

Guía de Primeros Auxilios de SAMUR - Protección Civil

Normas generales:

- Cómo actuar ante una emergencia
- Reconocimiento de la víctima
- Activación del servicio de emergencias
- Relación con la víctima

Crisis de ansiedad

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- Síncope, desmayo
- Coma
- Convulsiones

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- RCP y DESA
- Asfixia y OVACE

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- Intoxicación por alimentos
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Lesiones en ojos, oídos y nariz

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- Calor: Hipertermias
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- Frío: Hipotermias
- Lesiones por electricidad o rayo
- Ahogamiento

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- Accidentes de tráfico
- En el medio natural
- En el hogar
- En espacios públicos





Guía de Primeros Auxilios SAMUR - Protección Civil

Las personas que vivimos en comunidad tenemos muchas posibilidades de presenciar a lo largo de nuestra vida alguna situación imprevista en que una o varias personas puedan estar en riesgo vital. En algún caso puede ser alguna persona próxima de nuestro entorno o nosotros mismos. Estas situaciones desagradables para todos, lo son más si nosotros como testigos no podemos hacer nada por ayudar al que está en esta circunstancia, por falta de conocimiento o directrices claras para reconocer esta urgencia o sobre cómo prestar socorro.

Todos los ciudadanos por el hecho de serlo deberíamos recibir, en algún momento de nuestra formación (escuela, instituto, formación profesional, formación universitaria o ya en el entorno laboral), instrucciones sobre cómo realizar una primera asistencia a una víctima en situación de emergencia ya que, probablemente seamos la única oportunidad de sobrevida o limitación de secuelas que esta persona pueda tener hasta la llegada de los servicios de emergencias médicas. De esta primera actuación va a depender, en gran medida, el estado general y la posterior evolución de la víctima, de ahí la gran importancia de estas primeras actuaciones.

Los primeros auxilios son aquellas actuaciones o medidas básicas e inmediatas que se realizan en el mismo lugar en el que ha tenido lugar el accidente o la pérdida de salud de una persona. Se realizan por parte de personas testigo, sean o no sanitarias, con los medios que se tenga al alcance en ese momento y hasta la llegada de personal especializado. Por tanto, los primeros auxilios no son tratamientos médicos, sino acciones encaminadas a reducir los posibles efectos de las lesiones y a mantener el estado del paciente hasta la llegada del servicio médico extrahospitalario.

No debemos olvidar, además, la obligación legal y moral del deber de auxilio que tenemos todas las personas frente al herido o enfermo.

En toda actuación como persona que presta auxilio tenemos que tener en cuenta:

- La importancia de la **información** que se transmita a los servicios médicos de emergencias extrahospitalarios a través del 112 como alertante o primer respondiente. De su precisión y exactitud en cuanto a la localización del incidente, naturaleza, número de víctimas, etc, así como del estado de éstas dependerá el que la ayuda sanitaria llegue antes y que se pueda realizar consejo sanitario al alertante para que pueda ir prestando esos primeros auxilios.
- La **seguridad propia, del entorno y de la víctima** como premisa indispensable para la prestación de ayuda. No se deben prestar primeros auxilios si no existe garantías de seguridad para los intervenientes y para la propia víctima.
- La **tranquilidad** es nuestro máximo aliado para evitar el error y para generar un clima de control y confianza en el entorno, el herido y el resto de personas presentes, y limitar la situación de caos.
- Nuestra actuación solo tiene que limitarse a aquellas actuaciones estrictamente necesarias e indispensables para mantener el estado del paciente, tal y como se explica en esta Guía de Primeros auxilios.
- **No se debe mover** al herido o enfermo a no ser que exista riesgo para las personas (incendio, explosión inminente, etc) o situación de emergencia (parada cardiorrespiratoria que precisa reanimación cardiopulmonar inminente).
- Nuestra obligación persiste **hasta la llegada de los servicios médicos de emergencias extrahospitalarias** de manera que nuestra información sobre las circunstancias, evolución y lo realizado sobre la víctima es fundamental transmitirla a estos profesionales.

Por todo ello, SAMUR-Protección Civil, consciente de que los ciudadanos testigos de estas situaciones somos los primeros ojos y manos en la prestación de ayuda a la víctima ha querido apostar por nuestra formación como primeros aliados en la cadena de supervivencia de las personas en situación de emergencia médica a través de la edición de esta guía de primeros auxilios. En ella se reúne la experiencia adquirida en las asistencias sanitarias de sus profesionales, así como su larga experiencia en formación con sus 15.000 personas formadas al año.

Esta Guía tiene como objetivo fundamental colaborar en la difusión y conocimiento de estas prácticas y técnicas insustituibles para la víctima y gratificantes para el prestador del auxilio.

Gracias por permitirlo.





Botiquín de Primeros Auxilios

Picaduras y mordeduras

- Compresas.
- Hielo químico.
- Suero fisiológico.
- Bolsas de agua.
- Vendas.
- Apósticos.
- Alcohol.

Lesiones en partes blandas

- Gasas o pañuelos de tela.
- Jabón neutro.

Lesiones óseas y muscular

- 2 imperdibles grandes.
- Cinta adhesiva.
- Esparadrapo.
- Pañuelos triangulares.
- Cintas de tela.
- Vendas elásticas grandes.



Quemaduras

- Vendas, gasas y compresas estériles.
- Tijera, pinzas.

Intoxicaciones

- Mascarillas de papel con y sin filtro.
- Agua.
- Paños y gasas.

Crisis de ansiedad

- Bolsa de papel o plástico.
- Mascarilla con reservorio.

Lesiones en oídos, nariz y ojos

- Gasas o pañuelos estériles.
- Hielo.

Ahogamiento

- Manta térmica tipo Sirius.

Accidentes de tráfico

- Guantes de trabajo anticorte.
- Triángulos de preseñalización de emergencia homologados.
- Chaleco de alta visibilidad homologado.
- linterna con pilas de recambio.





Cómo actuar ante una emergencia

✓ Qué hacer:

- ✓ Trate de mantener la calma.
- ✓ Protéjase y proteja al accidentado.
- ✓ Compruebe que la escena donde está el paciente es segura.
- ✓ Sea consciente del peligro y espere a los equipos de rescate, si es necesario.
- ✓ En caso de circulación de vehículos utilice prendas reflectantes, y siga las indicaciones de [Prevención y actuación en accidentes de tráfico](#).
- ✓ Solicite ayuda al 112.
- ✓ Socorra a las víctimas

✗ Qué; NO hacer:

- ✗ Evite la visión en túnel: no focalice la atención a lo más evidente dejando a otras víctimas o situaciones sin atender.
- ✗ No actúe si no está seguro de lo que va a hacer.
- ✗ En caso de peligro no arriesgue su vida.





Reconocimiento de la víctima

Antes de acercarse a una persona para valorar su situación recuerde que debe tomar medidas de autoprotección siguiendo lo indicado en el capítulo [Cómo actuar ante una emergencia](#).

Los signos vitales que deberá buscar en una víctima son **conciencia y respiración**.

En el caso de existir varias víctimas deberá realizar una valoración rápida de estos dos aspectos de cada una de ellas, antes de realizar ninguna maniobra sobre una en particular.

Cómo valorar grado de conciencia:

Proceda de la siguiente manera:

✓ Qué hacer:

- ✓ Sitúese al lado de la víctima y realice estímulos de intensidad progresiva como se indica a continuación:



- Fíjese en si la persona tiene abiertos los ojos, responde a las preguntas, se mueve con normalidad. En este caso estaría **consciente y alerta**.
- Si no tiene abiertos los ojos y respira con normalidad, tóquela con firmeza y gritela preguntando si le pasa algo. Esta persona podría estar, tan solo, profundamente dormida.
- Si responde sin poder mantener el estado de alerta normal, nos encontraríamos ante una situación donde la conciencia estaría **alterada**.
- Si ante estos intentos no obtenemos respuesta de la víctima, nos encontramos ante una persona **inconsciente**.

- ✓ Continúe con la valoración sin perder la calma.

- ✓ Siempre que exista una alteración de la conciencia llame al 112 indicando la situación en la que se encuentra la víctima.



✗ Qué NO hacer:

- ✗ Perder la calma ante esta situación, usted es capaz de controlarla.
- ✗ Realizar estímulos dolorosos sobre la víctima para valorar inconsciencia, con métodos que puedan provocar lesiones.



Impresión de signos externos de gravedad:

Alteraciones de la respiración y hemorragias visibles:

✓ Qué hacer:

- ✓ Valore el ritmo de la respiración (continuo o con paradas prolongadas), profundidad y rapidez.
- ✓ En el caso que la víctima tenga una hemorragia importante, actúe de forma rápida sobre ellas para detener el sangrado ([Hemorragias](#)).
- ✓ En caso que el paciente no respire, inicie maniobras de Resucitación Cardiopulmonar ([Reanimación cardiopulmonar: RCP](#)).

✗ Qué NO hacer:

- ✗ Cambiar el orden de la valoración de los signos del paciente: conciencia - respiración - hemorragia.
- ✗ Apoyarse en el pecho del paciente para valorar la respiración.
- ✗ Cerrar la vía aérea mientras valora la respiración.



Valoración de signos y síntomas referidos por la víctima:

En caso de una víctima consciente, es muy importante poder valorar lo que le está ocurriendo. Para ello, debe estar atento a los síntomas que la víctima refiera, así como emplear todos sus sentidos para descubrir lo que le está ocurriendo.

✓ Qué hacer:

✓ Intente que le refiera su síntoma principal

- Escuche y pregunte a la víctima qué siente: dolor (físico o interno, como dolor en el pecho o en la espalda, o dolor localizado por un golpe o una lesión), falta de aire, debilidad, falta de fuerza, pérdida de sensibilidad.
- Desde cuando sucede (si es de reciente aparición o si las lesiones ya las presentaba con anterioridad).

✓ Indague acerca de antecedentes personales médicos: si tiene alguna enfermedad, si le ha pasado alguna otra vez esta misma situación.

✓ Pregunte acerca del suceso, para valorar su orientación temporal, espacial y personal (dónde está, que día es y cómo se llama).

✓ Busque signos relativos al síntoma referido:

- Mire los movimientos del pecho, si tiene sangrados, deformidad, simetría en la cara, quemaduras, objetos clavados, movilidad normal en brazos y piernas.
- Toque para notar diferencia de temperatura, si hay alguna deformidad y falta de continuidad en huesos.
- Escuche los ruidos que hace al respirar.

✓ Vuelva a llamar al 112 para informar a los servicios de emergencias de los nuevos hallazgos.

✗ Qué NO hacer:

- ✗ Valorar al paciente en profundidad si está inconsciente o no respira. (Priorice la RCP sobre todo lo demás).
- ✗ Intentar hacer diagnósticos médicos. Las sensaciones son muy ambiguas y difíciles de interpretar.
- ✗ Ocultar información porque la considere poco importante. Toda la información relacionada con el caso es relevante.





Solicitud de ayuda al 112. Activación del servicio de emergencias



✓ Qué hacer:

- ✓ Mantenga la calma para hablar con el operador.
- ✓ Indique la dirección exacta del suceso aportando número, cruce de calle, y puntos de referencia.
- ✓ Indique que es lo que ocurre.
- ✓ Comunice el número de heridos y si le impresionan gravedad.
- ✓ Interrogue a la víctima acerca de antecedentes y tratamientos que toma.
- ✓ Confirme al operador su número telefónico para cualquier consulta posterior.
- ✓ Si el estado de la víctima varía o se marchara del lugar, comuníquelo al operador.

✗ Qué NO hacer:

- ✗ No cuelgue hasta que no se lo indique el operador.
- ✗ No abandone la ubicación exacta que le ha indicado al operador.

Cómo hacer la transferencia al servicio de emergencias

✓ Qué hacer:

- ✓ Esté atento a la llegada de la ambulancia para indicar su ubicación exacta.
- ✓ Comunique la información que haya podido recabar al paciente: antecedentes, tratamientos actuales u otros.
- ✓ Facilite cualquier información que le solicite el servicio de emergencias.
- ✓ Ayude al personal sanitario en lo que se le solicite.
- ✓ Espere a que el servicio de emergencias y policía le indique que se retire.



✗ Qué NO hacer:

- ✗ No entorpezca las maniobras del servicio de emergencias médicas.
- ✗ No abandone el lugar sin previo aviso al personal sanitario de emergencias.



Relación con la víctima

Una persona que ha sufrido un accidente o repentina enfermedad, se encontrará asustada, perdida, desorientada. Su actuación será determinante para conseguir un estado de seguridad y tranquilidad.

✓ Qué hacer:

Acciones generales

- ✓ Establezca una relación de confianza y seguridad para ayudar a la víctima.
- ✓ Llame a la víctima por su nombre y preséntese manifestando su intención de ayudarle
- ✓ Actúe de forma calmada y sosegada, empleando frases cortas y mensajes claros con un tono de voz agradable.
- ✓ Actúe de igual manera con los gestos.
- ✓ Acompáñe en todo momento a la víctima.
- ✓ Proteja la intimidad de la víctima.
- ✓ Evite signos externos de alarma.
- ✓ Facilite la expresión de emociones y sentimientos.
- ✓ Deje hablar y escuche lo que tenga que decirle.
- ✓ Identifique necesidades básicas inmediatas de la víctima.



Relación con niños

A lo anterior añade:

- ✓ Sírvase de algún juguete o entretenimiento infantil para mantenerlo distraído.
- ✓ Pregúntele sobre sus miedos, esto le ayudará a controlar la situación.
- ✓ Permita que los padres estén con el niño para tranquilizarle.

Relación con ancianos

Como los niños, las personas mayores son más vulnerables y la mayoría pueden tener mermadas sus facultades de comunicación (habla, visión y escucha).

A las acciones generales citadas anteriormente, debe añadir:

- ✓ Pregúntele sobre lo ocurrido varias veces (posibilidad de amnesia).
- ✓ Insista sobre tratamientos médicos y enfermedades varias ocasiones.
- ✓ Deje que se exprese.
- ✓ Haga preguntas concisas y fáciles de entender.
- ✓ No pierda la calma ante personas que no puedan entenderle.
- ✓ Trate con respeto utilizando las fórmulas apropiadas a la edad.

Relación con personas con ideas suicidas

- ✓ Ante una persona con ideas en evidente fase de suicidio, llame al 112.
- ✓ No cierre la comunicación con el 112.
- ✓ No se acerque a la víctima, guarde un espacio con ella.
- ✓ Hable con seguridad y con voz calmada.
- ✓ Realice una valoración rápida de la víctima: Identifique signos de alteración física, psíquica, emocional y motora.
- ✓ Identifique los factores que, posiblemente, hayan precipitado la crisis e intentos autolíticos previos.
- ✓ Establezca, junto con la víctima, las necesidades inmediatas y posteriores.
- ✓ Facilite la expresión verbal y emocional de pensamientos e ideación autolítica.
- ✓ Reduzca los estímulos estresantes.
- ✓ A la llegada de los Servicios de Emergencias aporte toda la información que haya podido recabar, y no abandone la escena si así se lo solicitan los profesionales del servicio médico extrahospitalario. Podría seguir siendo el interlocutor con la víctima.



Crisis de ansiedad

Una crisis de ansiedad es una respuesta repentina de miedo o malestar intenso. Deberá buscar cualquiera de los siguientes signos y síntomas:

- Aumento de las pulsaciones y dolor de pecho no opresivo.
- Sensación de ahogo.
- Rrigidez en piernas y brazos o sensación de hormigueo.
- Dolor abdominal.
- Sudoración excesiva.

✓ Qué hacer:

- ✓ Aíslle a la víctima del entorno estresante.
- ✓ Intente relajar a la víctima con respiraciones calmadas y sucesivas, tomando el aire por la nariz y expulsándolo por la boca.
- ✓ Tranquilice a la víctima indicándole que la situación se va a controlar si sigue los consejos.
- ✓ Si tiene una bolsa, haga que respire dentro de ella.
- ✓ Hable en tono bajo procurando mantener un ritmo que no aumente el nerviosismo de la víctima.
- ✓ Valore la rapidez del pulso, número de respiraciones y dolor.
- ✓ Facilite intimidad a la víctima.
- ✓ Obtenga información de lo ocurrido.
- ✓ Mantenga la calma y pida ayuda al Servicio de Urgencias 112.



✗ Qué NO hacer:

- ✗ Hacer gestos o aportar estresores a la escena que pudieran aumentar la crisis.
- ✗ Dar bebidas o alimentos excitantes (café, bebidas de cola, chocolate, té, las bebidas "energéticas" son algunos productos de consumo habitual que pueden aportar excitantes suficientes para desencadenar una crisis de ansiedad).
- ✗ Juzgar el por qué de la crisis de ansiedad de la víctima.



Lipotimia - presíncope

Es la sensación de **mareo sin pérdida de conocimiento** durante un período de tiempo muy corto y con una recuperación rápida y completa.

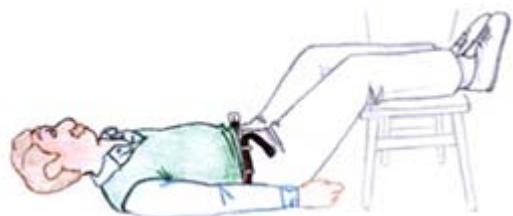
Puede producirse por emociones intensas, largos períodos de ayunas mantenidos (frecuente en personas que no desayunan), visiones desagradables, lugares muy calurosos donde esté muy abrigado, personas que están mucho tiempo de pie sin poder moverse, ejercicio excesivo, miedo, dolor, entre otros.

Usted debe sospecharlo si la víctima tiene sensación de mareo y se acompaña de:

- Sensaciones raras (sonidos lejanos, visión borrosa, hormigueo en manos).
- Piel pálida, fría y sudorosa (sobre todo en la cara).
- Caída al suelo por debilidad en las piernas.
- Es posible que si busca el pulso radial (en la muñeca) no lo encuentre o éste sea débil, lento e incluso arrítmico.
- Debilidad muscular (los músculos están flojos y sin tensión).
- Náuseas o dolor de tripa (retortijones).

✓ Qué hacer:

- ✓ Guarde la calma, controle la situación.
- ✓ Evite que la víctima caiga al suelo y túmbela.
- ✓ Si ya estuviera en el suelo, colóquela tumbada boca arriba y eleve las piernas unos 45°, posición antishock ([ver figura](#)).
- ✓ Facilite a la víctima que respire sin ninguna dificultad (aflojando cuellos, corbatas, bufandas, cinturones, sujetadores, etc.).
- ✓ Consiga un ambiente fresco y con aire limpio en el lugar donde se encuentra abriendo una ventada o desarropando un poco a la víctima si estuviera muy abrigada.
- ✓ Evite aglomeraciones de gente a su alrededor.
- ✓ Nunca deje sola a la víctima.
- ✓ Llame al 112 y comunique lo sucedido, explicando síntomas y cambios en el estado de la víctima.
- ✓ Controle los signos vitales y anótelos.
- ✓ Si pudo golpearse al caer, revise en busca de heridas o contusiones, y proceda según la lesión ([ver capítulos Lesiones en tejidos blandos](#) y [Lesiones óseas y musculares](#)).
- ✓ Cuando la víctima se haya recuperado por completo, siéntela despacio antes de ponerla de pie y aguarde un rato en esa posición para comprobar que no se repite el mareo.
- ✓ Intente averiguar qué estaba haciendo la víctima (especialmente esfuerzos), si ha comido y enfermedades que padezca.
- ✓ Cuando lleguen los servicios de emergencias médicas, explíquelles lo sucedido, las medidas que ha realizado y que se encontraba haciendo la víctima antes del episodio.



✗ Qué NO hacer:

- ✗ Dar de comer ni beber a la víctima hasta que se haya recuperado totalmente, ya que puede atragantarse con mucha facilidad.
- ✗ Administrar medicamentos.
- ✗ Permitir que se levante bruscamente.



Síncope, desmayo

Es la pérdida de la conciencia durante un período de tiempo muy corto y con una recuperación rápida y completa. Puede producirse por emociones intensas, largos períodos de ayunas mantenidos, visiones desagradables, lugares muy calurosos donde estamos muy abrigados, personas que están mucho tiempo de pie sin poder moverse, ejercicio excesivo, miedo, dolor, entre otros. También puede ser resultado de arritmias cardíacas, problemas neurológicos u otras enfermedades.

Usted debe sospecharlo si la víctima sufre una pérdida de conocimiento acompañado de:

- Sensación de mareo o de sensaciones raras (sonidos lejanos, visión borrosa, hormigueo en las manos u otros similares).
- Piel pálida, fría y sudorosa (sobre todo en la cara).
- Caída al suelo por debilidad en las piernas.
- Es posible que si busca el pulso radial (en la muñeca) no lo encuentre o éste sea débil y lento.
- Pérdida de tono muscular (los músculos están flojos y sin tensión).
- Náuseas o dolor de tripa (retortijón).



✓ Qué hacer:

- ✓ Actúe como en el apartado de [presíncope](#).
- ✓ Si la víctima no responde, valore su respiración. Si ésta está ausente o es ineficaz (boqueos, escaso movimiento torácico o con poca frecuencia) realice reanimación cardiopulmonar (Ver capítulo [Reanimación cardiopulmonar](#))
- ✓ Si la víctima no se recupera pero va respondiendo, colóquela en [posición lateral de seguridad](#) (ver figura).
 - ✓ Controle signos vitales y anótelos.
 - ✓ Cuando la víctima se haya recuperado por completo, siéntela despacio antes de ponerla de pie y aguarde un rato en esa posición para comprobar que no se repite el mareo o la pérdida de conocimiento.
 - ✓ Intente averiguar qué estaba haciendo la víctima (especialmente algún esfuerzo), si ha comido y enfermedades que padezca.
 - ✓ Si pudo golpearse al caer, revise en busca de heridas o contusiones, y proceda según la lesión (ver capítulos [Lesiones en tejidos blandos](#) y [Lesiones óseas y musculares](#)).
- ✓ Cuando lleguen los servicios de emergencias médicas, explíquoles lo que ha sucedido, las medidas realizadas y toda la información que tenga sobre la víctima.



✗ Qué NO hacer:

- ✗ Dar de comer ni beber a la víctima hasta que se haya recuperado totalmente, ya que puede atragantarse con mucha facilidad.
- ✗ Administrar medicamentos.
- ✗ Permitir que se levante bruscamente.



Coma

Situación en la que una persona pierde la conciencia de forma severa, profunda y prolongada, no teniendo ninguna respuesta a órdenes verbales ni estímulos dolorosos y con anulación de los reflejos protectores (tos y deglución), pero conservando pulso y respiración. Existen una serie de causas que lo pueden producir, que pueden ser:

- Debido a un traumatismo en cabeza (ver capítulo [Traumatismos en cabeza](#)).
- Por falta de azúcar en sangre (hipoglucemias).
- Ingestión de tóxicos ([alcohol](#), [drogas](#) o [medicamentos](#)).
- Problemas a nivel cerebral ([ICTUS](#), meningitis, convulsiones).
- Por falta de oxígeno en el cerebro, patologías derivadas del calor o del frío extremo, etc.

✓ Qué hacer:

- ✓ Mantenga la calma. Controle la situación.
- ✓ Sitúe a la víctima en una posición adecuada para valorar los signos vitales (ver capítulo [Reconocimiento de la víctima](#)).



- ✓ Afloje todas las ropas que le puedan impedir respirar (corbatas, cinturones, pantalones, etc.).
- ✓ Si la víctima respira, colóquela en [posición lateral de seguridad](#) (ver figura). asegurándose, cada poco tiempo, de que sigue respirando.
- ✓ Si la causa fue traumática, tumbe a la víctima boca arriba manteniendo abierta la vía aérea, sujetando la cabeza.
- ✓ Si no respira o su respiración es ineficaz (boqueos, escaso movimiento torácico), prepárese para iniciar maniobras de resucitación (ver [Reanimación cardiopulmonar](#)).
- ✓ Pregunte a los testigos presentes qué estaba haciendo la víctima anteriormente al suceso, cuándo ha sucedido y si padece alguna enfermedad importante (diabetes).
- ✓ Llame al 112 y explique la situación de la víctima, así como toda la información sobre antecedentes y lo que se encontraba haciendo antes de perder la conciencia.
- ✓ Si fuera preciso, tape a la víctima para evitar que coja frío.
- ✓ Nunca deje sola a la víctima.
- ✓ Si tuviese alguna herida visible, trátela como se indica en los capítulos [Lesiones en tejidos blandos](#) y [Lesiones óseas y musculares](#).
- ✓ Si la víctima recupera la conciencia, intente averiguar que le ha sucedido.
- ✓ A la llegada de los servicios de emergencias médicas, infórmeles de lo que ha sucedido, de todos los cambios que se hayan producido, antecedentes recogidos y las maniobras realizadas.



✗ Qué NO hacer:

- ✗ Dar de comer ni beber a la víctima, ya que podría atragantarse.
- ✗ Movilizar a la víctima si la causa fue traumática.



Convulsiones

Son contracciones bruscas, involuntarias, repetidas y anormales de los músculos, provocadas por estímulos cerebrales. Suelen provocar debilidad o pérdida de conciencia. La causa más habitual es la epilepsia, pero pueden darse por otras razones como lesiones en la cabeza, enfermedades cerebrales, fiebre, hipoglucemias, ingesta de tóxicos, etc.

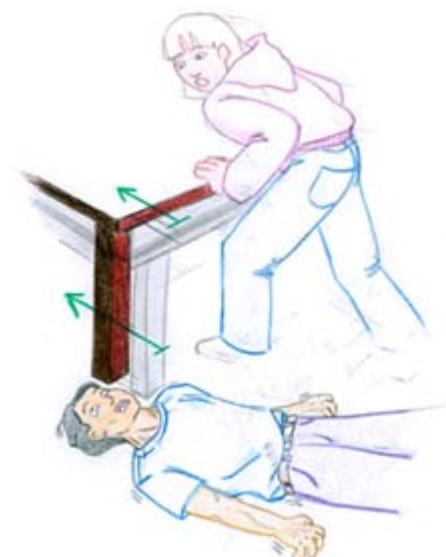
Usted deberá sospechar siempre que aparezca uno de estos síntomas:

- Pérdida súbita del conocimiento a veces profiriendo un grito.
- Rígidez permanente en miembros o espalda (convulsión tónica).
- Movimientos que sacuden el cuerpo (convulsión tónico-clónica).
- Apnea o falta de respiración acompañada de labios morados.
- Mandíbula apretada, enrojecimiento de la cara y ojos desviados, fijos o en blanco.
- Movimientos repetitivos raros como chuparse el labio, masticar o hacer ruidos.
- Incremento en la salivación (a veces sale en forma de espuma).
- Sangre en la boca (si se ha mordido la lengua).
- Pérdida del control de esfínteres (la víctima puede orinarse o defecar encima).
- Tras la crisis aparece desorientación en la víctima.
- Recuperación de la conciencia de forma progresiva y lenta.

En personas que ya han tenido más crisis, puede existir un "aviso" llamado *aurea* donde la víctima siente olores o sabores raros.

✓ Qué hacer:

- ✓ Guarda la calma. Controle la situación.
- ✓ Si advierte que la víctima va a padecer una crisis, evite que se caiga.
- ✓ Haga espacio a su alrededor para que no se golpee ni le caiga algún objeto encima.
- ✓ Proteja la cabeza de la víctima poniendo algo blando debajo (por ejemplo: ropa, cojines, almohadas) sin forzar su cuello.
- ✓ Afloje todas las prendas apretadas, a nivel de cuello y cintura, que puedan oprimir a la víctima al respirar.
- ✓ Anote la duración de la crisis, tipos de movimientos o cualquier otro síntoma.
- ✓ Infórmese de los antecedentes previos (epilepsia, diabetes, episodios semejantes, traumatismo craneoencefálico).
- ✓ Si aparecen vómitos o sangre, gire a la víctima para evitar que se ahogue.
- ✓ Una vez ha pasado la crisis, compruebe que la respiración está presente.
 - Si la víctima respira, póngala en [posición lateral de seguridad](#) (ver  figura).



- Si la víctima no respira o la respiración es ineficaz (boqueos, escaso movimiento torácico o con poca frecuencia) realice reanimación cardiopulmonar (Ver capítulo [Reanimación cardiopulmonar](#))

- ✓ Llame al 112 informando de lo sucedido, sobre todo si la víctima no recupera la conciencia pasados 10 minutos, si el ataque dura más de 5 minutos o si las crisis se repiten.
- ✓ Espere a los servicios de emergencias médicas para darles información de lo sucedido, las medidas realizadas y toda la información que tenga sobre la víctima.

✗ Qué NO hacer:

- ✗ Sujetar a la víctima durante las contracciones musculares.
- ✗ Intentar meter la mano en su boca ni cualquier objeto (podría romperse o tragarse).
- ✗ Forzar la mandíbula para abrirla e introducir algo o evitar que se muerda la lengua.



- ✗ Dar bebidas o alimentos cuando la víctima comience a recuperar la conciencia.

Existen un tipo de convulsiones llamadas "ausencias" donde la víctima se desconecta de la realidad y está con la mirada perdida unos minutos, que puede acompañarse o no de otros síntomas, y luego vuelve en sí. La actuación es similar a la anteriormente descrita.

Convulsiones en los niños

En los niños, las convulsiones suelen derivarse de un aumento de la temperatura corporal por catarros, infecciones... Se llaman también convulsiones febres y se deben a una respuesta del cerebro ante la elevada temperatura. Los síntomas son similares a los de los adultos y suelen ir acompañadas de fiebre.

✓ Qué hacer:

- ✓ Proceda igual que en adultos. También:
 - Tome la temperatura de la víctima si es posible.
 - Retire la ropa de la víctima e intente enfriarla con un baño de agua templada o paños fríos en frente, muñecas, ingles y axilas.

✗ Qué NO hacer:

- ✗ Lo mismo que en adultos.
- ✗ Enfriar demasiado rápido ni bruscamente.
- ✗ Bajar la temperatura de la víctima por debajo de 37 °C.



Resucitación Cardiopulmonar (RCP)

Son las maniobras que deben efectuarse en aquellas personas que sufren una parada cardiorrespiratoria (PCR). La PCR es la interrupción brusca, inesperada y en principio reversible de la circulación y de la respiración espontáneas.

¿Cómo identificarla? La persona se encuentra inconsciente y no respira con normalidad o simplemente no respira.

✓ Qué hacer:

- ✓ Verifique que la zona es segura.
- ✓ Acérquese a la víctima y pregúntele qué le sucede.

Si la víctima le contesta o se mueve, está **consciente**:

- ✓ Déjelo en la misma posición y busque lesiones evidentes.
- ✓ Averigüe la causa del incidente.
- ✓ En caso necesario alerte al 112.

Si la víctima no responde o no se mueve, está **inconsciente**:

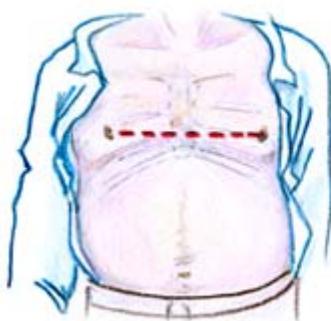
- ✓ Ante una víctima inconsciente observe si respira (observe si el tórax se mueve, hay ruidos respiratorios o siente la respiración), no utilice más de diez segundos para ello:
 - Si la víctima **respira** colóquela en [posición lateral de seguridad](#).
 - Si la víctima **no respira**, o su respiración no es buena (agónica o boqueo), alerte al 112 o pida a alguien que lo haga, **solicite un DEA** e inicie maniobras de RCP. En caso de dudar si la respiración es normal, actúe como si no lo fuera.



Maniobras de RCP

Normalmente, recibirá instrucciones por parte de un operador del 112 sobre cómo ejecutar las maniobras de RCP. En tal caso proceda como le indican. Si esto no fuera posible, actúe de la siguiente manera:

- Colóquese de rodillas al lado de la víctima para hacer compresiones.
- Descubra el tórax del paciente y coloque el talón de una mano en el centro del pecho, que es la mitad inferior del hueso central del pecho de la víctima o esternón. Ponga la otra mano encima y entrelace los dedos.
- Estire los brazos, **hombros perpendiculares al punto de masaje y espalda recta**.



- Ejerza presión dejando caer los hombros. Comprima el pecho fuerte y rápido con una velocidad de entre **100 y 120 compresiones por minuto**, con una profundidad de al menos cinco centímetros y dejando que el tórax se reexpanda entre compresiones.
- Utilice el DEA en cuanto esté disponible.
- Continúe con las compresiones torácicas hasta la llegada de los servicios de emergencia, hasta que se agote y no pueda continuar o hasta que la víctima tenga signos de vida: , respire, tosa o se mueva.
- Cuando lleguen los servicios de emergencias médicas, explique lo que ha sucedido, las medidas realizadas y toda la información que tenga sobre la víctima.

En **niños entre un año y la pubertad**, comprima 1/3 de la profundidad del pecho. Las compresiones se pueden hacer con uno o dos brazos, a criterio del rescatador y según sea el tamaño del mismo y de la víctima con cuidado de no causarle lesiones

En **lactantes**, menores de un año, las compresiones se harán con dos dedos y el punto de compresión será un dedo por debajo de la línea imaginaria intermamilar. Sujete la cabecita de la víctima por la frente con la palpa de su mano libre.



Qué NO hacer:

- ✗ Dejar sola a la víctima, salvo si tuviera que llamar al 112 y conseguir un DESA usted mismo.
- ✗ Tardar más de diez segundos en determinar si la víctima respira.
- ✗ Mantener la presión entre compresión y compresión.
- ✗ Aplicar presión sobre la parte alta del abdomen o la parte final del esternón.
- ✗ Si da ventilaciones a la víctima, no esté más de quince segundos sin hacer compresiones, ventile lo justo para elevar el tórax y con una duración para cada insuflación de un segundo. No de ventilaciones si no conoce la técnica, es preferible solo hacer compresiones.

Desfibrilador Externo Automatizado (DEA)



Un DEA es un dispositivo electrónico portátil que, a través de los parches colocados en el tórax de la víctima y que van conectados al aparato, identifica los ritmos de parada cardiorrespiratoria que necesitan una desfibrilación como tratamiento. La desfibrilación consiste en emitir un impulso de corriente eléctrica al corazón para que recupere su ritmo cardíaco normal.

Deberá utilizarse en todos aquellos casos en los que la víctima este inconsciente y no respire o lo haga anormalmente. Basta con abrirlo, ponerlo en funcionamiento y seguir sus instrucciones. Su uso está recomendado en víctimas de cualquier edad, aunque hasta los ocho años deberían usarse parches pediátricos si se dispone de ellos.

Cada vez se encuentran más DEA ubicados en lugares de acceso público y son fácilmente localizables por la señalización internacional. En caso de ser necesario, pida a alguien que avise al 112 y traiga un DEA mientras usted administra compresiones torácicas. Utilícelo en cuanto esté disponible.





Obstrucción de la vía aérea por cuerpo extraño (OVACE)

Es una obstrucción del paso del aire a los pulmones a consecuencia de un objeto en la vía aérea.

Síntomas de alerta: El signo universal de atragantamiento es llevarse las manos al cuello. Otros signos pueden ser la dificultad para hablar y el color azulado de la piel o la salivación por boca.

✓ Qué hacer:

- ✓ Si la víctima puede toser, anímele a que tosa y vigile.
- ✓ Si la víctima no puede toser o ya no tiene fuerza para ello, pero sigue consciente, inicie **compresiones abdominales**. Para ello:
 - Pregunte a la víctima si se está ahogando y dígale que le va a ayudar.
 - Colóquese detrás y abrace a la víctima por la espalda con los dos brazos. En esta posición y de pie, coloque una mano cerrada apoyando el puño con el pulgar sobre el abdomen, justo por encima del ombligo y por debajo del final del esternón y la otra recubriendo la primera.
 - Presione en ese punto, en dirección hacia dentro y hacia arriba.
 - Alterne esta maniobra con golpes fuertes en la espalda, con la palma de su mano entre ambas escápulas de la víctima, a razón de 5 veces seguidas cada una hasta que se expulse el objeto o la víctima pierda el conocimiento.
 - En embarazadas, personas obesas o menores de un año las compresiones abdominales son sustituidas por **compresiones torácicas**. El lugar de compresión será el mismo que en la [parada cardiorrespiratoria](#).
 - En los menores de un año, alterne cinco compresiones torácicas con los dedos y cinco golpes fuertes entre las escápulas, todo ello con la cabeza del bebé más baja que el cuerpo.



✓ Si la víctima perdiera el conocimiento:

- Avise al 112 o pida a alguien que lo haga.
 - Túmbe a la persona en el suelo boca arriba, colóquese a su lado de rodillas e inicie compresiones torácicas de la misma manera que si de una [parada cardiorrespiratoria](#) se tratase.
 - Continúe las compresiones, sin dejar de observar la boca de la víctima por si apareciera el objeto, hasta la llegada de los servicios de emergencia médicas, hasta que se agote y no pueda continuar, o hasta que la víctima tenga signos de vida: respire, tosa o se mueva.
- ✓ Cuando lleguen los servicios de emergencias médicas, explique lo que ha sucedido, las medidas realizadas y toda la información que tenga sobre la víctima.

✗ Qué NO hacer:

- ✗ Realizar compresiones abdominales a menores de un año, podría provocarles daños mayores.
- ✗ Realizar las compresiones fuera del lugar indicado, pues podría producir daños en costillas o intestino.
- ✗ Intentar extraer el cuerpo extraño con los dedos a ciegas del interior de la boca.



Infarto agudo de miocardio (ataque cardiaco)

Situación en la que las arterias coronarias (que son las que llevan la sangre al corazón) se obstruyen y ese corazón se queda sin riego sanguíneo. Es una situación de extrema urgencia en la que es imprescindible que la víctima reciba atención médica de emergencias.

Se debe sospechar siempre que aparezcan algunos de estos síntomas:

- Dolor persistente en el pecho que se puede extender al cuello, brazos, hombro, espalda y mandíbula. Al cambiar de postura ese dolor no se modifica.
- Problemas para respirar, respiraciones más rápidas, sensación de ahogo; a veces hay jadeo ("hambre de aire").
- Piel fría, pálida, sudorosa y azulada.
- Debilidad o mareo repentino.
- Molestias gastrointestinales, náuseas, vómitos.
- Alteraciones en el pulso (puede estar rápido y débil, o irregular).
- La víctima puede describir una sensación de "muerte inminente".
- Inconsciencia y seguidamente, parada cardiorrespiratoria.



✓ Qué hacer:

- ✓ Guarde la calma. Mantenga el control de la situación.
- ✓ Coloque a la víctima en una posición en la que se encuentre cómoda y sin hacer ningún tipo de esfuerzos (ver capítulo [Posiciones de espera](#)).
- ✓ Llame al 112 y apunte la hora de inicio de los síntomas (dolor) especificando los que ha identificado.
- ✓ Si la persona está consciente:
 - Déle media aspirina con UN POCO de agua.
 - Si estuviera en tratamiento por angina de pecho, déle su medicación. La víctima sabrá como administrársela; ayúdale.
 - Indague sobre antecedentes médicos previos y circunstancias del suceso (ejercicio, reposo, ayunas, etc.)
- ✓ Afloje todas las ropas que le estuvieran oprimiendo (cinturones, cuellos, bufandas...) y permita una buena respiración.
- ✓ Controle los signos vitales de la persona y si queda inconsciente, valore la respiración:
 - Si la víctima no respira prepárese para maniobras de RCP (ver capítulo [Reanimación cardiopulmonar](#)).
 - Si respira colóquele en [posición lateral de seguridad](#) (ver figura) y no pierda de vista la respiración.



- ✓ Controle a la víctima y no la deje sola en ningún momento hasta que llegue ayuda.
- ✓ Indague sobre antecedentes médicos previos y circunstancias del suceso (ejercicio, reposo, ayunas, etc.)
- ✓ Cuando lleguen los servicios de emergencias médicas, explique lo que ha sucedido, las medidas realizadas y toda la información que tenga sobre la víctima.

✗ Qué NO hacer:

- ✗ Dar una medicación que no sea la que le hayan recetado al propio paciente, aunque un viandante le diga que él la toma para estos mismos síntomas.
- ✗ Permitir que la persona haga cualquier esfuerzo, como andar o subir escaleras.
- ✗ Dar comida o bebida a la víctima. Si se atraganta, los esfuerzos para toser o las náuseas empeoran la situación.
- ✗ Poner nerviosa a la víctima, porque la angustia empeora la situación del paciente y aumenta la demanda de oxígeno del corazón.
- ✗ Trasladar directamente a la víctima por sus medios sin esperar a los servicios de emergencias médicas.



ICTUS

Estado en el que se deteriora el riego sanguíneo de una parte del cerebro por un coágulo (o trombo) o por la rotura de un vaso (hemorragia). Es importante que la persona reciba atención médica de emergencias lo antes posible.

Suele afectar a personas mayores (sobre todo mujeres) y se puede reconocer por:

- Cambios repentinos o pérdida gradual en la conciencia de la persona.
- Falta de coordinación de movimientos.
- Alteraciones en el tono muscular (sobre todo en músculos de la cara): Pida a la víctima que enseñe los dientes y si solo mueve un lado de la cara o el movimiento es asimétrico, el cerebro está afectado.
- Problemas al hablar o al tragar.
- Pérdida de movimiento y fuerza en brazos o piernas.
- Dolor de cabeza intenso y repentino.
- Confusión. Estado mental y emocional similar a la embriaguez sin haber consumido bebidas alcohólicas.



✓ Qué hacer:



- ✓ Guarde la calma. Controle la situación.
- ✓ Facilite a la víctima que respire sin ningún obstáculo (aflojando cuellos, corbatas, bufandas, cinturones, etc).
- ✓ Llame al 112 y apunte la hora de inicio de los síntomas. Especifique en la llamada los síntomas que aparecen.
- ✓ Tumbe a la víctima con la cabeza y los hombros un poco levantados, apoyados por ejemplo, en una almohada.
- ✓ Asegure el ambiente relajado de la víctima, sin ningún tipo de estrés (sin ruidos y con luces suaves).
- ✓ Si hiciese mucho frío o mucho calor ambiental, adecúe las ropas de la víctima a la temperatura.

✓ Si la persona queda inconsciente valore la respiración:

- Si no respira prepárese para iniciar maniobras de RCP (ver capítulo [Reanimación cardiopulmonar](#)).
- Si la persona respira colóquela en [posición lateral de seguridad](#) (ver figura) y vigile su respiración.



- ✓ Espere a que llegue ayuda y anote todos los cambios que aparezcan en el estado de la víctima.
- ✓ Indague sobre antecedentes médicos previos y circunstancias del suceso (ejercicio, reposo, ayunas, etc).
- ✓ Cuando lleguen los servicios de emergencias médicas, explique lo que ha sucedido, las medidas realizadas y toda la información que tenga sobre la víctima.

✗ Qué NO hacer:

- ✗ Dar de comer ni beber a la víctima, ya que puede atragantarse con mucha facilidad.
- ✗ Forzar a la víctima para hablar o moverse.
- ✗ Administrar algún tipo de medicamento.
- ✗ Intentar sujetar a la víctima si aparecen [convulsiones](#) o se agita, solamente evite que se haga daño.
- ✗ Movilizar el cuello o ponerle cosas apretadas.
- ✗ Dejar sola a la víctima.
- ✗ Trasladar directamente a la víctima por sus medios sin esperar a los servicios de emergencias médicas.



Intoxicaciones y envenenamientos

Son las reacciones del organismo ante la entrada de cualquier sustancia tóxica, causando lesiones o enfermedades y, en ocasiones, la muerte. El grado de toxicidad varía según la edad, sexo, estado nutricional, vías de penetración y concentración del tóxico.

Las intoxicaciones pueden presentarse por:

- Dosis excesivas de medicamentos o drogas.
- Almacenamiento inapropiado de medicamentos y venenos.
- Utilización inadecuada de insecticidas, pulgicidas, cosméticos, derivados del petróleo, pinturas o soluciones para limpieza.
- Por inhalación de gases tóxicos.
- Consumo de alimentos en fase de descomposición o de productos enlatados que estén soplados o con fecha de consumo caducada.
- Manipulación o consumo de plantas venenosas.
- Ingestión de bebidas alcohólicas especialmente las adulteradas.



✗ Qué NO hacer:

- ✗ Mezclar medicamentos con alcohol, especialmente barbitúricos, tranquilizantes antibióticos o antiparasitarios.
- ✗ Tomar medicamentos de frascos sin etiqueta o si ésta no es legible.
- ✗ Tomar o administrar medicamentos a oscuras. Encienda las luces.
- ✗ Tomar medicamentos en presencia de niños.
- ✗ Guardar medicamentos o productos tóxicos en armarios o cajones abiertos y que estén al alcance de los niños.
- ✗ Guardar fármacos que no utilice o caducados.
- ✗ Consumir conservas cuando el envase esté abollado, perforado, caducado o al abrirse desprenda olores raros
- ✗ Consumir alimentos que no estén refrigerados adecuadamente.
- ✗ Almacenar productos tóxicos en botellas de bebidas.



Intoxicaciones producidas por abuso de alcohol

Signos y síntomas de alarma:

La víctima podrá ser auxiliada en estado inicial de euforia o en estado más avanzado de embriaguez, manifestado por un comportamiento confuso o incluso la pérdida de sensibilidad o conciencia.

Busque:

- Mareos y vómitos.
- Alteraciones en el habla, en los reflejos, al caminar.
- Alteraciones de conducta que pongan en riesgo su vida.
- Alteraciones de la conciencia: Si estuviera inconsciente, avise al 112 (ver [Alteraciones de la conciencia y urgencias neurológicas: coma](#)) y prepárese para realizar maniobras de RCP (ver [Reanimación cardiopulmonar](#)).

✓ Qué hacer:

- ✓ Evite el enfriamiento de la persona.
- ✓ Si está consciente, contesta adecuadamente a las preguntas y no existe riesgo por alteración de conducta, busque una persona que se haga cargo de su observación y traslado a domicilio.
- ✓ Si el paciente tiene lesiones asociadas, solicite ayuda al 112 para su valoración por parte de los sanitarios.
- ✓ Si el paciente está inconsciente: Vigile la respiración y evite que la víctima se ahogue con su propio vómito en [posición lateral de seguridad](#).
- ✓ Indague sobre antecedentes médicos previos y circunstancias del suceso.
- ✓ Comunique al personal del servicio médico extrahospitalario la información recogida y lo realizado con la víctima.



✗ Qué NO hacer:

- ✗ Dar de comer, beber o fumar.
- ✗ Abandonar a la víctima.



Intoxicaciones por abuso de drogas

Observe si la víctima inicia una fase de excitación, agitación motora y posterior fase depresiva con posible pérdida de conciencia.

✓ Qué hacer:

- Mantenga la calma y avise al 112 si se manifiesta la situación anteriormente descrita.
- Valore continuamente la conciencia y la respiración:
 - Si la persona está inconsciente y no respira o la respiración es ineficaz (escaso movimiento torácico o con poca frecuencia), realice maniobras de [Reanimación cardiopulmonar](#).
 - Si está inconsciente y respira, colóquela en [posición lateral de seguridad](#) y vigile la respiración.
- Observe el lugar para averiguar lo sucedido (busque papelinas, papel de aluminio con resto de sustancias, agujas, jeringuillas, gomas de compresión). Evite riesgos. No toque nada del entorno. Tenga especial cuidado con la manipulación de agujas.
- Averigüe el tipo de droga consumida, vía de penetración, signos de hemorragia por la nariz o sangrado en zonas del cuerpo, especialmente brazos como consecuencias de existencia de pinchazos. Tiempo transcurrido.
- Busque otros signos acompañantes de la intoxicación (tendencia al sueño, irritabilidad, nerviosismo, fiebre, etc.).
- Indague sobre antecedentes médicos previos y circunstancias del suceso.
- Comunique al personal de los servicios médicos extrahospitalario la información recogida y lo realizado con la víctima.



✗ Qué NO hacer:

- ✗ Dar de comer, beber o fumar.
- ✗ Abandonar a la víctima.



Intoxicaciones producidas por fármacos

Signos y síntomas de alarma

Observe la presencia de alguno de los siguientes datos:



- Dolor abdominal y vómitos.
- Pérdida de reflejos, somnolencia, movimientos no coordinados de los músculos, apariencia de estado ebrio, inconsciencia
- Respiración agitada y rápida.
- Aumento de la temperatura corporal.
- Manifestación, por parte de la víctima, de la ingestión de fármacos

✓ Qué hacer:

- ✓ Mantenga la calma y llame al 112 aportando la información que conozca.
- ✓ Busque recipientes cercanos a la víctima. Entrégueselos al servicio médico extrahospitalario para que su contenido sea analizado. Generalmente, cerca de la víctima se encuentra el recipiente que contiene la sustancia tóxica.
- ✓ Valore continuamente la conciencia y la respiración:
 - Si la persona está inconsciente y no respira o la respiración es ineficaz (escaso movimiento torácico o con poca frecuencia), realice maniobras de [Reanimación cardiopulmonar](#).
 - Si está inconsciente y respira colóquela en [posición lateral de seguridad](#) y vigile la respiración.
- ✓ Evite el enfriamiento.
- ✓ Busque otros signos acompañantes de la intoxicación.
- ✓ Anime al vómito sin provocarlo.
- ✓ Cuide los aspectos de [relación con la víctima](#).
- ✓ Indague sobre antecedentes médicos previos (tratamiento psiquiátrico) y circunstancias del suceso (intento autolítico o accidental, tiempo de ingesta y número de comprimidos o volumen ingerido, última comida o ayunas, acompañamiento de alcohol).
- ✓ Comunique al personal del servicio médico extrahospitalario la información recogida y lo realizado con la víctima.

✗ Qué NO hacer:

- ✗ Dar de comer, beber o fumar.
- ✗ Abandonar a la víctima.





Intoxicaciones producidas por alimentos

Signos y síntomas de alarma:

Observe si la víctima presenta dolor en estómago, náuseas, mareos o malestar general. Si fuera así, avise al 112.

✓ Qué hacer:

- Mantenga la calma y pregunte a la víctima por recientes ingestas de alimentos.
- Valore continuamente la conciencia y la respiración:
 - Si la persona está inconsciente y no respira o la respiración es ineficaz (escaso movimiento torácico o con poca frecuencia), realice maniobras de [Reanimación cardiopulmonar](#)
 - Si está inconsciente y respira colóquela en [posición lateral de seguridad](#) y vigile la respiración.
- Indague sobre antecedentes médicos previos (tratamientos y enfermedades, alergias) y circunstancias del suceso.
- Infórmese sobre si hay otras personas afectadas.
- Anime al vómito sin provocarlo.
- Si la víctima vomita, lateralice su cabeza, con control cervical si sospecha traumatismos asociados (ver capítulo [posiciones de espera: Posición de decúbito lateral](#)).
 - Evite que restos del vomito pueden reintroducirse en la vía respiratoria.
 - Limpie en profundidad la boca, asegurándose de que no queden restos.
 - No elimine los restos del vómito para que los sanitarios del servicio médico extrahospitalario puedan observar sus características y recogerlos para su análisis posterior.
- Busque otros signos asociados a la intoxicación.
- Indague sobre antecedentes médicos previos y circunstancias del suceso.
- Comunique al personal del servicio médico extrahospitalario la información recogida y lo realizado con la víctima.



✗ Qué NO hacer:

- ✗ Dar de comer, beber o fumar.
- ✗ Abandonar a la víctima.



Intoxicaciones producidas por inhalación de humo

Tenga en cuenta que:

- Las altas temperaturas a las que se inhala el humo producen quemaduras en la vía aérea.
- Las sustancias sólidas que lleva disueltas (cenizas) son muy irritantes.
- Los gases asfixiantes (monóxido de carbono, ácido cianhídrico) llegan a nuestras células e impiden que tomen el oxígeno necesario para respirar.
- Los gases irritantes (derivados del incendio de plásticos, materiales sintéticos) dañan gravemente la vía aérea.

Todos estos elementos y sus efectos no tienen por qué estar presentes en su totalidad, dependiendo de la composición de los materiales en combustión.

Los síntomas principales son:

- Confusión, mareo, desorientación, agresividad.
- Tos, dificultad para respirar, mocos y saliva negros.
- Cefalea.
- Falta de fuerza muscular, agotamiento.
- Náuseas y/o vómitos.
- Coma, parada cardiorrespiratoria.



✓ Qué hacer:

- ✓ Guarde la calma e intente controlar la situación sin ponerse en riesgo.
- ✓ Llame al 112 solicitando servicios sanitarios y bomberos informando de la gravedad y naturaleza del suceso y número de víctimas según pautas generales (ver capítulo [Activación del servicio de emergencias](#))
- ✓ Actúe según recomendaciones de Bomberos (puede consultarlas en www.madrid.es/bomberos) "como actuar ante el fuego y otros riesgos" y "Autoprotección > edificios y viviendas":
 - Intente que las víctimas salgan por su propio pie a una zona ventilada.
 - Para desplazarse en un lugar con humo debe ir arrastrándose por el suelo, ya que en esa zona el aire es más limpio.
 - Si no hay más remedio y usted no corre peligro, apague la fuente intoxicante (estufas, coches, llave de gas, etc).
- ✓ Abra ventanas y puertas para ventilar el lugar una vez que el fuego está sofocado.
- ✓ Si la víctima estuviese ardiendo sofoque el fuego echando una manta por encima o haciéndola rodar por el suelo y actúe según el capítulo de [quemaduras](#).
- ✓ Facilite que la víctima respire lo mejor posible, aflojando ropa y complementos que rodeen el cuello y póngala en la posición más cómoda y que mejor respire (ver capítulo [Posiciones de espera](#)).
- ✓ Valore en todo momento la respiración de la víctima, y si empeora, prepárese para iniciar maniobras de resucitación. (ver capítulo [Reanimación cardiopulmonar](#)).
- ✓ Si la víctima está inconsciente pero respira, colóquela en [posición lateral de seguridad](#) (ver figura).



- ✓ Indague sobre antecedentes médicos previos (problemas respiratorios o cardíacos, diabetes) y circunstancias del suceso (rescate de zona cerrada, inconsciencia en víctima, etc).
- ✓ Permanezca junto a la víctima hasta que lleguen los servicios de emergencias, evitando su enfriamiento.
- ✓ Comunique al personal del servicio médico extrahospitalario la información recogida y lo realizado con la víctima.

- ✓ Siga los consejos de los cuerpos de extinción de incendios en cuanto a permanencia o no en domicilio de las víctimas.

✗ Qué NO hacer:

- ✗ Entrar en un lugar con humo si no va debidamente protegido. Los pañuelos sobre la boca protegen de las cenizas y de la temperatura del humo, pero nunca de los gases.
- ✗ Encender cerillas, mecheros o interruptores en un sitio donde pueda haber gas. Desconecte su teléfono móvil si tiene que entrar a ventilar.
- ✗ Dar de comer o beber a la víctima.
- ✗ Entrar en un sitio con humo si no hay nadie más esperando fuera, ya que si a usted le ocurriera algún percance, nadie puede avisar.
- ✗ Intentar apagar con agua la llama provocada por fuente eléctrica.
- ✗ Abandonar el domicilio seguro y no seguir los consejos de los bomberos o personal sanitario.



Intoxicaciones producidas por agentes químicos

En el hogar hay multitud de productos químicos tóxicos a su alcance como, por ejemplo, los de limpieza. Este acceso a los productos químicos puede ocasionar accidentes e intoxicaciones, que se pueden producir de diferente forma: ingestión (cuando es bebido), inhalación (cuando es respirado), absorción/quemadura dérmica (a través de la piel).

Sospeche la posibilidad de intoxicación en caso de:

- Náuseas, dolores abdominales.
- Aliento con olores raros.
- Vómitos con presencia de productos y olores extraños; sangre.
- Quemaduras dérmicas, ampollas, descamación.
- Quemaduras en la boca y labios.
- Posibilidad de acceso al producto y envases próximos a la víctima.
- Alteraciones de la conciencia.

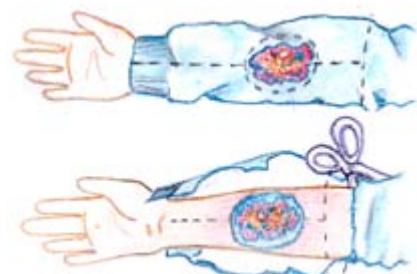


✓ Qué hacer:

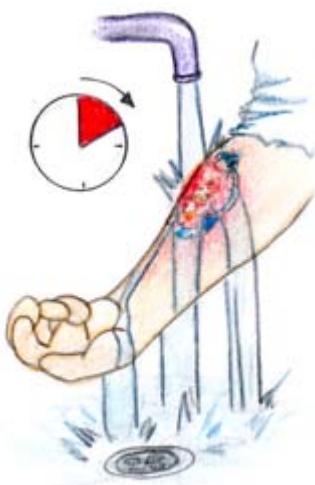
En caso de ingestión, inhalación o absorción dérmica:



- Llame al 112 e informe de la forma de intoxicación y nombre y características del producto, así como del número de víctimas, si las hubiera y estado.
- Asegure su actuación y retírese del lugar donde se encuentre el producto.
- Protéjase las manos con guantes (por ejemplo, los de fregar) y los ojos con gafas si lava al paciente.
- Retire con precaución las ropas impregnadas del producto.
- Si hay presencia de vómitos, impida que toquen la piel y se absorban a través de la misma.
- Quite el producto de la boca cuando esté accesible.
- Guarde la botella o coja la etiqueta del producto.
- Valore continuamente la conciencia y la respiración:
 - Si la persona está inconsciente y no respira o la respiración es ineficaz (escaso movimiento torácico o con poca frecuencia), realice maniobras de [Reanimación cardiopulmonar](#).
 - Si está inconsciente y respira colóquela en [posición lateral de seguridad](#) y vigile la respiración.



- Si hubiera contacto a través de la piel:
 - Lave con agua muy abundante la zona con producto al menos 10 minutos, incluidos los ojos si estuvieran afectados, de tal forma que el agua arrastre y no caiga directamente sobre la zona afectada.
 - Evite que le salpique el agua o el producto.



✗ Qué NO hacer:

- Dar de comer ni de beber a la víctima.
- Provocar el vómito en ningún caso.
- Lavar con poca cantidad de agua, hágalo abundantemente, con la ducha, por ejemplo.



Picaduras y mordeduras

Las mordeduras y picaduras de insectos pueden causar reacciones localizadas o generalizadas, de forma inmediata o pospuesta en el tiempo.



Los síntomas que no implican una urgencia varían de acuerdo con el tipo de insecto y el individuo. La mayoría de las personas experimentan dolor localizado, enrojecimiento, hinchazón o picazón. También se puede experimentar una sensación de ardor, entumecimiento u hormigueo. Pueden aparecer ampollas. Las mordeduras de animales y las picaduras de abejas y avispas son dolorosas. Es más probable que las picaduras de mosquitos, pulgas y ácaros causen picazón antes que dolor.

Algunas personas tienen una reacción alérgica grave a dichas mordeduras y picaduras. Esta es una reacción alérgica conocida como "shock anafiláctico" y requiere atención médica urgente. Las reacciones severas pueden afectar al cuerpo entero y pueden ocurrir muy rápidamente, a menudo en cuestión de unos pocos minutos.

Prevención ante picaduras y mordeduras:

✓ Qué hacer:

- ✓ Sea cauteloso al comer en espacios abiertos, en especial con las bebidas azucaradas o en áreas alrededor de colectores de basura que a menudo atraen a los insectos.
- ✓ Utilice repelente (cremas o aerosoles) de insectos.
- ✓ Utilice ropa que cubra sus partes expuestas (calzado cerrado, botas altas y pantalones largos, sobre todo en zonas con maleza, matojos y áreas rocosas).
- ✓ Si tiene alergias serias a picaduras o mordeduras de insectos:
 - Lleve consigo un botiquín de emergencia, breve informe de su alergia y la medicación prescrita por su médico.
 - Informe a sus amigos y familiares de su problema alérgico y de cómo utilizar la medicación en caso de que tenga una reacción.

✗ Qué NO hacer:

- Hurgar en zonas de anidamiento de insectos.
- Realizar movimientos rápidos y bruscos cerca de colmenas o nidos de insectos.
- Usar perfumes y ropa con colores claros y llamativos.
- Utilizar repelentes que sean inapropiados para insectos.
- Usar ropa que deje al descubierto gran parte del cuerpo.

Actuación general ante picaduras y mordeduras:

✓ Qué hacer:

- ✓ Tranquilice a la víctima y proporcionele reposo.
- ✓ Quite los anillos y todos los objetos que le puedan apretar la parte afectada.
- ✓ Retire el aguijón. Raspe el aguijón con cuidado. Hágalo en la misma dirección por la que penetró. Utilice para ello el borde afilado de una navaja o una tarjeta plástica.
- ✓ Aplique compresas de agua helada o fría sobre el área afectada para reducir la inflamación y disminuir el dolor y la absorción del veneno.
- ✓ Cuando se presenta reacción alérgica severa llame al 112 y suministre un antialérgico (antihistamílico u otra medicación por indicación médica).
- ✓ Vigile posibles alteraciones de las constantes vitales (frecuencia cardíaca, respiratoria, etc.) y actúe si se modificaran, informando al 112.



✗ Qué NO hacer:

- ✗ Con carácter general, no se deben aplicar torniquetes.
- ✗ Administrar a la víctima estimulantes, ácido acetilsalicílico o cualquier otro medicamento para el dolor.
- ✗ No aplique barro, pues aunque calma el dolor y picor, infectaría la picadura.

Picaduras de insectos

Pueden revestir gravedad si son múltiples, afectan a la boca o garganta produciendo hinchazón y dificultad respiratoria, o si la persona es hipersensible y desarrolla una reacción alérgica grave.

- Limpie la herida con agua y jabón.
- Aplique una compresa encima de la picadura con: vinagre, hielo o agua fría.
- Tenga en cuenta que al producirse la picadura, el saco venenoso y en el caso de las abejas, el agujón, queda en la piel.
- En caso de picaduras en el interior de la boca que provoquen dificultad respiratoria, haga chupar hielo.
- Vigile posibles alteraciones de las constantes vitales (frecuencia cardiaca, respiratoria, etc.) y actúe si se modificaran, informando al 112.



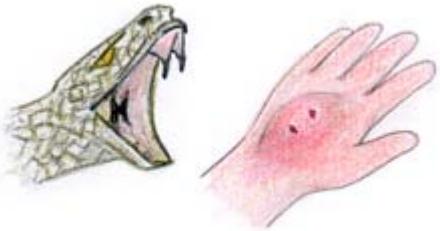
Mordedura de garrapata

- Llene un tapón con alcohol o acetona y tape con él a la garrapata, que quedará entre la piel y el tapón. Manténgalo sujeto durante dos o tres minutos. Transcurrido este tiempo, retire el tapón y la garrapata se encogerá y sacará las patas de la piel, que son las causantes de la infección. Retire la garrapata muerta con una pinza o palillo.
- Retire las patas, una vez que se hayan desprendido, con la ayuda de unas pinzas. Si no tiene pinzas utilice guantes o un trozo de plástico para proteger sus dedos. Se recomienda que no puncione o las rompa dentro de la lesión porque podrá producir una infección al quedar las patas en el interior de la piel.
- Lave frotando la piel con agua y jabón, para remover los gérmenes que hayan quedado en la herida.
- No use calor porque lesiona la piel y no garantiza que las garrapatas se desprendan completamente.
- Avise al 112, especialmente, si no puede quitarlas, si parte de ellas permanecen en la piel o si se desarrolla una erupción.

Mordeduras de animales domésticos y salvajes

- Limpie meticulosamente la herida con agua y jabón.
- Detenga la hemorragia si la hubiera (ver capítulo: [Hemorragias](#)).
- Cubra la herida con gasas o apósitos estériles.
- Asegure que sea atendido por un médico para su vacunación en prevención de rabia, tétanos o difteria.
- Consiga la cartilla de vacunación del animal doméstico o, si es posible, capture al animal que provocó la mordedura para que sea examinado por un veterinario.

Mordedura y picadura de serpiente venenosa (víbora hocicuda en España)



ofidios.

- Coloque una compresión (torniquete) siempre entre la herida y el corazón, que impida el retorno venoso, este hará que la herida sangre poco y las venas superficiales se engrosen, pero retardará la absorción del veneno.
- Mantenga en reposo la zona afectada.
- Desinfecte la herida y aplique frío local, mediante hielo o compresas frías.
- No efectúe incisiones en la herida, no corte, ni succione el veneno.
- Compruebe signos vitales, si están alterados llame al 112 haciendo saber que es una mordedura de serpiente, para que el SEM valore la necesidad de administrar suero anti-ofidios.

Picaduras de animales marinos

- Saque la espina o pincho si la hubiera. En caso de medusas, retire los tentáculos urticantes con agua caliente o arena seca
- Alivie el dolor, aplicando en la zona compresas empapadas con agua o zumo de limón.
- Las secreciones emitidas por estos animales son destruidas por el calor, introduzca la zona afectada en agua caliente, para aliviar el dolor.
- No rasque ni frote la zona afectada, esto aumentaría las molestias.
- Si la reacción es urticante (ronchones en la piel) acuda al médico.



Reacciones alérgicas

Son respuestas anormales y exageradas del sistema inmune ante sustancias que no son bien toleradas por el organismo. Estas sustancias son llamadas alergenos, que entran en contacto con la piel, la nariz, los ojos, las vías respiratorias y el tubo digestivo. Dichas sustancias pueden ser inhaladas hacia los pulmones, ingeridas o inyectadas.

Muchas reacciones alérgicas son leves, mientras que otras pueden ser graves y potencialmente mortales. Pueden estar limitadas a una pequeña área del cuerpo o pueden afectarlo todo.

✓ Qué hacer:

- Retire al paciente del foco causante de la reacción alérgica.
- Valore nivel de conciencia de la víctima (ver capítulo [Reconocimiento de la víctima](#)).
- Si la víctima permanece consciente, colóquela en posición semisentada (ver capítulo [Posiciones de espera](#)).
- Mantenga esta posición hasta la llegada de los servicios de emergencias médicas mientras no se deteriore el estado de la víctima.
- Compruebe la aparición de síntomas como palidez, sudoración o frialdad de la piel, dificultad respiratoria y para hablar, inflamación en partes blandas.
- Pregunte a la víctima por posibles alergias conocidas y si porta tratamiento para emergencias semejantes.
- Reevalúe de manera continua todo el cuerpo, buscando otras zonas con síntomas de reacción alérgica, progresión de la reacción, así como el estado general de la víctima.
- Preste especial atención a la vía aérea de la víctima.
- Si quedara inconsciente llame al 112 indicando la situación en la que se encuentra la víctima. Observe si respira.
 - Si no respira o su respiración es ineficaz (boqueos, escaso movimiento torácico), inicie [maniobras de reanimación cardiopulmonar](#).
 - Si respira, póngale en [posición lateral de seguridad](#).
- Comunice al personal del servicio médico extrahospitalario la información recogida y las medidas realizadas sobre la víctima, así como cualquier información de interés (antecedentes, tratamientos, traumatismos).



✗ Qué NO hacer:

- ✗ Dar de beber ni de comer a la víctima.
- ✗ Dejar que se rasque si tuviera picores.



Lesiones en tejidos blandos: heridas y contusiones

La aparición de heridas y contusiones se asocia al traumatismo físico por impacto brusco con objetos (romos, cortantes, punzantes, amorfos, etc.). Su gravedad dependerá de diversos factores:

- La fuerza y modo del impacto.
- Sucesión de impactos encadenados.
- Superficie y profundidad corporal afectada.
- Tiempo de exposición sin tratamiento adecuado.

Siendo más grave cuanto mayor sea cada uno o se sumen.

Heridas

El contacto con energía de objetos del entorno puede romper la piel y profundizar en los tejidos blandos, ensuciando y contaminando, llegando a producir dolor y [hemorragias](#). Al quedar la herida abierta el riesgo de infección puede producirse si no se actúa de la siguiente manera:

✓ Qué hacer:

- 
- Averigüe el objeto y forma de la lesión.
 - Limpie y desinfecte sus manos y el instrumental (ver capítulo [Medidas de higiene](#)).
 - Lave a chorro con agua y jabón el foco de la herida.
 - Limpie con gasas o pañuelos de tela humedecidos, lo más asépticos posibles, arrastrando desde el centro hacia los bordes y desecharlo la superficie ya utilizada.
 - Utilice alguna sustancia antiséptica que no tiña comprobando antes que la víctima no sea alérgica a sus componentes.
 - Cubra la totalidad de la superficie con apóstoles humedecidos y sujetelo con esparadrapo, cinta adhesiva o venda.
 - Ante la gravedad y posibles complicaciones, asegure su traslado a centro sanitario para valoración y tratamiento médico (antibiótico y sutura) y vacunación si procede, llamando al 112.
- 

✗ Qué NO hacer:

- ✗ Utilizar algodón o alcohol.
- ✗ Teñir la herida que vaya a suturarse prontamente con productos antisépticos que contengan yodo o mercurocromo.
- ✗ Aplicar pomadas sin prescripción médica.

Las heridas pueden presentarse asociadas a contusiones.

Contusiones

Cuando el impacto no rompe la piel pero afecta a la musculatura y vasos sanguíneos, causa lesiones que se concentran en la zona afectada, con dolor, hemorragia interna, amoratamiento (cardenal), inflamación (desde el pequeño al gran chichón) y dificultad para el movimiento funcional.

Será más grave cuanto mayor sea la manifestación de estos signos.



✓ Qué hacer:

- 
- ✓ Retire cualquier objeto o prenda que comprima la zona o miembro contundido.
 - ✓ Aplique frío local (hielo, productos congelados) envuelto en una bolsa de plástico y recubierto con un pañuelo de tela o gasa lo más aséptica posible para que no entre en contacto directo con la piel. Quite lo y póngalo alternativamente cada 20 minutos si fuera leve. En caso de gravedad, manténgalo permanentemente.
 - ✓ Si puede, eleve la extremidad afectada.
 - ✓ En contusiones graves, inmovilice el miembro afectado (ver capítulo [Traumatismos en extremidades](#)). Si fuera en cabeza, coloque un collarín cervical de fortuna (ver capítulo [Traumatismos en la columna vertebral](#)).
 - ✓ Ante la gravedad y posibles complicaciones, asegure su traslado a centro sanitario para valoración médica, llamando al 112.

- ✓ Observe si hay signos de alerta tras un día después del evento: dolor que va en aumento, inflamación que aumenta, amoratamiento generalizado del miembro, impotencia funcional, lo que exigirá consulta médica.



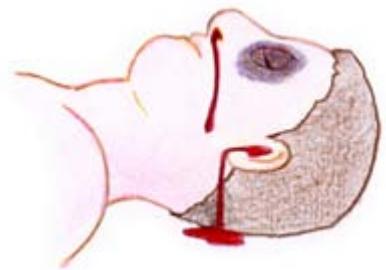


Traumatismos en cabeza

Son todas aquellas lesiones que afectan a cara, cuello y/o cráneo, ya sean contusiones, heridas y/o fracturas.

Las heridas en cualquiera de estas zonas se caracterizan por:

- Hemorragias abundantes.
- Hematomas de rápida aparición.
- A nivel del cráneo, desprendimiento fácil de la piel.
- Afectación de zonas de especial riesgo: ojos, nariz, boca y orejas.



Las fracturas en cualquiera de estas zonas requieren asistencia médica urgente al poder comprometer la vía aérea, o bien asociarse a una disminución del nivel de conciencia. Los síntomas que pueden aparecer son:

- Dolor intenso y deformidad en la zona de fractura.
- Pérdida de sangre o líquido claro por nariz u oídos.
- Incapacidad de la víctima por recordar lo sucedido (amnesia).
- La víctima no para de repetir las mismas conversaciones.
- Mareos, náuseas, vómitos fuertes.
- Respiración lenta con períodos de parada respiratoria.
- Pupilas desiguales o muy abiertas y que no reaccionan a los cambios de luz.
- Cambios en el estado de conciencia (somnolencia, coma, irritabilidad, convulsiones).
- Hematomas alrededor de los ojos o por detrás de las orejas.
- Dificultad respiratoria y engrosamiento del cuello.
- Desviación de la nuez hacia un lado del cuello.

Todos estos síntomas pueden aparecer en el momento o incluso pasadas algunas horas.

✓ Qué hacer:

- ✓ Ante cualquier impacto violento en la cabeza y con la presencia de cualquier síntoma descrito anteriormente, llame al 112 y detalle las circunstancias y estado de la víctima.
- ✓ Mantenga la calma y controle la situación.
- ✓ Coloque a la víctima boca arriba, elevándola en bloque ([posición antitrendemeburg](#)). Si no fuera posible la elevación en bloque, eleva la cabeza y los hombros manteniendo inmóvil el eje cabeza-cuello.
- ✓ Facilite la respiración abriendo camisas o retirando cualquier ropa u objeto que pueda dificultar la respiración o el manejo de la víctima.
- ✓ Si la víctima está consciente, intente averiguar qué ha sucedido, cómo se siente, en busca de algún síntoma (ver capítulo [Reconocimiento de la víctima](#)).
- ✓ Si la víctima está inconsciente, llame al 112 indicando la situación en la que se encuentra la víctima. Observe si respira. Si no respira o su respiración es ineficaz (boqueos, escaso movimiento torácico), inicie maniobras de [reanimación cardiopulmonar](#).
- ✓ Si aparecen convulsiones, actúe según las pautas indicadas en el capítulo [Convulsiones](#).
- ✓ En caso de hemorragia, heridas y contusiones actúe según las pautas indicadas en el capítulo [Hemorragias](#).



- ✓ En caso de fractura en cara coloque hielo local protegido con un paño.
- ✓ Si hay hemorragia, tápela inmediatamente y coloque un vendaje circular que sujeté y comprima el apósito, o bien realice presión con la mano sobre el punto sangrante hasta que deje de sangrar. En caso de fractura, tenga cuidado con la presión para evitar lesionar más a la víctima.
- ✓ Vigile la respiración de la víctima, y si está alterada, prepárese para iniciar [maniobras de resucitación](#) si fuera necesario.
- ✓ En caso de traumatismo leve en cráneo, coloque hielo local protegido con un paño en los primeros minutos.
- ✓ Cuando los servicios de emergencias lleguen, explique cómo fue el suceso, describa el traumatismo, los síntomas referidos y evolución, así como las maniobras realizadas sobre la víctima.

 Qué NO hacer:

- ✗ Dar de comer o beber a la víctima.
- ✗ Dejar sola a la víctima aunque los síntomas desaparezcan.
- ✗ Movilizar el cuello aunque el golpe no haya sido directamente ahí.
- ✗ Taponar las orejas si sale líquido o sangre por ellas.
- ✗ Quitar el casco del motorista, si no lo ha hecho nunca.



Traumatismos en la columna vertebral

Sospeche lesión de columna cuando la víctima haya recibido un fuerte golpe en la cabeza y espalda; caídas desde una altura considerable y accidentes con impactos violentos o esté inconsciente.

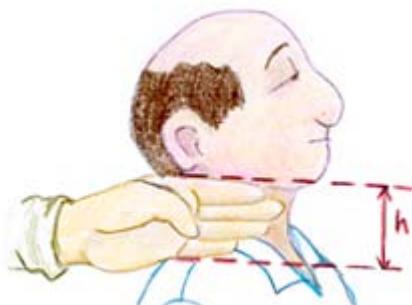
La víctima sentirá dolor y rigidez muscular. Presuma gravedad cuando haya perdido movilidad o sensibilidad en las extremidades, así como dificultad respiratoria.

✓ Qué hacer:

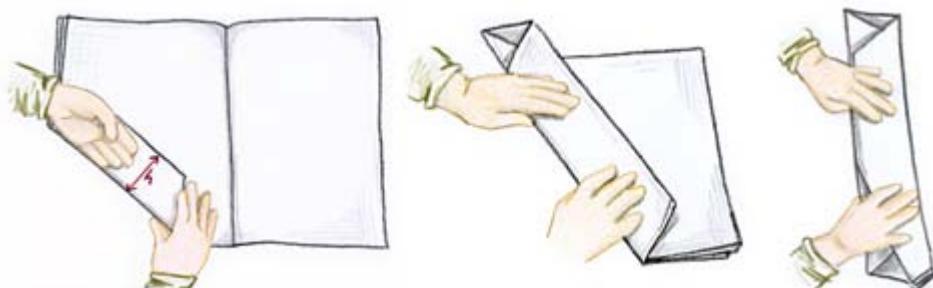
- ✓ Llame al 112.
- ✓ Mantenga a la víctima inmóvil y alineando el eje cabeza-cuello-columna.
- ✓ Sujete la cabeza con ambas manos igual que en los [traumatismos en cabeza](#).
- ✓ Realice una **Inmovilización cervical de fortuna**:



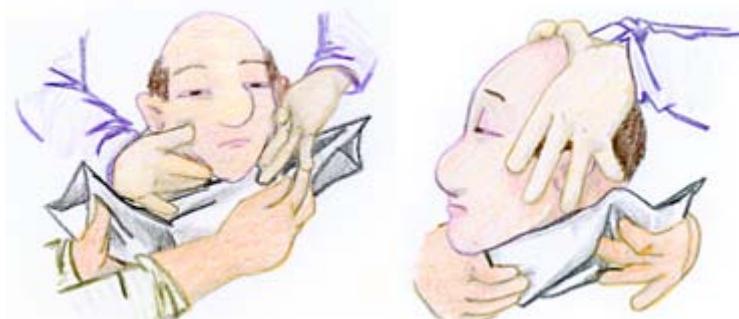
- Pida ayuda a otra persona. Indíquele que sujeté fuertemente la cabeza e impida que se mueva.
- Mida el ancho del cuello de la víctima con sus dedos, desde el hombro hasta el maxilar inferior.



- Extienda unas 4 o 5 hojas de periódico y dóblelas con el ancho anteriormente obtenido en diagonal.



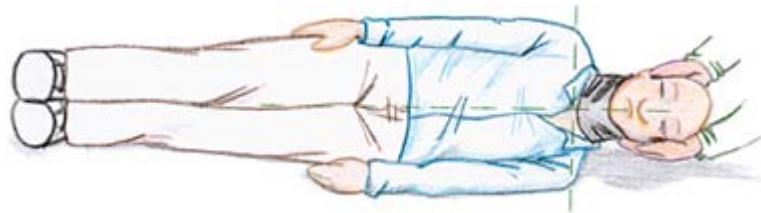
- Coloque el periódico así doblado alrededor del cuello de la víctima lo más ajustado posible permitiendo que respire y trague con normalidad.
- Sujete este "collarín improvisado" mediante cinta adhesiva, anudando una corbata, una tira de tela ancha, pañuelos triangulares, etc. pero sin oprimir el cuello.



- Continúe manteniendo el control de la cabeza con ambas manos.

- ✓ Si por razones de urgencia (vómito súbito), precisara **voltear** a la víctima:

- Pida ayuda a otra persona. Indíquele que sujeté fuertemente la cabeza para impedir que se mueva.



- _ Colóquese en el lado elegido para el giro.
- _ Coloque los brazos de la víctima sobre el cuerpo cruzados por las muñecas, si no presenta lesiones en ellos.
- _ Ponga una de sus manos en el hombro más alejado de la víctima y la otra en el muslo de ese mismo lado.
- _ Cuando estén ambos listos, tire fuerte y lentamente hacia usted, haciendo rodar a la víctima, mientras que el otro socorrista mantiene sujetada la cabeza firmemente.
- _ Mantenga la posición alineada mientras dure la urgencia que motivó la lateralización.



Traumatismos en tórax y abdomen

Avise al 112 si observa alguno de estos signos y síntomas:

- Dolor intenso en la zona afectada.
- Dificultad para respirar.
- Piel azulada, especialmente en los labios.
- Sudoración, ansiedad, náuseas.
- Piel pálida, fría y pegajosa.

Lesiones no penetrantes

Son traumatismos que **no presentan** orificio de entrada o salida, ni objetos enclavados. Suelen provocarse por el impacto de objetos romos o por el impacto de la víctima contra objetos al ser proyectada con gran energía

✓ Qué hacer:

- ✓ Conserve la calma y asegure el entorno.
- ✓ Llame al 112 informando de las circunstancias y del estado de la víctima (herida penetrante o no, según lo que observe).
- ✓ Valore nivel de conciencia de la víctima. Si está inconsciente proceda como se indica en [reanimación cardiopulmonar](#).
- ✓ Si estuviera consciente, colóquelo en posición semisentado (en tórax) o de defensa abdominal (en abdomen).
- ✓ Descubra el torso y la espalda de la víctima para buscar signos de lesiones en la zona con dolor.
- ✓ Afloje cinturones y fajas.
- ✓ **En tórax:** Compruebe la simetría del tórax así como la aparición de posibles deformidades.
- ✓ **En abdomen:** Compruebe la rigidez del abdomen sin provocar más dolor.
- ✓ Cuantifique la frecuencia respiratoria de la víctima.
- ✓ Valore si la víctima presenta palidez y/o sudoración.
- ✓ Actúe sobre las heridas, contusiones y [hemorragias](#).
- ✓ Abrigue a la víctima.
- ✓ Reevalúe de manera continua el estado general de la víctima y esté atento a los síntomas de otras lesiones asociadas.
- ✓ Cuando los servicios de emergencias lleguen, explique cómo fue el suceso, describa el traumatismo, los síntomas referidos y las modificaciones del estado de la víctima.

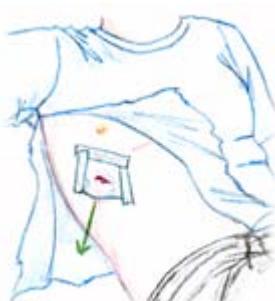
✗ Qué NO hacer:

- ✗ Palpar o comprimir la zona dolorida.

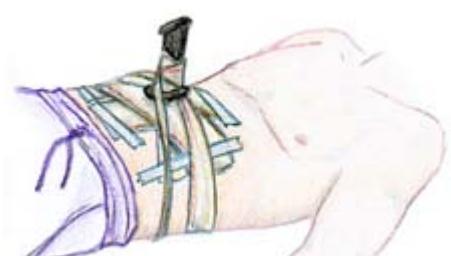
Lesiones penetrantes

Son traumatismos que presentan orificios de entrada o salida, u objetos enclavados

✓ Qué hacer:



- ✓ Actúe de la misma forma que en las lesiones no penetrantes.
- ✓ Asegure el objeto enclavado para evitar que se mueva, mediante la aplicación de un almohadillado a su alrededor bien fijado al cuerpo.
- ✓ Si la víctima no realiza la expansión completa o simétrica de uno de los lados del tórax, o la herida parece silbar, coloque sobre la herida un apósito impermeable, pegado al tórax por tres de sus cuatro bordes.
- ✓ En caso de salida de vísceras hacia el exterior, cúbralas con el material más limpio que posea mojado en suero o agua templada.



✗ Qué NO hacer:

- ✗ Palpar o comprimir la zona dolorida.
- ✗ Retirar los objetos enclavados.
- ✗ Introducir las vísceras que hayan salido al exterior.



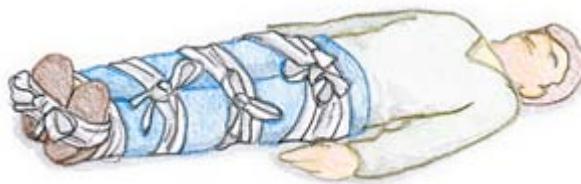
Traumatismos en extremidades

Sospeche una lesión en huesos, músculos o articulaciones en brazos y piernas, cuando aprecie inflamación, deformidad y la víctima refiera dolor localizado y con el movimiento y dificultad para la movilidad de la zona.

Presuma gravedad cuando la dificultad para mover el miembro se intensifique y la deformidad sea muy clara, llegando a asociarse con heridas y contusiones e, incluso, salida del hueso en fracturas abiertas.

✓ Qué hacer:

- ✓ Llame al 112 informando de las circunstancias y estado de la víctima.
- ✓ Aplique hielo o frío local, si no existe herida en la zona.
- ✓ Si la víctima colabora, pídale que no mueva el miembro e incluso que se lo sujeté en la posición menos dolorosa. No permita el apoyo en caso de lesión en miembro inferior.
- ✓ Inmovilice el miembro afectado de tal manera que impida el movimiento de la articulación anterior y de la posterior a la zona de fractura.
 - En miembros inferiores, mantenga la inmovilización uniendo ambas piernas y pies con cintas, tiras de tela anchas, pañuelos triangulares, etc.



- En miembros superiores, adapte el brazo al cuerpo con un pañuelo triangular a modo de cabestrillo o con la propia ropa sujetada por un botón, imperdible, cordón de los zapatos, etc.

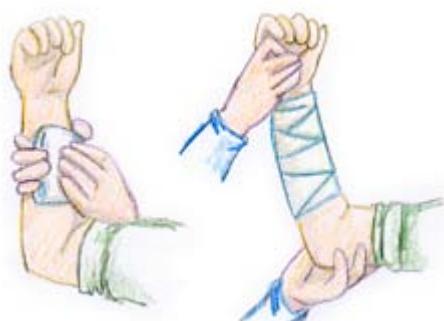
✗ Qué NO hacer:

- ✗ Alinear una posible fractura o luxación.
- ✗ Aplicar calor o pomadas antiinflamatorias.
- ✗ Movilizar activamente un miembro con evidencia de fractura.

Cómo actuar sobre la lesión con heridas y/o hemorragias asociadas

✓ Qué hacer:

- ✓ Llame al 112 informando de las circunstancias y estado de la víctima.
- ✓ Mantenga el miembro inmóvil como se ha descrito anteriormente.
- ✓ Controle la hemorragia (ver capítulo [Hemorragias](#)) y limpie las heridas sin presionar sobre el foco de lesión (ver capítulo [Lesiones en los tejidos blandos](#)).
- ✓ Cubra con apósitos y, si fuera necesario, vende la herida.
- ✓ Vigile las constantes de la víctima.



✗ Qué NO hacer:

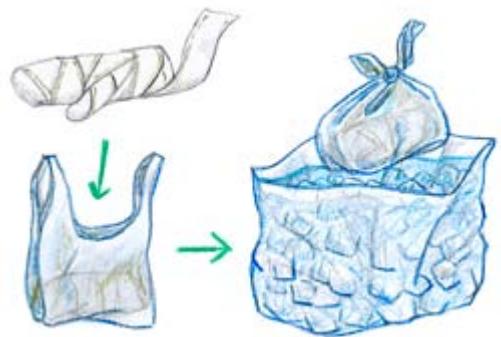
- ✗ Introducir ni manipular el hueso fracturado.

Amputaciones

✓ Qué hacer:

- ✓ Llame al 112 informando de las circunstancias y estado de la víctima.
- ✓ Envuelva el miembro amputado en paños limpios y húmedos e introduzcalo en una bolsa de plástico. Ciérrela.





- ✓ Introduzca esta bolsa dentro de otra que contenga hielo en cantidad suficiente para cubrirla.
- ✓ Actúe sobre las heridas del muñón (ver capítulo [Lesiones en los tejidos blandos](#)).





Hemorragias

Se produce una hemorragia cuando un vaso sanguíneo se rompe, acarreando pérdida de sangre según pasa el tiempo.

La impresión de gravedad aparecerá cuando observe los siguientes signos y síntomas según pasa el tiempo sin control del sangrado y en función del volumen sanguíneo perdido:

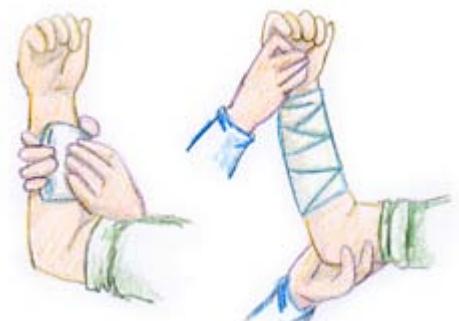
- Palidez cutánea y de mucosas (boca, nariz).
- Ansiedad creciente.
- Respiración agitada, rápida y poco profunda.
- Pulso rápido y débil.
- Obnubilación.

Si aparecen estos signos, actúe rápidamente sobre ellos: [Reconocimiento de la víctima](#) y llame al 112.

Controle las hemorragias visibles siguiendo estos pasos:

✓ Qué hacer:

- ✓ Siente o tumbe a la víctima. Tranquilícela (ver capítulo [Relación con la víctima](#)).
- ✓ Adopte las [medidas higiénicas](#) y de seguridad frente a infecciones y contagios.
- ✓ Aplique apósitos o pañuelos de tela lo más asépticos posible cubriendo el foco sangrante y presione directamente sobre estos con sus dedos, mano o puño.
- ✓ Eleve el miembro afectado si las lesiones se lo permiten.
- ✓ Si el sangrado continúa y ha empapado la primera capa de apósitos: coloque otra por encima sin retirar los primeros. Vuelva a presionar inmediatamente.
- ✓ El sangrado persiste: repita la misma operación anterior.
- ✓ Aplique un fuerte vendaje compresivo, manteniendo el miembro elevado.
- ✓ Observe la coloración por debajo del vendaje y si aparece dolor intenso u hormigueo. Si esto sucediera, afloje progresivamente la presión, siempre y cuando, el sangrado no aparezca nuevamente.
- ✓ En caso de mareo o inconsciencia, ponga a la víctima en [posición antishock](#).
- ✓ Reevalúe de manera continua el estado general de la víctima, compruebe sus constantes, y actúe si se deterioran (ver capítulo [Reconocimiento de la víctima](#)).
- ✓ Cuando los servicios de emergencias lleguen, explique cómo fue el suceso, describa el traumatismo, los síntomas referidos y las modificaciones del estado de la víctima.



✗ Qué NO hacer:

- ✗ Presionar directamente sobre un foco de lesión con mucho dolor.
- ✗ Forzar la elevación de un miembro con deformidad o con mucho dolor.
- ✗ Dar de beber o comer a la víctima. Tampoco fumar.

Actuaciones sobre hemorragias internas exteriorizadas:

CONDUCTO	ORIGEN	ACTUACIÓN	POSICIÓN	IMAGEN
Nariz	Nariz. Faringe superior.	Presión directa en fosa nasal. Inclinar la cabeza hacia delante.	Sentado	

Oído	Possible lesión en cráneo o en el propio conducto auditivo.	No taponar. Vigilar nivel de conciencia y constantes	Lateral sobre el oído sangrante.	
Boca	Cavidad bucal	Si el foco sangrante fuera accesible, límpie y presione con apósitos.	Sentado con la cabeza inclinada ligeramente hacia adelante y la boca abierta.	
Boca	Digestivo	No administrar nada vía oral.	Defensa abdominal (fetal)	
Boca	Pulmonar	No administrar nada vía oral.	Defensa torácica. Semisentado.	
Ano	Digestivo/Recto	Aplicar compresas.	Defensa abdominal (fetal)	
Vagina	Aparato genital femenino	Aplicar compresas.	Defensa abdominal. Fritz.	



Lesiones en ojos, oídos y nariz

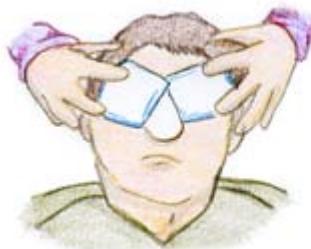
Este tipo de lesiones pueden tener múltiples orígenes, produciendo principalmente: erosiones, heridas, picaduras o enclavamiento de objetos.

Lesiones en los ojos

Producen dolor intenso, irritación, pérdida de visión o visión borrosa, lagrimeo constante e inflamación en el párpado.

✓ Qué hacer:

- Tranquilice al herido y evite que se manipule.
- Averigüe lo ocurrido.
- Si la lesión ha sido provocada por un agente químico, identifíquelo y guárdelo para presentárselo al servicio de emergencias.
- Observe su evolución, si hay hemorragia, heridas o inflamación en la zona afectada.
- Indique al herido que se retire las lentes de contacto si las tuviera.
- Lave el ojo con agua a chorro, de forma suave, dejando que resbale desde la nariz hacia la parte ocular más externa, a fin de arrastrar el objeto. Si fuese una quemadura por químicos, lea la etiqueta, ya que el agua puede ser perjudicial (ver capítulo [Intoxicaciones producidas por agentes químicos](#)).
- Tape ambos ojos con gasas húmedas y asegure el traslado a un hospital para que pueda ser evaluado por un oftalmólogo.



- En caso de inflamación o contusión en párpados, aplique hielo o frío local envuelto en un pañuelo limpio.
- Informe a los servicios de emergencia o médico receptor (atención primaria, hospitales) sobre los datos recogidos (agente productor de lesión), el tiempo transcurrido, presencia de heridas, inflamación o hemorragias, así como de las acciones que ha realizado sobre el herido antes de su llegada.

✗ Qué NO hacer:

- ✗ Frotar el ojo.
- ✗ Administrar colirios o medicamentos.



Cuerpos extraños en los oídos y en la nariz

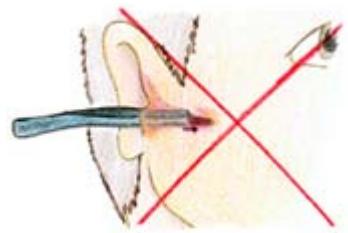
Si se ha introducido un objeto en el oído o en la nariz, en algunas ocasiones, los síntomas aparecen más tarde.

✓ Qué hacer:

- ✓ Tranquilice al herido y evite que se manipule el objeto.
- ✓ Averigüe lo que se ha introducido y cantidad.
- ✓ Observe su evolución, si hay hemorragia, heridas o inflamación en la zona afectada.
- ✓ Si el objeto se encuentra en la parte externa de un orificio nasal, tapone el otro y haga sonar fuerte la nariz para intentar expulsarlo.
- ✓ Informe a los servicios de emergencia o médico receptor (atención primaria, hospitales) sobre los datos recogidos, tipo de objetos u objetos, su tamaño, el tiempo transcurrido desde que se lo introdujo, presencia de heridas, inflamación o hemorragias, así como de las acciones que ha realizado sobre el herido antes de su llegada.

 **Qué NO hacer:**

- ✗ Introducir objetos (pinzas, objetos punzantes) para tratar de extraer el cuerpo extraño, ni manipularlos, ya que puede insertarlo aún más.



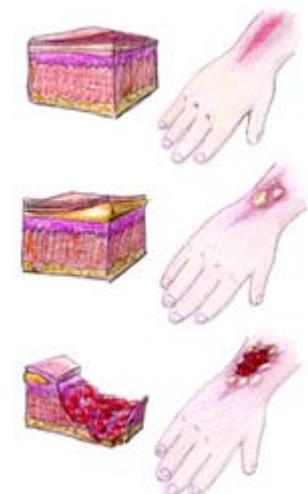


Quemaduras

Son lesiones en la piel provocadas por agentes externos (emisores de calor, productos químicos, electricidad, radiación solar).

La gravedad de la lesión dependerá de:

- **Extensión:** cuanto mayor sea más grave es.
- **Profundidad:**
 - Primer grado: solo afectan a la parte externa de la piel. Provocan dolor.
 - Segundo grado: son más profundas. Producen ampollas y dolor.
 - Tercer grado: pueden afectar a músculos y huesos. No duelen pero son muy graves.
- **Localización corporal:** cara, cuello, manos, pies, articulaciones y genitales, son zonas que requieren atención especial.
- **Tiempo** de exposición con el agente agresor.
- **Edad:** más graves en niños y ancianos.
- **Lesiones traumáticas** asociadas.
- **Enfermedades previas** que padezca la víctima.



Los signos y síntomas presentes pueden ser:

- Ampollas o pérdida de sustancia.
- Dolor.
- Enrojecimiento de la piel.
- Inflamación.
- Piel blanca o carbonizada.

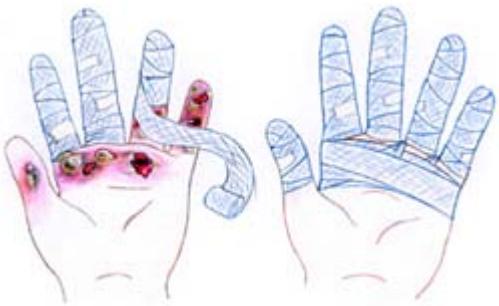
Si la quemadura afecta a la vía aérea superior (laringe, boca o nariz) y cara, los síntomas que pueden aparecer son:

- Sonidos respiratorios raros.
- Cambios en la voz.
- Dificultad al respirar, tos.
- Pelos de nariz o de cejas chamuscados.
- Moco oscuro o con manchas de carbón.

✓ Qué hacer:

- Intente guardar la calma y tranquilizar a la víctima.
- Separe a la víctima del agente agresor siempre con autoprotección.
- Si aún quedan llamas sobre la víctima, sofóquelas cubriendo a ésta con una manta o haciéndola rodar por el suelo.
- Valore nivel de conciencia de la víctima (ver capítulo [Reconocimiento de la víctima](#)). Si la víctima está inconsciente, llame al 112 indicando la situación en la que se encuentra.
- Observe si respira. Si no respira o su respiración es ineficaz (boqueos, escaso movimiento torácico), inicie maniobras de [reanimación cardiopulmonar](#).
- Enfrie la zona afectada con agua abundante durante 10 minutos sin que el chorro de agua caiga directamente sobre la zona afectada.
- Retire anillos, pulseras y ropas que **no estén pegadas** a la piel.
- Llame al 112 informando de las circunstancias (causa de la quemadura, localización) y del estado de la víctima, así como de su edad y antecedentes.
- Tape la quemadura con un apósito limpio sin aplicar ningún tipo de pomada.
 - Si la zona afectada son manos, pies o algún pliegue de la piel, envuelva cada dedo o pliegue por separado en apósitos diferentes.
 - Si tiene algún apósito impregnado específico para quemaduras, puede usarlo.





- Si refiere mucho dolor, continúe enfriando la zona con agua.
- Proteja a la víctima de pérdidas de calor tapándola con una manta (la barrera protectora de la piel ahora está dañada).
- En caso de quemaduras que afecten a la vía aérea, facilite la respiración del paciente aflojando camisas, collares, etc. Si el paciente respira con dificultad, prepárese para realizar [maniobras de resucitación](#).
- Cuando lleguen los servicios de emergencias médicas, explíquenes lo que ha sucedido, las medidas realizadas y toda la información que tenga sobre la víctima.

Qué NO hacer:

- ✗ Permitir que la víctima corra si tiene llamas en sus ropas.
- ✗ Dar de comer ni beber a la víctima.
- ✗ Usar ungüentos o pomadas en la zona quemada.



afectada.

- ✗ Manipular la piel de la zona afectada.
- ✗ Pinchar o vaciar ampollas.
- ✗ Retirar las ropa pegadas a la piel.
- ✗ Intentar usar extintores sobre la víctima para sofocar las llamas.
- ✗ Comprimir con vendajes las quemaduras o pegar esparadrapos o tiritas sobre la piel afectada.



Hipertermias: calambres musculares, insolación y golpe de calor

Nuestro cuerpo es capaz de mantener una temperatura de unos 37º C, independientemente de la temperatura exterior, dentro de unos límites. Esto es posible gracias a unos mecanismos propios del cuerpo, como son los cambios en la circulación de la sangre más próxima a la piel y la sudoración. Cuando estos mecanismos fallan por exposiciones a temperaturas elevadas prolongadas o pérdida de líquidos (deshidratación), aparecen una serie de trastornos progresivamente más graves:

- **Calambres musculares:** producidos por calor más leve. Consiste en espasmos musculares sobre todo a nivel de abdomen, piernas y hombros, debido a la pérdida de líquidos y sales minerales.
- **Insolación:** sucede con exposición prolongada al sol o con ejercicio excesivo en ambiente caluroso. Consiste en una debilidad generalizada por agotamiento y deshidratación severa.
- **Golpe de calor:** trastorno grave y urgente donde la deshidratación es extrema y los mecanismos del cuerpo reguladores de la temperatura corporal fallan, por lo que la temperatura se dispara.



Busque síntomas dentro del contexto de exposiciones a calor prolongadas o ejercicios intensos en ambientes calurosos, tales como:

- Calambres o contracturas musculares dolorosas.
- Temperatura corporal elevada (incluso por encima de 40ºC).
- Piel caliente, húmeda o seca y enrojecida.
- Dolor de cabeza, visión borrosa.
- Nauseas, vómitos.
- Alteraciones de la conciencia, convulsiones.
- Pulso rápido y débil.
- Respiración rápida y superficial.

✓ Qué hacer:

- ✓ Conserve la calma y asegure el entorno.
- ✓ Llame al 112 informando de las circunstancias y del estado de la víctima.
- ✓ Valore nivel de conciencia de la víctima (ver capítulo [Reconocimiento de la víctima](#)). Si la víctima está inconsciente, llame al 112 indicando la situación en la que se encuentra.
- ✓ Observe si respira. Si no respira o su respiración es ineficaz (boqueos, escaso movimiento torácico), inicie maniobras de [reanimación cardiopulmonar](#).
- ✓ Retire a la víctima del ambiente caluroso (sombra o a un lugar fresco con corriente) y manténgala en reposo.
- ✓ Túmbela y eleve sus piernas ([posición antishock](#)) para favorecer la llegada de sangre al cerebro (ver figura).
- ✓ Si la temperatura corporal es muy elevada, quítele la ropa y comience a enfriar su cuerpo con compresas mojadas en agua fría o tapándola con una sábana mojada, sobre todo en ingles, axilas y pecho.
- ✓ Si el único síntoma que aparece son los calambres, masajee la zona favoreciendo la recuperación del músculo.
- ✓ Si la víctima se encuentra consciente y orientada, dele agua o bebidas isotónicas con azúcar.
- ✓ Si aparecen [convulsiones](#) actúe.
- ✓ Si consigue bajar la temperatura corporal alrededor de los 37,5ºC, coloque a la víctima en [posición lateral de seguridad](#).
- ✓ Reevalúe de manera continua el estado general de la víctima (ver capítulo [Reconocimiento de la víctima](#)) y esté atento a los cambios en el nivel de conciencia y respiración.
- ✓ Cuando los servicios de emergencias lleguen, explique las circunstancias del suceso, los síntomas referidos, las modificaciones del estado de la víctima y las medidas realizadas sobre ella, así como cualquier información de interés recogida (antecedentes, tratamientos).



✗ Qué NO hacer:

- ✗ Dejar sola a la víctima.
- ✗ Enfriar directamente con hielo, ya que podría causarle quemaduras.
- ✗ Dar comida ni bebida si no se encuentra consciente.

- ✗ Usar pomadas ni aerosoles en los calambres musculares, ya que no son útiles.
- ✗ Dar bebidas carbonatadas ni con alcohol para rehidratar a la víctima, los gases y el alcohol pueden provocar vómitos, que favorecen la deshidratación. En caso sólo disponer de bebidas azucaradas con gas, batirla o agitarla para quitarlo.

Cómo prevenir:

- Evite hacer ejercicios en horas del día en las que haga más calor.
- Manténgase bien hidratado en los días calurosos, sobre todo si va a practicar alguna actividad que implique desgaste.
- Vista ropa cómoda que permita la transpiración si va a estar expuesto al sol o en ambientes con mucho calor, así como gorras u otra prenda que cubra su cabeza.
- De no estar entrenado previamente, comience gradualmente con la actividad deportiva.
- Evite que niños y ancianos permanezcan mucho tiempo al sol.
- Ante síntomas leves como calambres musculares durante un ejercicio físico, no continúe con la actividad para evitar agravar la situación.



Congelaciones

Son lesiones provocadas por el frío en las zonas más distales (manos, pies, orejas y nariz) que pueden ocasionar la pérdida del miembro, por daño irreparable de los vasos sanguíneos.

Los signos y síntomas que pueden aparecer son:

- Ligero hormigueo o pérdida de sensibilidad en la zona afectada.
- Piel pálida, muy fría, seca, a veces azulada y con entumecimiento de la zona.
- Endurecimiento y rigidez de la piel afectada, con sensación de pinchazos.
- Ampollas oscuras e inflamación en la zona.
- Grietas en la piel, ésta se abre y se pierde.



✓ Qué hacer:

- ✓ Conserve la calma y asegure el entorno.
- ✓ Retire a la víctima a un ambiente seco y caliente.
- ✓ Si tiene ropa mojada o muy frías, retírelas y cámbielas por secas y calientes.
- ✓ Retire anillos, relojes, pulseras y cualquier otro elemento que pueda comprimir un miembro si éste se inflama.
- ✓ Mantenga elevada la zona afectada.
- ✓ Tome la temperatura a la víctima.
- ✓ Mueva a la víctima con cuidado, los movimientos bruscos pueden desencadenar problemas cardíacos.
- ✓ Llame al 112 informando de las circunstancias y del estado de la víctima.
- ✓ Intente calentar la zona afectada, sumergiéndola en agua tibia (40° C) de forma gradual.
- ✓ Si la víctima está consciente y orientada, administre líquidos calientes con azúcar.
- ✓ Si su respiración es muy débil y el pulso no palpable, esté preparado por si fuese necesario iniciar una [Reanimación cardiopulmonar](#).
- ✓ Reevalúe de manera continua el estado general de la víctima (ver capítulo [Reconocimiento de la víctima](#)) y esté atento a los cambios en el nivel de conciencia y respiración.
- ✓ Cuando los servicios de emergencias lleguen, explique las circunstancias del suceso, los síntomas referidos, las modificaciones del estado de la víctima y las medidas realizadas sobre ella, así como cualquier información de interés recogida (antecedentes, tratamientos).

✗ Qué NO hacer:

- ✗ Dejar sola a la víctima.
- ✗ Dar bebidas alcohólicas o tabaco.
- ✗ Frotar directamente la piel de la zona afectada.
- ✗ Aplicar directamente sobre la piel bolsas de calor ni aproximar demasiado a estufas o fuentes de calor.
- ✗ Romper ninguna ampolla.
- ✗ Calentar una zona si existiera nuevo riesgo de congelación.

Cómo prevenir:

- Evite que ancianos y niños salgan en días muy fríos a la calle poco abrigados durante mucho tiempo.
- Es caso de paseos por el monte, vaya protegido y abrigado. Lleve bebidas calóricas y alimentos energéticos.
- Lleve ropa y calzado adecuado con posibilidad de recambio seco en caso de necesidad.
- Si empieza a notar adormecimiento de alguna parte del cuerpo, retírese y no continúe la marcha.



Hipotermia

Se produce cuando la temperatura de una persona desciende por debajo de los 35°C y los mecanismos que tiene el cuerpo para evitar la pérdida de calor (redistribución de la sangre a los órganos importantes, escalofríos) comienzan a fallar. Además de la exposición continua o brusca a bajas temperaturas, factores como edades extremas, delgadez, consumo de alcohol u otras drogas o bañarse en aguas muy frías pueden favorecer una situación de hipotermia.

Los signos y síntomas que pueden aparecer son:

- Escalofríos o tiritona con piel fría, pálida, seca y algunas veces azulada.
- Cambios en el comportamiento de la persona (confusión, desorientación, irritación).
- Rigidez en brazos y piernas.
- Alteraciones de la conciencia.
- Andar de forma inestable y torpe.
- Respiración lenta.
- Pulso débil y lento.



✓ Qué hacer:

- ✓ Conserve la calma y asegure el entorno.
- ✓ Llame al 112 informando de las circunstancias y del estado de la víctima.
- ✓ Valore nivel de conciencia de la víctima (ver capítulo [Reconocimiento de la víctima](#)). Si la víctima está inconsciente, llame al 112 indicando la situación en la que se encuentra.
- ✓ Observe si respira. Si no respira o su respiración es ineficaz (boqueos, escaso movimiento torácico), inicie maniobras de [reanimación cardiopulmonar](#).
- ✓ Retire a la víctima a un ambiente seco y caliente.
- ✓ Si tiene ropas mojadas o muy frías, cámbielas por secas y calientes.
- ✓ Tape la cabeza de la víctima con un gorro o toalla.
- ✓ Tape con mantas, primero el tórax y luego piernas y brazos.
- ✓ Tome la temperatura.
- ✓ Mueva a la víctima con cuidado, pues los movimientos bruscos pueden desencadenar problemas cardíacos.
- ✓ Intente el calentamiento externo, sumergiéndola en agua tibia (40° C), acercándola a una fuente de calor, metiéndola en una cama arropada, pero siempre de forma gradual.
- ✓ Si está consciente y orientada, administre líquidos calientes con azúcar.
- ✓ Si la respiración es muy débil y el pulso no palpable, esté preparado por si fuese necesario iniciar una [Reanimación cardiopulmonar](#).
 - ✓ Asegure su reposo en una posición recogida de brazos y piernas (ver capítulo [Posiciones de espera](#)).
 - ✓ Reevalúe de manera continua el estado general de la víctima y esté atento a los cambios en el nivel de conciencia y respiración.
 - ✓ Cuando los servicios de emergencias lleguen, explique las circunstancias del suceso, los síntomas referidos, las modificaciones del estado de la víctima y las medidas realizadas sobre ella, así como cualquier información de interés recogida (antecedentes, tratamientos).



✗ Qué NO hacer:

- ✗ Dejar sola a la víctima.
- ✗ Dar alcohol.
- ✗ Frotar directamente la piel para hacerla entrar en calor.
- ✗ Calentar agresivamente a la víctima, ya que podría empeorar la situación. Hágalo de forma gradual.
- ✗ Aplicar directamente sobre la piel bolsas de calor ni aproximar demasiado a estufas o fuentes de calor.

Cómo prevenir:

- Evite que ancianos y niños salgan en días muy fríos a la calle poco abrigados durante mucho tiempo.
- En caso de paseos por el monte, vaya protegido y abrigado. Lleve bebidas calóricas y alimentos energéticos.
- Lleve ropa y calzado adecuado con posibilidad de recambio seco en caso de necesidad.



Lesiones producidas por la electricidad y rayos

La corriente eléctrica, ya sea generada de forma natural o artificial, ocasiona lesiones de diversa consideración. El paso de la corriente a través del cuerpo puede aturdir a la víctima y/o provocar una parada cardiorrespiratoria. Produce, además, quemaduras, tanto al entrar como al salir del cuerpo y espasmos musculares que impiden al herido interrumpir el contacto con la fuente eléctrica.

Los niños, las mujeres y los ancianos son más vulnerables ya que su cuerpo ofrece menor resistencia.

Existen dos tipos de corrientes eléctricas:

- **Alto voltaje:** la de transporte presente en las líneas de los tendidos aéreos.
- **Bajo voltaje:** la utilizada en los hogares y lugares de trabajo.

Debemos recordar que el agua supone un riesgo adicional ya que es un buen conductor eléctrico. Tener las manos mojadas o estar sobre un suelo húmedo, incrementa mucho el riesgo de descarga eléctrica.

✓ Qué hacer:

- ✓ Conserve la calma y asegure el entorno antes de tocar a la víctima.
- ✓ Llame al 112 informando de las circunstancias y del estado de la víctima.
- ✓ Apague, desconecte la corriente.
- ✓ Permanezca sobre algún material seco y aislante, como una caja de madera o una esterilla de goma.
- ✓ Si no se puede desconectar, retire de la corriente eléctrica al accidentado utilizando un objeto no conductor, de madera o de plástico (escoba, silla, etc.) o una alfombra.
- ✓ Valore nivel de conciencia de la víctima (ver capítulo [Reconocimiento de la víctima](#)). Si la víctima está inconsciente, llame al 112 indicando la situación en la que se encuentra.
- ✓ Observe si respira. Si no respira o su respiración es ineficaz (boqueos, escaso movimiento torácico), inicie maniobras de [reanimación cardiopulmonar](#).
- ✓ Las quemaduras eléctricas se tratan de forma similar a las quemaduras térmicas, si tiene quemaduras o dificultades respiratorias, proceda según el capítulo [Lesiones producidas por calor: quemaduras](#).



✗ Qué NO hacer:

- ✗ Dejar sola a la víctima.
- ✗ Tocar a la víctima con las manos descubiertas mientras siga en contacto con la fuente de electricidad.
- ✗ Acerarse a menos de 6 metros de una persona que se está electrocutando con corriente eléctrica de alto voltaje hasta que el flujo de energía haya sido interrumpido.
- ✗ No mueva a la víctima de una lesión eléctrica a menos que esté expuesta a un peligro inmediato, siempre que esté garantizada su seguridad propia.



Ahogamiento

El ahogamiento por asfixia o inmersión se produce por la obstrucción de un medio líquido al paso del aire al interior de las vías aéreas, lo que supone una total o menor llegada de líquido a los pulmones.

El caso de atragantamiento, se produce por el bloqueo de las vías aéreas por algún objeto, pudiendo obstruir de manera total o parcial el paso del aire a los pulmones. Suele aparecer espasmo en la glotis (garganta), lo que dificulta el paso del aire (ver capítulo [Obstrucción de vía aérea por cuerpo extraño](#)).

Según el medio en que se produzca, la inmersión puede ser:

- En **agua de mar**, por sus características, provoca el paso de líquido hacia los pulmones llegando a producir lesiones graves.
- En **agua dulce**, por sus características, pasa rápidamente desde los pulmones hacia el torrente sanguíneo, produciendo lesiones graves.
- En **piscinas**, que tiene las características del agua dulce, con el agravante del cloro que produce acción tóxica en los pulmones.
- En **aguas contaminadas**, agravadas por la contaminación bacteriana y química.

✓ Qué hacer:

- ✓ En lugares donde se encuentre socorrista, llame su atención e indíquele el lugar.
- ✓ Si es posible, extraiga a la víctima del lugar donde se está produciendo el suceso. **Si no sabe nadar abstengáse de iniciar el salvamento y llame al servicio de urgencias 112.**
- ✓ En caso de haber podido sacar a la víctima, valore su nivel de conciencia (ver capítulo [Reconocimiento de la víctima](#)). Si está inconsciente, llame al 112 indicando la situación en la que se encuentra.
- ✓ Observe si respira. Si no respira o su respiración es ineficaz (boqueos, escaso movimiento torácico), inicie maniobras de [reanimación cardiopulmonar](#).
- ✓ Maneje a la víctima como si existiera lesión de la columna cervical.
- ✓ Mantenga la temperatura corporal de la víctima tapándola con mantas.
- ✓ Ponga en [posición lateral de seguridad](#) a la víctima hasta la llegada de los servicios de urgencia.

✗ Qué NO hacer:

- ✗ Intentar salvar a la víctima si no sabe nadar.



Urgencias pediátricas

Avise al 112 si observa alguno de estos signos y síntomas:

- Alteración anormal de la conducta.
- Dificultad para respirar con normalidad.
- Alteraciones en la coloración de la piel.
- Convulsiones.
- Vómitos persistentes.
- Fiebre alta.

Enfermedades más frecuentes:

Dificultad respiratoria

Possiblemente de origen viral (catarros, bronquitis, rinitis, laringitis). Estos procesos pueden complicarse, provocando inflamación en la garganta o cierre de los bronquios, ocasionando dificultad respiratoria.

Signos de alerta:

Avise al 112 si observa alguno de estos signos y síntomas:

- Respiración jadeante, difícil, con uso de la musculatura del tórax para ayudarse a respirar. Movimientos rápidos de las fosas nasales (aleteos).
- Presencia de ruidos o pitidos al respirar.
- Angustia.
- Tono muscular debilitado.
- "Tos perruna" (estridente).
- Color azulado en la piel y en las mucosas (labios).
- Bajo estado de ánimo, tendencia al sueño, bajo nivel de conciencia.
- Fiebre alta (más de 38 grados centígrados).

✓ Qué hacer:

- ✓ Incorpore al niño y siéntelo.
- ✓ Afloje su ropa.
- ✓ Llévelo a un lugar con aire fresco.
- ✓ Reevalúe de manera continua el estado general del niño.
- ✓ Cuando los servicios de emergencias lleguen, explique las circunstancias, los síntomas referidos y las modificaciones del estado de la víctima y las medidas realizadas sobre él, así como cualquier información de interés recogida (antecedentes, tratamientos).

✗ Qué NO hacer:

- ✗ Administrar medicación por su cuenta.
- ✗ Desabrigarle.



Deshidratación

Es la pérdida de agua del organismo, provocada por problemas digestivos, como gastroenteritis aguda, o por la exposición a altas temperaturas.

Signos de alerta:

Avise al 112 si observa alguno de estos signos y síntomas:



- Inconsciencia.
- Que no orina.
- Ojos, lengua y labios secos.
- Que la piel se queda en forma de pliegue al pellizcarla.
- Fiebre muy alta.
- Convulsiones.

✓ Qué hacer:

- ✓ Si está consciente, dele de beber agua o líquidos con sales minerales y glucosa, a sorbitos.
- ✓ Reevalúe de manera continua el estado general del niño.
- ✓ Cuando los servicios de emergencias lleguen, explique las circunstancias, los síntomas referidos y las modificaciones del estado de la víctima y las medidas realizadas sobre él, así como cualquier información de interés recogida (antecedentes, tratamientos).

Fiebre

Normalmente provocada por procesos víricos o infecciones. Ocasionan [nerviosismo y ansiedad](#) y, en algunas ocasiones, la fiebre alta puede provocar [convulsiones](#).

✓ Qué hacer:

- ✓ Trate de bajar la temperatura corporal, enfriando progresivamente con paños húmedos aplicados sobre la frente, nuca, pliegues (axilas, ingles) o bañando al niño en agua tibia.
- ✓ Desarrote al niño. Aléjelo de las corrientes de aire





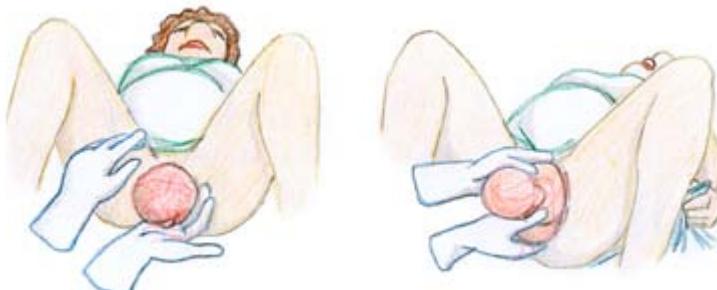
Parto de urgencia

El embarazo es el lapso de tiempo entre la concepción y la expulsión del feto, cuya duración aproximada es de 40 semanas. El parto es el periodo a través del cual, la madre expulsará al feto; va acompañado de otros procesos, que se dividen en tres fases:

- **Dilatación.** La madre comienza a sentir dolor abdominal, con intensidad y frecuencia en aumento, pudiendo extenderse a la zona lumbar (contracciones). Puede expulsar líquido amniótico (romper aguas) y tapón mucoso. El feto se encaja en la pelvis materna, y la salida del útero se dilata progresivamente.
- **Expulsión.** Consiste en la salida del feto del interior de la madre al exterior. Comienza con la visualización de la cabeza del feto hasta la salida completa de éste.
- **Alumbramiento.** Se trata de la salida de la placenta.

✓ Qué hacer:

- ✓ Conserve la calma y asegure el entorno
- ✓ Llame al 112 informando de las circunstancias y del estado de la mujer
- ✓ Pregunte a la víctima hora de inicio, frecuencia e intensidad del dolor, semanas de embarazo, número de partos anteriores, complicaciones o enfermedades previas.
- ✓ Valore la pérdida de líquido o sangre, coloración y cantidad aproximada.
- ✓ Colóquela en un lugar lo más tranquilo, cálido e íntimo posible; en decúbito supino, con las piernas flexionadas y separadas.
- ✓ Abríguela, retirando ropa mojada o que dificulte el parto.
- ✓ Lávese las manos.
- ✓ Anime a la víctima a empujar solo en el momento de la contracción y no entre éstas.
- ✓ Cuando visualice la cabeza del feto, proteja la zona inferior (periné) con una mano, para evitar desgarros.
- ✓ Con la otra mano, sujeté la cabeza del feto. No tire, solo acompañe su salida.



- ✓ Si el cordón rodea la cabeza del feto, trate de retirarlo sin romperlo. Si no puede, ate fuertemente dos cordones separados entre sí, con dos nudos cada uno, y corte el cordón por el medio de los nudos.
- ✓ Ayude, sin ejercer fuerza, a rotar 90° la cabeza del feto: comenzará a ladearse sola.
- ✓ Acompáñe, sin tirar, la salida del hombro superior del feto; posteriormente, la del inferior, e inmediatamente, la salida del resto del cuerpo.
- ✓ Sujete firmemente el cuerpo del recién nacido, puede resbalarse.
 - ✓ Abrigue inmediatamente al recién nacido, no le limpie, y colóquelo sobre el pecho de la madre.
 - ✓ Ate fuertemente un cordón, con dos nudos, a un palmo del recién nacido; y un segundo cordón, igualmente, a dos palmas.
 - ✓ Valore el estado del recién nacido y de la madre: conciencia y respiración. Prepárese por si fueran necesarias maniobras de [RCP](#).
 - ✓ Felicite a la madre, informe inmediatamente del sexo y estado del recién nacido.
 - ✓ Espere el alumbramiento (salida de la placenta) 30 minutos después, y guárdela íntegra.



✗ Qué NO hacer:

- ✗ Introducir compresas en los genitales de la madre.
- ✗ Comprimir el abdomen de la madre.
- ✗ Traccionar del feto o del cordón durante el parto.

 Qué hacer sobre el recién nacido:

- ✓ Deposítelo sobre toallas, sábanas o mantas.
- ✓ Verifique su estado de conciencia: observe si llora, se mueve y respira espontáneamente o estimúlelo con suaves golpecitos en la planta del pie.
- ✓ Si no responde, inicie maniobras de [RCP](#).
- ✓ Limpie cuidadosamente la nariz y la boca.
- ✓ Abríguelo, especialmente cabeza, manos y pies. Evite las pérdidas de calor.
- ✓ Entrégueselo a la madre para que lo sostenga en sus brazos mientras espera la llegada de los servicios de emergencias.



Hemorragias por vía vaginal

Las hemorragias vaginales son aquellas hemorragias internas, debidas a varias causas, en las que se expulsa la sangre a través de los genitales femeninos. Si éstas se producen durante el embarazo, tienen una consideración especial.

✓ Qué hacer:

- ✓ Valore nivel de conciencia de la víctima (ver capítulo [Reconocimiento de la víctima](#)). Pregunte la hora de inicio del sangrado, así como la cantidad, consistencia y otros síntomas acompañantes (dolor, malestar, etc.).
- ✓ Compruebe la aparición de síntomas como palidez, sudoración o frialdad de la piel.
- ✓ Si la víctima permanece consciente, colóquela en decúbito supino, y sujeté los miembros inferiores levantados y cruzados (ver capítulo [Posiciones de espera](#)).
- ✓ Mantenga esta posición hasta la llegada del servicio médico extrahospitalario o hasta que se deteriore el estado de la víctima.
- ✓ Pregunte además si la víctima está embarazada, así como las semanas de gestación, complicaciones previas o durante el embarazo.
- ✓ Si la víctima presenta embarazo evidente (abombamiento del abdomen), coloque, además ropa o un cojín bajo la cadera derecha o en [decúbito lateral flexionado](#).
- ✓ Indague sobre posibles traumatismos anteriores a la aparición de la hemorragia.
- ✓ Reevalúe de manera continua el estado general de la víctima.
- ✓ Comuníque al personal del servicio médico extrahospitalario la información recogida y las medidas realizadas sobre la víctima, así como cualquier información de interés recogida (antecedentes, tratamientos, traumatismos).

✗ Qué NO hacer:

- ✗ Introducir nada o tratar de taponar los genitales.
- ✗ Presionar sobre el abdomen.



Posiciones de espera

NOMBRE	DESCRIPCIÓN	INDICADO PARA	IMAGEN
Lateral de seguridad. PLS	Posición lateral estable que evita atragantamiento y aspiración de vómito.	Inconsciente sin traumatismos importantes.	
Decúbito supino	Tumbado boca arriba. Brazos y piernas estirados a lo largo del cuerpo.	Valorar e iniciar la asistencia. RCP. Mantener la alineación neutra en traumatismos graves de columna.	
Antishock	Tendido boca arriba con las piernas levantadas y arropada.	Recuperar mareos, pérdidas de conocimiento sin traumatismos graves.	
Trendelenburg	Tendido boca arriba con todo el cuerpo en progresiva elevación, quedando los pies más altos que la cabeza.	En traumatismos graves para recuperar mareos, pérdidas de conocimiento con tensión arterial baja.	
Antitrén	A la inversa de Trendelenburg.	Traumatismos craneoencefálicos sin pérdida de conocimiento.	
Decúbito prono	Tumbado boca abajo, con la cabeza ladeada, piernas y brazos estirados a lo largo del cuerpo.	Traumatismos en espalda, glúteos o parte trasera de las piernas.	
Decúbito lateral	Todo el cuerpo estirado y apoyado sobre un lateral.	Cuando precise lateralizar traumatismos graves para expulsión de vómito.	
Decúbito lateral flexionado	Apoyada, especialmente sobre el lado izquierdo, con las piernas flexionadas.	Embarazadas.	

Sentado	Como en una silla. Cuerpo erguido y la planta de los pies se apoya sobre el suelo.	Possible ataque cardiaco.	
Semisentado	Cabeza y espalda apoyada sobre un respaldo moderadamente inclinado y las piernas se estiran descansando completamente sobre una superficie.	Facilitar la respiración excepto en traumatismos de columna vertebral. Traumatismos en tórax .	
Defensa abdominal	Las piernas se flexionan sobre el abdomen apoyándose las plantas de los pies sobre la superficie.	Traumatismos en abdomen. Dolor interno en zona abdominal de origen no traumático.	
Fritz	Decúbito supino con las piernas cruzadas sobre los muslos.	Hemorragias exteriorizadas por el aparato genital femenino.	

Cómo realizar la posición lateral de seguridad (PLS)

-
- Colóquese en el lado elegido para el volteo.
 - Siempre que no haya lesiones en los brazos: coloque el brazo de la víctima más cercano a usted en ángulo recto, con la mano hacia la cabeza. Coja el brazo contrario por la muñeca, en ángulo recto, dirigiéndolo hacia usted.
 - Si no hay lesiones, eleve la rodilla del lado más alejado a usted en ángulo, apoyando el pie en el suelo.
 - Ponga su mano derecha en el hombro más alejado de la víctima y la otra en el pliegue de la rodilla de ese mismo lado.
 - Tire fuerte y lentamente hacia usted, haciendo rodar a la víctima hacia su posición.
 - Una vez en esta posición, coloque la mano de la víctima más cercana a su cara debajo de ésta. Utilice la pierna que ha quedado encima como apoyo, para evitar que se mueva y pudiera quedarse boca abajo.

Si existen [lesiones en extremidades](#) no realice esta maniobra, manteniendo a la víctima en decúbito supino o en la posición en la que se encuentra si sus lesiones no permiten ningún movimiento.

Durante la espera, usted o algún ayudante deberán:

 Qué hacer:

- ✓ Vigilar el nivel de consciencia y las constantes (ver capítulo [Reconocimiento de la víctima](#)).
- ✓ Informar al 112 si el estado se agravara, especialmente si se inician maniobras de [RCP](#).
- ✓ Aflojar las ropas y el calzado. Retirar pañuelos y corbatas del cuello, y anillos, pulseras y relojes de miembros superiores con traumatismos.
- ✓ Abrigar contra el frío. Facilitar sombra contra el calor y el sol radiante.
- ✓ Mantener despierto y fortalecer su estado de ánimo.
- ✓ Alejar a curiosos no colaboradores o que traigan desaliento.

 Qué NO hacer:

- ✗ Dar de comer o de beber y mucho menos de fumar a la víctima.
- ✗ Alterar el estado emocional de la víctima con comentarios inapropiados sobre su salud, transcurso del tiempo o lesiones graves o fallecimiento de otras víctimas.



Medidas de higiene personal

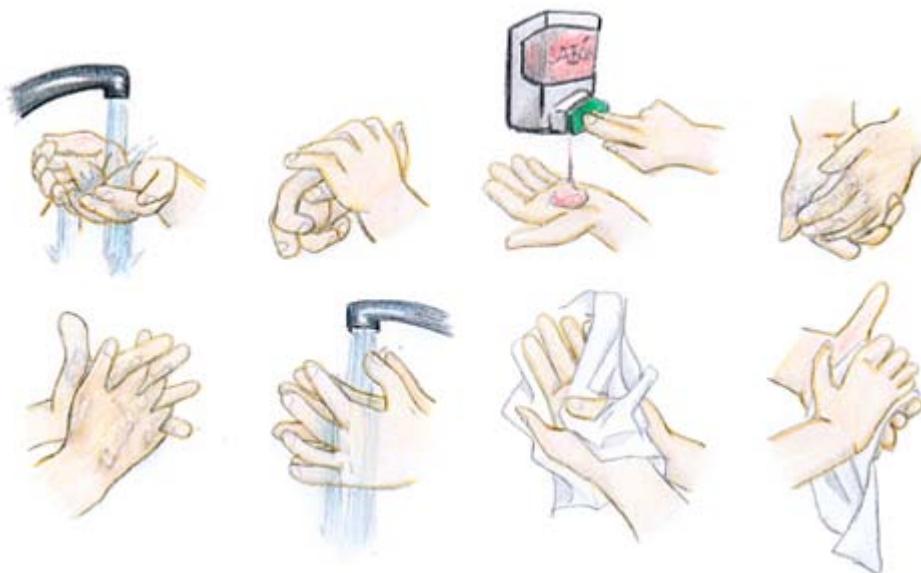
El mayor riesgo para una herida es la infección. Por ello, antes de comenzar su manipulación, deberá adoptar las siguientes **medidas universales de protección**:

- Lávese las manos antes y después del contacto con la víctima.
- En caso de tener alguna herida, cúbrala.
- Use gafas de protección ante acciones en las que pueda haber salpicaduras.
- Emplee filtros de barrera respiratoria en contacto con personas que padeczan o sospeche algún tipo de infección.



¿Cómo lavarse las manos correctamente?

- ✓ Abra el grifo con una toalla de papel.
- ✓ Mójese abundantemente las manos y los antebrazos.
- ✓ Lávese con jabón durante 20 segundos, entrelazando los dedos y frotando las palmas y la parte posterior de las manos en un movimiento circular.
- ✓ Lave las uñas con más jabón, utilizando las uñas de la otra mano o un cepillo.
- ✓ Aclárese abundantemente.
- ✓ Séquese completamente con la toalla de papel por aplicación y sin deslizar el papel sobre la piel desde los codos hasta la punta de los dedos de la mano.
- ✓ Cierre el grifo con otra toalla de papel seca.



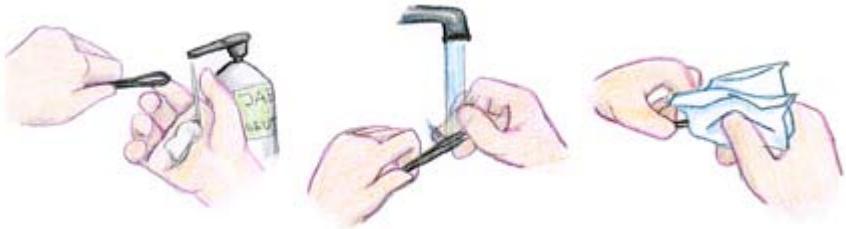
Desinfección rápida

Si fuese necesaria una desinfección rápida de las manos, utilice una solución alcohólica desinfectante:

- ✓ Aplique una dosis del producto sobre las manos secas.
- ✓ Extienda el antiséptico, frotando las palmas y la parte posterior de las manos en un movimiento circular, entrelazando los dedos, hasta que queden completamente secas (30 segundos).
- ✓ Si hay restos de materia orgánica es aconsejable realizar primero limpieza rutinaria antes de este lavado especial de manos.

Limpieza del material de curas

Antes de utilizar material para realizar una cura (tijeras, pinzas), deberá limpiarlos cuidadosamente para evitar infectar la herida. Para ello, lávelo con agua y jabón, o imprégne lo en alcohol o una solución antiséptica, secándolo después con un paño limpio lo más estéril posible (un pañuelo de tela recién planchado es estéril) o con una toalla de papel seca.



Posibilidad de transmisión de enfermedades

Existen determinadas enfermedades que se transmiten de unas personas a otras. El desconocimiento en esta materia puede generar cierto temor en el momento de ayudar a una persona herida.

Las diferentes vías de transmisión son:

- Por contacto directo, a través de otras personas u objetos contaminados, como son los hongos, la varicela, el sarampión, el herpes.
- Por el aire, al inhalar las gotitas de saliva exhaladas, al toser o al estornudar. Se encuentran entre estas enfermedades la gripe, la tuberculosis.
- A través de fluidos corporales (VIH, hepatitis).
- A través de la sangre, en el intercambio de jeringuillas, bisturíes.

Qué hacer en caso de contacto con fluidos corporales

En caso de posibles contactos o sospecha de contagios, comuníquese al personal sanitario actuante, quien le indicará los pasos a seguir; o diríjase a su hospital, para informar de lo sucedido. En el hospital le realizarán las pruebas necesarias y le administrarán la medicación profiláctica adecuada si estuviera indicada.



Prevención y actuación en accidentes de tráfico

Evitar o minimizar lesiones tras un accidente de tráfico es el objetivo de los *sistemas de seguridad del automóvil* que, tanto el conductor, como el resto de los ocupantes, deben utilizar responsablemente, así como cumplir los preceptos legales que popularmente se conocen como *Código de la Circulación*. Sobre la seguridad normativa podrá estar permanentemente actualizado si consulta www.dgt.es.

Recomendaciones generales para la conducción:

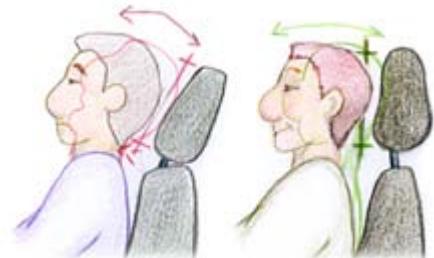


- No conduzca bajo los efectos del alcohol.
- En caso de tomar medicamentos, lea detenidamente el prospecto o siga las instrucciones de su médico. Algunos medicamentos provocan sueño o lentitud de reflejos.
- Si tiene sueño, baje las ventanillas del vehículo. No trate de seguir, aunque le quede poco trayecto, si el sueño es intenso.
- Evite comer copiosamente.
- Lleve ropa cómoda.
- No abuse de la calefacción, ya que le provocará sueño.
- Realice paradas cada 2 horas o 100 Km.

Circulando en turismos, furgonetas, camiones y autobuses

El cinturón de seguridad y el reposacabezas son elementos diseñados para proteger nuestro cuerpo, pero requieren de una correcta colocación para que cumplan bien su función:

1. Coloque el asiento casi en ángulo recto.
2. Desplace el reposacabezas hasta que la parte superior quede a la altura de los ojos y a una distancia de la cabeza inferior a 7 centímetros.
3. Confirme que todos los ocupantes llevan puesto el cinturón de seguridad de forma correcta. Este debe colocarse entre el cuello y el hombro y una vez enganchado debe agarrarse la correa torácica en la parte más cercana al anclaje y tirar firmemente hacia el hombro del brazo contrario. De esta manera la banda de la cadera quedará bien tensada.



✗ Qué NO hacer:

- ✗ Llevar en el cinturón de seguridad pinzas, protectores o dobleces que impidan su movimiento normal o puedan bloquearlo.
- ✗ Utilizar cojines, almohadas, o ropa demasiado voluminosa, que no permitan tener una posición correcta sobre el asiento, ya que eliminarán la eficacia del cinturón de seguridad.

Circulando en motocicletas y ciclomotores

✓ Qué hacer:

- ✓ Utilice guantes, cazadora con refuerzos, pantalón largo y calzado alto que cubra todo el pie y sujeté el tobillo. También en verano.
- ✓ Utilice siempre el casco homologado y puesto en la cabeza. Ajústeselo bien a la barbilla.



✗ Qué NO hacer:

- ✗ Utilizar prendas ligeras porque no protegen el cuerpo.
- ✗ Exponer cabeza, manos, brazos, piernas y pies directamente.
- ✗ Llevar bolsos o mochilas a la espalda.

En caso de accidente siga las siguientes reglas básicas:

✓ 1º Proteger

- Detenga su vehículo en el arcén con la luz de corto alcance y ambos intermitentes conectados a la vez ("warning").
- Póngase el chaleco reflectante.
- Tenga cuidado al salir del vehículo mirando por el retrovisor si es posible la salida sin peligro.
- Coloque los dispositivos de pre-señalización de peligro (triángulos) o dispositivo luminoso de emergencia en lugar bien visible.
- Valore los riesgos del entorno.
- No fume y preste atención a los derrames de combustible.
- Apague las luces de los vehículos accidentados y desconecte el contacto quitando las llaves.

 2º Avisar

Llame al 112. Informe del tipo de accidente, número de heridos, localización exacta, posibles riesgos (derrames, incendios).

 3º Socorrer

- Realice una estimación inicial de gravedad de las víctimas y proceda a prestar la asistencia básica.

 Qué NO hacer:

- ✗ Deambular por la calzada. Colóquese en el arcén para evitar ser atropellado.
- ✗ Introducirse en el vehículo siniestrado si está volcado o poco estable.



Prevención de accidentes en el medio natural

(Actuación en el medio acuático, el campo y la montaña)

Prevención en la exposición solar:

- Evite quemaduras por exposición al sol, protegiéndose con cremas adecuadas a su tipo de piel. Aplíquelas, al menos, media hora antes de la exposición y, de nuevo, dos horas después o tras el baño.
- Tras la exposición al sol, utilice cremas hidratantes para el cuerpo para recuperar la humedad de la piel.
- En niños, ancianos y personas sensibles, es recomendable cremas con alta protección y la utilización de sombreros y camisetas.
- Cúbrase los brazos y piernas.
- Utilice ropa ligera y de colores claros.
- Utilice gafas con filtros contra rayos ultravioleta.
- Evite la exposición en las horas centrales del día.
- En la nieve, utilice protectores labiales con filtro solar.

Prevención en el baño:

- Utilice tapones en los oídos para prevenir enfermedades.
- En piscinas deberá utilizar siempre calzado de goma para evitar contagio de hongos.
- En ríos, lagos, estanques y piscinas, dúchese antes del baño o introduzcase muy lentamente en el agua, para evitar el cambio brusco de temperatura.
- En playas, ríos, lagos y estanques infórmese de las zonas permitidas para el baño.
- Extreme las precauciones en aguas turbias o que no pueda ver el fondo. Observe las corrientes.
- En zonas de aguas estancadas y ríos utilice repelentes e insecticidas y cúbrase brazos y piernas.
- Los niños dentro del agua deberán llevar siempre dispositivos de seguridad, manguitos, flotadores o chaleco salvavidas.

✓ Qué hacer:

- ✓ Beba agua antes, durante y después de la actividad.
- ✓ Lleve siempre ropa adecuada al tipo de excursión (gorras, botas, etc) y suficiente avituallamiento.
- ✓ Si va a realizar una excursión por zonas desconocidas, informe al cuartel de la Guardia Civil de la zona, sobre el itinerario previsto de su travesía
- ✓ Respete las zonas habilitadas para el baño.
- ✓ Tenga en cuenta los colores de las banderas de información en playas, ríos, lagos y embalses.
- ✓ En piscinas siga siempre las indicaciones del socorrista.
- ✓ En ríos y aguas estancadas si ve a una persona en peligro y no es experto nadador, llame al 112 y no la pierda de vista.

✗ Qué NO hacer:

- ✗ Utilizar perfumes durante la exposición al sol.
- ✗ Hacer fuegos o fogatas en el campo.
- ✗ Bañarse durante una tormenta.
- ✗ Zambullirse de golpe al agua, especialmente si no ve el fondo o con gran oleaje.
- ✗ Intentar sacar a una víctima del agua si no es un experto nadador.
- ✗ Caminar descalzo dentro de los ríos, lagos o estanques.
- ✗ Bañarse o emprender una travesía si ha ingerido suficiente cantidad de alcohol.



Prevención en el hogar

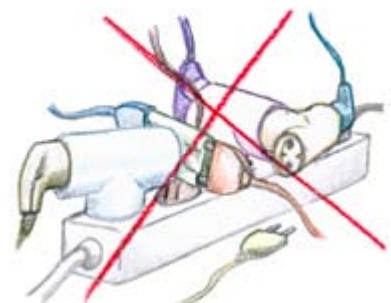
Prevención con la electricidad

✓ Qué hacer:

- ✓ Tenga siempre a mano linternas o aparatos similares que se utilicen con fuente de energía a pilas o baterías cargadas, para que nos ilumine en caso de apagón.
- ✓ Todos los hogares deben disponer de un sistema eléctrico de seguridad que desconecte la instalación en caso de descarga eléctrica o de cortocircuito.
- ✓ Deje espacio de aire alrededor de los electrodomésticos para prevenir sobrecalentamientos.
- ✓ En caso de persona electrocutada, intente cortar la tensión y nunca toque directamente a la víctima (ver capítulo [Lesiones producidas por la electricidad y rayos](#)).

✗ Qué NO hacer:

- ✗ Dejar enchufados aparatos ni cargadores eléctricos sin necesidad y sobrecargar los enchufes con muchos aparatos conectados.
- ✗ Tocar enchufes y aparatos eléctricos con las manos mojadas y los pies descalzos.
- ✗ Utilizar agua para apagar fuegos donde exista tensión eléctrica.



Prevención con el gas

✓ Qué hacer:

- ✓ Si detecta olor a gas, cierre las llaves de paso de gas más cercanas al área de fuga y avise inmediatamente al servicio de mantenimiento, emergencia o bomberos y abra puertas y ventanas para que circule el aire.
- ✓ Si se enciende una llama, conserve la calma y trate de controlarla teniendo en cuenta:
 - No lo intente apagar de forma violenta. La llama irá disminuyendo a medida que baje el volumen y la presión del gas.
 - Aleje del área objetos y materiales incandescentes.

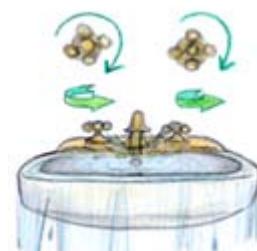
✗ Qué NO hacer:

- ✗ Es peligroso buscar el área de fuga con una llama, sólo debe hacerlo con agua jabonosa, si realmente hay una fuga de gas, brotarán burbujas rápidamente.
- ✗ Encienda y apague la luz puede provocar una explosión o deflagración.

Prevención con el agua

✓ Qué hacer en caso de rotura o fuga:

- ✓ Detenga el flujo de agua rápidamente con la llave de cierre principal.
- ✓ Tenga cuidado con no resbalar en suelos húmedos.
- ✓ Retire los objetos eléctricos que estén próximos y desconéctelos si es posible



Prevención con los incendios

✓ Qué hacer:

- ✓ Si arde una sartén llena de aceite, no la eche agua, salpicaría y no se extinguiría. Utilice una tapadera grande o un trapo sobre la sartén para apagarlo.
- ✓ Las campanas extractoras acumulan grasa. Cambie o limpie los filtros con frecuencia.
- ✓ En la cocina debe usar los fuegos más próximos a la pared y no dejar los mangos de los utensilios que sobresalgan de la encimera.
- ✓ Al vaciar un cenicero asegurarse de que estén todas las colillas apagadas.



- ✓ En caso de utilizar velas, comprobar que estén apagadas cuando abandona la estancia.
- ✓ En caso de incendio conserve la calma, no provoque el pánico general gritando ni corriendo y llame al servicio de emergencia o bomberos (ver capítulo [Intoxicaciones producidas por inhalación de humo](#)).

Si el incendio es dentro de casa:

- ✓ Busque el extintor más cercano e intente combatir el fuego. Retire la anilla del seguro del extintor, colóquese a una distancia de 3 m. y dirija la boquilla a la base de las llamas, apriete el gatillo manteniendo el extintor en posición vertical y mueva la boquilla de lado a lado lentamente, atacando por la base toda la parte frontal del fuego.
- ✓ Si no puede apagar el fuego salga de su casa hacia la calle cerrando las puertas.
- ✓ Si se ha quedado atrapado, cierre las puertas y rendijas, asómese a las ventanas y haga señales para que puedan verle desde la calle.
- ✓ Si se incendia su ropa no corra, tírese al suelo, ruede lentamente y si fuera posible, cúbrase con una manta para apagarlo.
- ✓ Si hay humo, colóquese lo más cerca posible del suelo desplazándose a gatas y si es posible con un trapo húmedo tápese la nariz y boca.

Si el incendio es en una planta inferior:

- ✓ No salga, seguramente el humo habrá invadido el hueco de la escalera.
- ✓ Cierre las puertas y tape las rendijas con trapos mojados para evitar que entre el humo. Asómese a las ventanas y haga señales.

• Si el incendio es en una planta superior:

- Abrir la puerta de casa y si el hueco de la escalera no tiene humo, salir a la calle cogiendo las llaves y cerrando todas las puertas.
- Si hay demasiado humo vuelva dentro de casa y actúe como en el caso anterior.
- Durante la evacuación, nunca use ascensores y acate las instrucciones del personal especializado.

• Si la puerta es la única salida, verifique que la chapa no esté caliente antes de abrirla; si no está seguro de si hay fuego al otro lado, no abra la puerta.

Qué NO hacer:

- Dar la espalda al fuego.
- Secar la ropa sobre estufas y aproximar cortinas a estufas de butano o eléctricas.
- Fumar en la cama o tumbado en el sofá.
- Dejar velas encendidas sin vigilancia, en corrientes de aire o cerca de materiales combustibles.



Prevención con los niños

Qué hacer:

- ✓ Mantenga cerillas y encendedores, pilas de botón y objetos pequeños fuera de su alcance.
- ✓ Tenga mucha precaución con la plancha y no deje al niño estar cerca. El vapor de la plancha puede producir quemaduras.
- ✓ Ponga tapas cubriendo los enchufes.
- ✓ Guarde utensilios de afeitar y cortar; costureros, herramientas, productos de limpieza y detergentes; medicamentos y bebidas alcohólicas, en lugares altos y seguros como muebles con cierre de seguridad o llave.
- ✓ Acostar siempre al bebe boca arriba para prevenir la muerte súbita.
- ✓ Ponga protectores a la cuna del bebé y fíjese que la cabeza del niño no quiepa entre los barrotes.
- ✓ Retire todos los objetos de tamaño pequeño de su alcance.
- ✓ Ponga puertas de seguridad en los accesos a la escalera. Utilice sistemas de bloqueo en puertas, ventanas y cajones que solo se puedan abrir por un adulto.

Qué NO hacer:

- ✗ Permitir que se acerquen a chimeneas, estufas o radiadores.
- ✗ Poner insecticidas o raticidas en lugares a su alcance.
- ✗ Poner a su alcance medicamentos o hacérles creer que son caramelos.
- ✗ Dejar sin vigilancia, o a cargo de otro menor, en la bañera, tampoco con un animal o mascota por muy domesticado que esté.
- ✗ Abrigar en exceso por la noche y con ropa de cama pesada que impida que se puedan mover con libertad.
- ✗ Dormir en la misma cama, durante el sueño puede darse la vuelta y aplastar o asfixiar al niño.
- ✗ Dejar cables, cuerdas, cintas y bolsas de plástico a su alcance, ya que podrían ahorcarse.
- ✗ Dejar que se llenen en exceso la boca o que coman acostados.
- ✗ Que jueguen saltando mientras comen, podrían tener una obstrucción de las vías respiratorias.
- ✗ Poner la cama, mesa u otro tipo de muebles cercanos a las ventanas.





Prevención en lugares públicos

Prevención en la calle

✓ Qué hacer:



- ✓ Camine por zonas peatonales por el interior de la acera y no por el bordillo, prestando atención a las salidas de garajes.
- ✓ Camine en carretera siempre por su izquierda ya que verá mejor a los vehículos que se aproximan. En horas de poca iluminación lleve chaleco o bandas reflectantes para aumentar su visibilidad.
- ✓ Cruce la calzada por los semáforos o pasos de peatones, utilice los pasos superiores e inferiores para peatones. No cruce plazas ni rotundas, rodéelas.
- ✓ Si tiene que cruzar una carretera, hágalo con cuidado y por el lugar de mejor visibilidad, mirando a la izquierda y a la derecha asegurándose de que no se aproxime ningún vehículo.
- ✓ Evite salir a caminar, correr o andar en bicicleta con auriculares puestos ya que reduce la capacidad de reacción al verse limitado el sentido de audición.

✗ Qué NO hacer:

- ✗ Cruzar la calzada sorteando vehículos, puede sorprenderle alguna moto o bicicleta que pase entre ellos.
- ✗ Llevar animales sueltos cuando pasee por la calles.
- ✗ Correr cuando está lloviendo, puede sufrir caídas.
- ✗ Caminar solo por lugares desconocidos, oscuros, solitarios y peligrosos. Esté alerta ante cualquier persona que se acerque en actitud extraña, alejándose de ella lo más rápido posible.
- ✗ Acudir baños públicos en áreas desoladas, en estaciones de servicio que se encuentran a la vuelta de la misma o aquellos al final de largos corredores.
- ✗ Llevar objetos de valor que llamen la atención a los ladrones o sacar grandes sumas de dinero en público.



Prevención en recintos públicos

✓ Qué hacer:



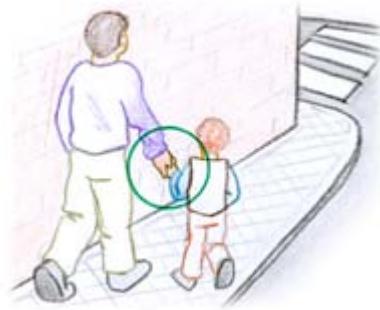
- ✓ Si es trabajador, conozca los planes de emergencia de la empresa, donde están las salidas de emergencias, los extintores y medios contra incendios y mantenga todos los lugares de trabajo limpios y ordenados. Guíe a otras personas que lo necesiten, neutralice el pánico y la histeria y evite aglomeraciones y empujones.
- ✓ Si es cliente siga las instrucciones que escuche por megafonía y, conservando la calma, deje todo lo que está haciendo. No se pare a recoger sus pertenencias, no deje nada en zonas de paso y abandone el local manteniendo el orden y la calma en la evacuación, siguiendo las señales que indican la salida y respetando el orden. No detenerse junto a las puertas de salida, deben permanecer libres.
- ✓ Identifique los accesos, pueden ser siempre una salida de emergencia.
- ✓ En caso de altercado o acto violento, intente separarse del lugar.

✗ Qué NO hacer:

- ✗ Utilizar ascensores o montacargas en caso de incendio.
- ✗ Pararse en las puertas o pasillos de acceso a las localidades.

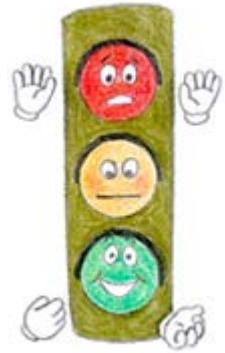
- ✗ Subir a barandillas, verjas y otros lugares no destinados a estos fines.

Prevención con los niños



✓ Qué hacer:

- ✓ Lleve en brazos o de la mano a los niños.
- ✓ Explique al niño del peligro de cruzar la calle sin comprobar los colores del semáforo, sin mirar hacia un lado y otro en los pasos de peatones y sin ir agarrado de la mano de un adulto.
- ✓ En el parque de juegos, observe al niño desde una cierta distancia, que en caso de necesidad pueda ayudarle y tenga cuidado con los bordes cortantes y el buen mantenimiento de las atracciones.
- ✓ Cuando elija una guardería o colegio para el niño cuide de que cumpla todos los requisitos de seguridad.
- ✓ Para jugar a un determinado deporte, es importante la presencia de al menos un monitor adulto y responsable, con capacidad de prestar los primeros auxilios.



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061

**Urxencias
Sanitarias**



**XUNTA
DE GALICIA**

GUÍAS RÁPIDAS DE CONSULTORÍA TELEFÓNICA MÉDICA Y DE ENFERMERÍA

Fundación Pública Urgencias Sanitarias de Galicia-061

XUNTA
DE GALICIA

Fundación Pública Urxencias Sanitarias de Galicia-061

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Esta publicación fue acreditada por la Sociedad Española de Medicina de Urgencias y Emergencias (Semes), cumpliendo con los protocolos y normativas recomendadas, por lo que se acredita como *actividad considerada de interés científico*.

Es un honor para mí poder participar en la presentación de este fantástico trabajo. He tenido el privilegio de haber formado parte como médico, durante años, de la Fundación Pública Urxencias Sanitarias de Galicia-061 y he vivido en primera persona la importancia del trabajo dirigido, ordenado y referenciado por guías como la presente.

El grupo de trabajo que, durante veinticinco años, ha elaborando protocolos, guías y otros documentos, con los que el personal del 061 y cualquier otro personal sanitario que se dedique a la atención de urgencias y emergencias sanitarias está familiarizado, consigue con este documento una nueva referencia.

Sin duda alguna, los aspectos fundamentales que proporcionan mayor seguridad al personal sanitario son el conocimiento, la formación y la habilidad en el manejo de protocolos, instrucciones técnicas, algoritmos, recomendaciones y guías clínicas, siendo la clave para lograr un trabajo homogéneo y estructurado.

Estas guías pretenden ser un referente para cualquier profesional sanitario que necesite un documento de consulta que garantice una rápida y adecuada respuesta a la tan difícil labor de la consulta telefónica. Nacen en medio de una pandemia en la que la Covid-19 nos ha obligado a cambiar nuestra forma de vivir y de relacionarnos y cómo no, nuestra forma de atender a los pacientes, cobrando un especial protagonismo la consulta no presencial.

Estas guías están elaboradas por médicos coordinadores y enfermeros de consulta del servicio público gallego de Urgencias y Emergencias 061, profesionales referentes en este tipo de consulta y con una dilatada experiencia profesional. A este grupo se han sumado profesionales del ámbito clínico que completan una obra con garantía de éxito.

José Flores Arias
Gerente del Servicio Gallego de Salud

Vivimos en una sociedad en la que el progreso continuo del conocimiento influye en todas las áreas de la ciencia, y especialmente en la medicina, causando una repercusión inmediata en cualquier procedimiento sanitario, que se hace extensible desde los protocolos diagnósticos o terapéuticos hasta el dimensionamiento de los recursos asistenciales. Esta realidad exige a todos los profesionales sanitarios un esfuerzo continuo de actualización de conocimientos que garantice la prestación de una atención óptima a todos los pacientes que nos llaman cada día, con el objetivo final de una asistencia sanitaria de calidad y una mejora de los tiempos de atención, tanto en la consulta sanitaria como en la operatividad del personal coordinador.

Este manual constituye una respuesta a esta necesidad, consensuada por médicos especialistas del Servicio Gallego de Salud y por médicos coordinadores y enfermeros de consulta de la Fundación Pública Urxencias Sanitarias de Galicia-061 con amplia experiencia en la atención a la demanda sanitaria de nuestra Central de Coordinación. El resultado es, por tanto, consecuencia del esfuerzo y trabajo de todos los sanitarios coordinadores, con el valor añadido de haber unificado respuestas ante demandas similares, permitiendo crear un documento asimilable a una guía de práctica clínica para consultoría sanitaria telefónica.

Las "Guías rápidas de consultoría médica y de Enfermería" se han estructurado en diecisiete secciones, compuestas por diferentes temas en función de las patologías más atendidas. Cada guía consta de un interrogatorio sanitario telefónico con su correspondiente orientación diagnóstica y una serie de recomendaciones según los síntomas relatados por el alertante, para finalizar, en función de la gravedad valorada, con la respuesta más adecuada a la situación del paciente.

Todo lo anterior convierte a estas guías en un manual de consulta de gran valía no solo para el trabajo diario, sino también para la formación del personal de nueva incorporación e, incluso, para todo el personal sanitario que, en un momento determinado, precise una herramienta de referencia para la toma de decisiones rápidas ante una demanda de consulta sanitaria telefónica. Por todo ello y en representación de la Fundación Pública Urxencias Sanitarias de Galicia-061 te animo a su lectura que deseo resulte de utilidad en tu práctica clínica.

Adriana Regueira Pan
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ABREVIATURAS

AAS	Ácido acetilsalicílico
ABC	Vía aérea, ventilación y circulación
ABVD	Actividades básicas de la vida diaria
ACO	Anticoagulantes orales
Admon	Administración
ADO	Antidiabéticos orales
AE	Angioedema
AEH	Angioedema hereditario
AF	Antecedentes familiares
AHE	Angioedema hereditario
AINE	Antiinflamatorios no esteroideos
Alt	Alteración
AM	Ambulancia medicalizada
ANHE	Angioedema no hereditario
ANOV	Anovulatorios
AP	Antecedentes personales
AR	Artritis reumatoide
ARA-II	Antagonistas de los receptores de la angiotensina II
ATM	Articulación temporomandibular
BCO	Bronquitis crónica obstructiva
BEG	Buen estado general
BQ	Bradicardia
BT	Bronquiectasias
BZD	Benzodiazepinas
CAE	Conducto auditivo externo
CCR	Cáncer colorrectal
CCUS-061	Central de Coordinación de Urgencias Sanitarias 061
CO	Monóxido de carbono
COF	Centro de orientación familiar
cm	Centímetro
CS	Centro de salud
CSE	Cuadrante superior externo
d	Día
DLP	Dislipemia
DM	Diabetes mellitus
DPN	Disnea paroxística nocturna
EAP	Edema agudo de pulmón
EII	Enfermedad inflamatoria intestinal
EM	Esclerosis múltiple
EPI	Enfermedad pélvica inflamatoria
EPOC	Enfermedad pulmonar obstructiva crónica
ERGE	Enfermedad por reflujo gastroesofágico

ETS	Enfermedad de trasmisión sexual
FC	Frecuencia cardíaca
FID	Fosa ilíaca derecha
FII	Fosa ilíaca izquierda
FOP	Fuerzas del Orden Público
FRCV	Factor de riesgo cardiovascular
Frec	Frecuentemente
FUR	Fecha de la última regla
g	gramo
GEA	Gastroenteritis aguda
GI	Gastrointestinal
GN	Glomérulonefritis aguda
GPAC	Gestaciones, partos, abortos, cesareas
h	Hora
HAC	Horario de atención continuada
HADO	Hospitalización a domicilio
HAO	Horario de atención ordinaria
HC	Hidratos de carbono
HIC	Hipertensión craneal
HPB	Hipertrofia prostática benigna
HSA	Hemorragia subaracnoidea
HTA	Hipertensión arterial
HTIC	Hipertensión intracraneal
IAM	Infarto agudo de miocardio
IBP	Inhibidor de la bomba de protones
IC	Insuficiencia cardíaca
ICC	Insuficiencia cardiaca congestiva
IECA	Inhibidores de la enzima convertidora de angiotensina
Intox	Intoxicación gravea
IR	Insuficiencia renal
IRC	Insuficiencia renal crónica
ISRS	Inhibidores selectivos de la recaptación de serotonina
ITU	Infección del tracto urinario
IV	Insuficiencia venosa
IVAS	Infección de vías aéreas inferiores
IVC	Insuficiencia venosa crónica
l	litros
ISRS	Inhibidores de la serotonina
LES	Lupus eritematosos sistémico
MAP	Médico de atención primaria
Máx	Máximo
MEG	Mal estado general
mg	miligramos
min	minutos

MMII	miembros inferiores
MMSS	miembros superiores
Neo	Neoplasia
NTA	Necrosis tubular aguda
NTG	Nitroglicerina
OMA	Otitis media aguda
ORL	Otorrinolagigológica
PAC	Punto de atención continuada
PA	Presión arterial
PAS	Presión arterial sistólica
pat	Patología
PEG	Sonda de gastrostomía percutánea
PLS	Posición lateral de seguridad
OE	Oído externo
QT	Quimioterapia
RCP	Reanimación cardiopulmonar
RGE	Reflujo gastroesofágico
RT	Radioterapia
Rx	Radiografía
S	Síndrome
sc	Subcutáneo
SCA	Síndrome coronario agudo
SF	Suero fisiológico
sg	según peso
SNC	Sistema nervioso central
SNG	Sonda nasogástrica
SNY/D	Sonda nasoyeyunal/doudenal
sl	Sublingual
SOP	Síndrome de ovario poliquístico
s/p	Según pauta
TCE	Traumatismo craneoencefálico
TEP	Tromboembolismo pulmonar
TQ	Taquicardia
TSV	Taquicardia supraventricular
Tto	Tratamiento
TVP	Trombosis venosa profunda
OMA	Otitis media aguda
P	Prioridad
PAS	Presión arterial sistólica
PLS	Posición lateral de seguridad
PTI	Purpura trombótica idiopática.
PTT	Purpura trombótica trombocitopenica
QT	Quimioterapia

T°	Temperatura
TCE	traumatismo craneoencefálico
TB	Tuberculosis
TQ	Taquicardia
TVP	Trombosis venosa profunda
VA	Vía aérea
VAS	Vía aérea superior
VAI	Vías aéreas inferiores
VD	Visita domiciliaria
VPP	Vértigo posicional paroxístico
vo	Vía oral
<	Menor que
>	Mayor que

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1. LA COMUNICACIÓN

LA COMUNICACIÓN Y SUS VARIABLES EN LA COORDINACIÓN MÉDICA TELEFÓNICA

Introducción

Las habilidades comunicativas del médico coordinador tienen dos bases fundamentales:

- La capacidad de obtener información necesaria para la toma de decisiones.
- La habilidad de negociar respuestas no coincidentes con lo solicitado que garantice la satisfacción del usuario y su fidelización a la organización.

Dicha comunicación sigue, si bien de forma un tanto especial, el esquema de la historia clínica que se realiza en la habitación de un hospital o en una consulta de Atención Primaria, pero de forma mucho más escueta, ya que es un sistema de emergencias que requiere una toma de decisión ágil y una liberación rápida de la línea para que puedan entrar todos los usuarios.

Variables que influyen en la comunicación médica/enfermería telefónica en una CCUS

1. **Desconocimiento del sistema:** la presencia en la calle de ambulancias con sus logotipos es lo que identifica la ciudadanía y no así la existencia de un desconocido centro coordinador.
2. **Desconocimiento personal:** la comunicación es más eficaz cuando los dos interlocutores se conocen.
3. **Elevada ansiedad:** cuando se solicita ayuda se hace, generalmente, en un contexto ansioso y ante una situación que no se es capaz de controlar.
4. **Incomunicación asociada a la conversación telefónica:** existen barreras que la condicionan:
 - Físicas: ruido ambiental, transmisión distorsionada, etc.
 - Psíquico-intelectivas propias del alertante: prisa, prejuicios de experiencias anteriores, nivel intelectual, idioma, etc.
5. **Objetivos ocultos:** El mensaje transmitido por el alertante no siempre coincide con la realidad de lo que le preocupa o de lo que sucede. Llamadas reiteradas no sólo son características de patología funcional, sino que pueden ser alertas de problemas sociofamiliares.
6. **Sesgos de médico/enfermero consultor:** el estado anímico, el cansancio o la existencia de situaciones epidémicas, entre otras, favorecen sesgos al valorar la gravedad de que estamos analizando.
7. **Sesgo de bienestar:** en contextos de epidemia gripe no es raro banalizar los cuadros febriles y contemplarlos como un nuevo caso de gripe.
8. **Sesgo de enfermedad:** contemplar como dolor isquémico todo dolor torácico tras una experiencia negativa en ese apartado.
9. **Sesgos del alertante:** su objetivo prioritario es obtener asistencia sanitaria para él o para otro paciente, pero la comunicación se verá condicionada por el grado de preocupación por el enfermo, ansiedad, exigencia de un recurso determinado, etc.
10. **Localización del incidente:** la ubicación del incidente condiciona la interrelación médico-alertante, tanto en el apartado técnico con las posibles trabas que pueden asociarse al empleo de la telefonía móvil, como con la cantidad y calidad de la información aportada por el comunicante.

COMPONENTES DE LA COMUNICACIÓN MÉDICA TELEFÓNICA

Introducción

El abordaje de la llamada en su aspecto psíquico y físico (acceso al ordenador, postura, cansancio, disponibilidad de medios necesarios, etc.) debe ser preparado de forma metódica.

Para una adecuada comunicación, a la hora de atender cada llamada, hemos de tener en cuenta los componentes de la comunicación médica/enfermería de consultoría telefónica.

Componentes de la comunicación médica/enfermería telefónica aplicada a la entrevista

1. **Sonrisa:** abordar la conversación telefónica con gesto sonriente garantiza una comunicación positiva.
2. **Voz:** es el envoltorio del mensaje que aporta confianza y tranquilidad. Hay que distinguir:
3. **Entonación:** resulta importante modificar el tono de voz a lo largo de la conversación, ya que un tono monocorde provoca desconfianza y una sensación de desinterés percibida por el interlocutor. En una conversación normal, no conflictiva, se pueden emplear las siguientes entonaciones
 - Presentación y acogida Tono cálido
 - Sondeo de necesidades Tono seguro
 - Interrogatorio dirigido Tono seguro
 - Comunicación de respuesta Tono sugerente
 - Despedida Tono cálido
4. **Elocución:** el ritmo de conversación debe ser más lento de lo habitual. La frecuencia idónea es de unas 140 palabras/minuto, evitando un ritmo rápido, que pueda ser interpretado como urgencia para cortar la comunicación, o bien un ritmo excesivamente lento que logre impacientar al alertante.
5. **Articulación:** el mensaje ha de ser comprensible para el alertante. Es esencial una correcta articulación de las palabras, sobre todo cuando se pauta o prescribe medicación.
6. **Lenguaje:** el lenguaje ha de ser claro, conciso, evitando terminología médica, empleando frases cortas y de carácter positivo, eludiendo comentarios negativos, recriminatorios o agresivos. Hemos de intentar adaptar nuestro lenguaje al nivel de conocimientos del alertante.
7. **Silencios:** entre las palabras, antes o después de ellas, hay silencios y éstos tienen un significado. Tienen mucho poder y es importante saber gestionarlos. Si el médico y el alertante quieren hablar y ninguno de ellos tiene la aptitud del silencio, no hay escucha por lo cual resulta difícil la comunicación o la resolución de un conflicto. También resulta importante la habilidad para romper los silencios, incluso tocando algún tema no sanitario.
8. **Escucha activa:** oír no es sinónimo de escuchar. No es oír al alertante, es estar totalmente concentrado en el mensaje que nos trasmite, escuchar con atención al paciente de forma que perciba que se ha estado atento a la información que nos aporta (ya que en una Central de Coordinación de Emergencias, se trabaja fundamentalmente con información) y que perciba que hemos estado muy atentos a su discurso, que tenemos un interés real en aportar una solución a sus necesidades en cuanto al consejo médico como a la respuesta que el sistema sanitario le puede ofrecer.
9. **Empatía:** significa que tenemos la capacidad para ponernos en el lugar del alertante, comprender lo que le está sucediendo o el motivo de su urgencia, permitiéndonos resolver en muchas ocasiones un conflicto. No nacemos siendo empáticos, sino que es una habilidad que forma parte de nuestro desarrollo emocional, social y laboral. Deben de desarrollarse técnicas que hagan que el alertante o el paciente perciba que al intercomunicación con el médico sea empática.

INTERROGATORIO CLÍNICO TELEFÓNICO

Introducción

El interrogatorio médico telefónico está dirigido a descubrir los antecedentes y los datos clínicos pertinentes (priorizando la valoración de la urgencia), que permitan al facultativo evaluar la situación y dar la respuesta más eficiente a la situación clínica que nos plantean.

Abordaje del interrogatorio clínico telefónico

1. Presentación y acogida: contemplar cada llamada como la primera que se asume en ese turno de trabajo. Tener en cuenta que el alertante ha relatado su problema, como mínimo, a otro profesional (teleoperador) y en el caso de que la llamada provenga de otra plataforma de recepción de llamadas de emergencia (112), el médico coordinador es la tercera persona con la que el alertante habla. La eficacia en la comunicación mejora si en la presentación el médico se identifica personalmente (Buenos días soy el Dr/Dra....) repitiendo lo que ya conoce del caso. La ansiedad del interlocutor disminuye al conocer que está al hablar con quien va a tomar la decisión sobre el problema que le preocupa.

2. Sondeo de necesidades: tras la presentación, realizar una pregunta abierta del tipo: ¿En qué le puedo ayudar?, que busca tres objetivos:

1. Permite que el alertante aporte información sobre el motivo de la llamada.
2. Consigue que disminuya su ansiedad, (se le permite expresar de forma libre, sin respuestas cerradas, lo que le preocupa).
3. El relato abierto sin restricciones y con las expresiones propias del alertante permite al médico coordinador realizar una valoración global de su fiabilidad.

Posponer a momentos posteriores de la conversación el empleo de preguntas cerradas, enfocadas a conocer determinados aspectos clínicos o de otro tipo; no obstante, se pueden emplear en este primer sondeo cuando nos encontremos ante una urgencia vital o funcional, cuyo abordaje asistencial precise la toma rápida de decisiones. Cuando el relato del alertante haya finalizado, o cuando empiece a repetir datos o argumentos, pasar a la siguiente fase del interrogatorio, en la que se incluirán preguntas cerradas, en búsqueda de la información necesaria para la valoración del caso.

Indagar acerca de los antecedentes personales, medicaciones habituales, etc. Si resulta difícil centrar el motivo de la llamada o bien cuando se describe una sintomatología abigarrada, (en contextos de pluripatología), centrar la demanda asistencial mediante preguntas del tipo: ¿Qué es lo que más le preocupa?, ¿Cuál es el motivo por el que ha decidido llamar a esta hora?, ¿A qué atribuye los síntomas que me cuenta?

Esta fase del interrogatorio no debe ser prolongada (no pretender realizar una anamnesis completa para obtener un diagnóstico). El objetivo básico del médico coordinador es intentar descartar la patología grave y, al mismo tiempo, orientar y aliviar la patología por la que consulta el paciente.

3. Decisión de la respuesta: una vez realizada la valoración del caso, el médico está en condiciones de decidir cuál es la respuesta más adecuada. Respuesta que puede requerir el envío de uno o más recursos, o bien consistir en la resolución de la demanda asistencial por el propio médico coordinador. Debemos asegurarnos de que al alertante le ha quedado clara la respuesta que le hemos dado.

4. Despedida: es importante en cuanto a la imagen de servicio, emplear un tono de voz cálido, similar al de la acogida, que invite al comunicante a ponerse de nuevo en contacto con el 061 si así lo precisa. La elocución debe ser lenta, sin que el alertante perciba que hay cierta celeridad en cortar la comunicación y esperando a que el comunicante haya cortado antes que el profesional.

2. APARATO CARDIOCIRCULATORIO

DOLOR TORÁCICO

Interrogatorio

1. **Descartar inconsciencia:** ¿Está consciente? ¿Habla? ¿Abre los ojos? Si está inconsciente, seguir protocolo específico.
2. **Evaluar patrón respiratorio:** Le cuesta hablar, se fatiga al moverse, respiración jadeante, tiraje, sibilancias, roncus o estertores. Evaluación indirecta de dificultad respiratoria.
3. **El inicio del dolor y el tiempo de evolución son relevantes:**
 - Súbito nos hará pensar en disección aórtica, TEP o neumotórax. Si es agudo, en cardiopatía isquémica, pleuritis, osteocondritis.
 - Progresivo, pensaremos en pericarditis, úlcera o esofagitis.
4. **¿Dónde es el dolor?**
 - Retroesternal: cardiopatía isquémica, esofagitis.
 - Interescapular: aneurisma aórtico, cardiopatía isquémica.
 - A punta de dedo: osteomuscular, submamario: úlcus gastrointestinal, pancreatitis, biliar.
5. **Irradiación.** Cardiopatía isquémica: brazos, cuello y mandíbula. Disección aórtica: espalda. Esofagitis: cuello.
6. **¿Cómo es el dolor?**
 - Opresivo orienta hacia cardiopatía isquémica.
 - Quemante orienta a esofagitis.
 - En puñalada a pleuritis o pericarditis.
 - Desgarrante a disección aórtica.
 - Pinchazos nos orientan más a cuadros de ansiedad o inespecíficos.
7. **¿Le alivia de alguna manera?:** Nitratos: cardiopatía isquémica. Antiácidos: patología ulcerosa. Flexión ventral del cuerpo: pericarditis, colecistitis, pancreatitis.
8. **¿Empeora de alguna manera?**
 - Con los movimientos corporales: dolor osteomuscular, pleuritis o pericarditis. A la palpación: osteomuscular, pleuritis, pericarditis. Con la inspiración: pleuritis, pericarditis u osteomuscular. Postpandrial: esofagitis, ulcus, cardiopatía isquémica.
9. **El aspecto del paciente nos puede orientar hacia la gravedad del cuadro.**
 - Un cuadro acompañado de cortejo vegetativo orienta hacia cardiopatía isquémica, disección aórtica o patología de mayor complicación generalmente.
 - La coloración: cianosis, rubicundez facial, palidez. Puede ayudarnos a discernir si se trata de algo respiratorio, ansiedad, etc.
10. **¿Le pasó alguna vez, le recuerda a infartos previos , lo achacan a algo?** Antecedentes de cardiopatía isquémica, orienta a patología previa
11. **¿Tiene alguna enfermedad?** HTA, DM, DLP, cardiopatías, valvulopatías, cirugías... procesos agudos como virasis, herpes ...
12. **Tratamientos:** gastrolesivos, hepatotóxicos, anticoagulantes o antiagregantes ...

Consejo telefónico

Medidas generales

- Comprobar estado de conciencia. Si inconsciente, seguir algoritmo RCP .
- Si disnea mantener incorporado o sentado, abrir una ventana y retirar ropa que oprima el tórax. Si tienen O2 en el domicilio, indicar su administración según gravedad.
- A la espera del recurso enviado, vigilar la conciencia, la respiración y la agudización del dolor.

Medidas específicas

Si el dolor sugiere cardiopatía isquémica, se puede indicar nitratos si hasta en tres ocasiones separados de 5 -10 min, incluso media aspirina masticada. En caso de patología menor, se pueden indicar analgésicos atendiendo a los AP del paciente.

Si sospechamos ansiedad, comenzar con técnicas de respiración y si tienen ansiolíticos de crisis previas administrar (alprazolam 0,25-0,5 mg, diazepam 2,5-5 mg...).

Respuesta desde CCUS-061

Recurso medicalizado	Derivación a Urgencias	Visita a domicilio
<ul style="list-style-type: none">- Alteración estado conciencia- Inicio súbito o agudo- Opresión o desgarro- Disnea o taquicardia- Similar a episodio isquémico previo- Retroesternal o interescapular- Cortejo vegetativo acompañante.	<ul style="list-style-type: none">- Consciente, sin disnea ni cortejo acompañante- Similar a previos, que no mejora con medicación- Sensación de quemazón, puñalada o punta de dedo- Dolor no filiado- Ansiedad que no mejora tras la medicación o con afectación general- Pleurítico que empeora con inspiración- Carácter osteomuscular sin mejoría con analgesia	<ul style="list-style-type: none">- Vida basal limitada y movilidad reducida con:<ul style="list-style-type: none">• Dolor progresivo, subagudo, sin afectación general• Superficial, pinchazos o a punta de dedo• Empeora con inspiración.• Mejora con antiácidos

PALPITACIONES

Interrogatorio

1. **¿Cuándo empezaron?** Hace minutos, horas, días.
2. **¿Lo relaciona con esfuerzos? ¿Aparecen en reposo? ¿Durante el descanso nocturno?**
3. **¿Presenta otros síntomas?**
 - Dolor torácico.
 - Opresivo: angor hemodinámico, pasar a protocolo de dolor torácico.
 - Punzante: ansiedad.
 - Cortejo vegetativo: mal tolerada, pensar en cardiopatía isquémica, taquicardia ventricular, TSV, FA, flutter.
 - Dificultad respiratoria: podemos estar ante un TEP si es de forma súbita, un fallo cardíaco en contexto de arritmia con respuesta rápida (FA, TSV, flutter).
 - Fiebre, sospecha de algún proceso infeccioso: (tos, expectoración,...). La fiebre suele acompañarse de un aumento del ritmo cardíaco.
 - Mareo: pudiendo ser la causa de las palpitaciones un simple vértigo o malestar.
 - Ha vivido algún acontecimiento estresante previo que pueda desencadenarlo: ansiedad.
4. **¿Padece de alguna enfermedad -AP-?** Arritmia o cardiopatía conocida. Anemia, problemas electrolíticos, diuréticos, tiroides.

Consejo telefónico

Medidas generales

- Realizar respiraciones profundas y lo más lento posible.
- Intentar mantener la calma.
- Adoptar postura cómoda y relajada hasta nuestra llegada.
- Vigilar si empeora y en caso de pérdida de conocimiento, dolor torácico en aumento, disnea, etc. se le indicará que vuelva a llamar.

Medidas específicas

- Si tiene una arritmia conocida y tiene una medicación que haya tomado en otros episodios, se puede indicar su administración, asegurándonos de los antecedentes y valorando sus efectos secundarios.
- Si sospechamos ansiedad y el paciente tiene medicación, se puede administrar alprazolam 0,25 mg sl o diazepam de 2,5 o 5 mg. En caso de tener otro tipo de ansiolíticos se valorará de forma individualizada (según dosis habitual, vida media y tolerancia, etc.).
- Si sospechamos una TQ potencialmente grave (mal tolerada), indicar reposo semincorporado, con el tórax descubierto esperando a nuestra llegada.
- Medir la T^a y si el proceso presenta fiebre, recomendaremos paracetamol 1 g/8 h.
- Si está tomando antígrípales, podríamos indicar su retirada, ya que en mayores de 50 años pueden provocar TQ.

Respuesta desde CCUS-061

Recurso medicalizado	Derivación a Urgencias	Visita a domicilio
<ul style="list-style-type: none">- Taquicardia mal tolerada- Dolor torácico opresivo o mal definido con cortejo acompañante- Disnea- Pérdida de conocimiento	<ul style="list-style-type: none">- Sospecha de arritmia de nueva aparición, siendo bien tolerada por el paciente y sin datos de alarma (dolor torácico, mareo, disnea, cortejo vegetativo)- Arritmia conocida con frecuencias altas y repercusión del estado general o datos de alarma- FC por encima de 100 sin causa aparente- Ansiedad que no se controla	<ul style="list-style-type: none">- Situaciones de estrés severo que no conseguimos desplazar al paciente o reacción de duelo- Persona mayor con fiebre- Paciente paliativo

SÍNCOPE

Interrogatorio

1. **Valorar estado de conciencia:** ¿Abre los ojos? ¿Respira? Estimular al paciente (llamar, pellizcar).
 - Inconsciente--Seguir algoritmo de RCP.
 - Recuperado-- cuadro presincopal o sincopal.
2. **¿Cómo respira?** Si hay disnea, buscar causas (atragantamiento, TEP, ansiedad).
3. **¿Qué estaba haciendo?**
 - Calor, ansiedad, bipedestación prolongada, dolor, habitualmente con pródromos (sudoración, acúfenos, náuseas, vómitos, visión borrosa, BQ o hipotensión). Orienta a síncope neuromediado.
 - Brusco , durante un esfuerzo, palpitaciones que preceden a la pérdida de conciencia: orienta a síncope cardiógeno.
 - Con la bipedestación, disminución de la PAS, palpitaciones, sudoración y debilidad. Orienta a síncope ortostático.
 - Tras ingesta alimenticia: orienta a hipotensión postprandial, síncope ortostático.
 - Tras accesos tos, defecación, micción, síndrome seno carotídeo: orienta a síncope neuromediano.
4. **¿Convulsión ?¿Relajación de esfínteres?** Orienta a crisis comicial.
 - Síncope : puede iniciarse con un espasmo tónico y relajación de esfínteres.
 - Crisis comicial: convulsión prolongada , recuperación lenta con estado postcrítico.
5. **¿Presenta pérdida de fuerza en miembros, desvía comisura, disartria ...?** Orienta a ACV.
6. **¿Presenta algún otro síntoma?** Dolor torácico, abdominal, disnea, palpitaciones, etc.: pasar a protocolo específico.
7. **¿Padece de alguna enfermedad -AP-?** DM, cardiopatía, toma de fármacos (diuréticos, digital, hipoglucemiantes, antihipertensivos...). Orienta a patología previa.

Consejo telefónico

Medidas generales

- Intente despertarlo. Si no ha recuperado la conciencia, compruebe respiración. Si respira, colocarlo en PLS y si no respira, inicie RCP.
- Si convulsiona esperar a que termine y tumbar en PLS, no sujetar al paciente y retirar los objetos con los que pueda golpearse.
- Si ha recuperado la conciencia, tumbe al paciente boca arriba con las piernas elevadas.

Medidas específicas

- Si dolor torácico o disnea, descubra el tórax y espere a nuestra llegada.
- Si tiene vómitos, inclinarle hacia un lado para evitar el atragantamiento.
- Si el paciente es diabético, medir la glucemia, en caso de <60 mg/dl comience a administrar azúcar.

Respuesta desde CCUS-061

Recurso medicalizado	Derivación a Urgencias	Visita a domicilio
<ul style="list-style-type: none">- PCR- Cardiogénico- Disnea intensa- Focalidad neurológica, convulsión- Hipoglucemia severa- Disminución del nivel de conciencia	<ul style="list-style-type: none">- Síncope recuperado- Toma de fármacos- Palpitaciones- Dolor abdominal o estreñimiento- Tusígeno- Cefalea asociada	<ul style="list-style-type: none">- Paciente encamado con claro desencadenante o sin recuperación completa

PARADA CARDIORRESPIRATORIA

Interrogatorio

1. **¿Está consciente?** ¿Abre los ojos, habla, se mueve?
 - Sí: pasar al protocolo correspondiente.
 - NO: pasar a la siguiente pregunta.
2. **¿Respira?** Paciente que no respira: pasar a protocolo de PCR.
 - Sí o respira con dificultad: utilizar protocolo correspondiente.
 - NO: pasar a la siguiente pregunta
3. **¿Tiene signos de vida? (valorar la circulación):** movimientos, deglución
 - Sí
 - NO: pasar a la siguiente pregunta
4. **¿Cuánto tiempo lleva así?** Orienta sobre la actitud terapéutica y respuesta desde la CCUS.
 - Segundos, minutos: PCR.
 - Más de 20 min, horas: éxitus.
5. **Valoración del entorno o actividad previa del paciente a la PCR:** domicilio (autolisis, pastillas), bar (intoxicación etílica, drogas, jeringuillas), industria (tóxicos industriales). Humo combustión, motor en marcha (sospecha intox CO), intemperie o ahogamiento (hipotermia). Señales de violencia, armas.
6. **¿Padece de alguna enfermedad -AP?** La patología previa puede indicar criterios de no iniciar la RCP. Pueden orientar a una causa específica: DM, cardiopatía, broncopatía, hepatopatía, IRC, epilepsia, intentos autolíticos previos o adicciones. Neoplasias u otras enfermedades avanzadas, vida basal previa.

Consejo telefónico

Medidas generales

- Retirar la ropa del tórax del paciente, decúbito supino, superficie dura (si es posible) e iniciar **RCP**.
- Dejar el **teléfono** del reanimador en **función de altavoz** para realizar la RCP guiada.
- Si el **reanimador no está formado en RCP** se indicarán solo **COMPRESIONES TORÁCICAS**:
 - Colóquese de rodillas perpendicularmente al tórax del paciente.
 - Coloque el talón de sus manos y una sobre otra en el centro del tórax, y comprima.
 - Con una profundidad de unos **5 cm**. (Se aumentará la profundidad si la superficie no es dura)
 - Entre **100-120/veces/min.** (Vamos contando con el paciente 1,2,3,)
 - Con ciclos de compresión descompresión del **50%**.
 - Se le animará periódicamente: ¡Lo está haciendo muy bien!, ¡Continúe hasta que llegue la ambulancia!.
- Si el reanimador está formado en RCP, se le indicará administrar 2 ventilaciones de rescate de 1 segundo, en ciclos de 30 compresiones y 2 ventilaciones.
- Si hay dos personas, se alternarán cada 2 minutos en las compresiones torácicas.

Medidas específicas

- Si tiene DESA (gimnasios, aeropuertos...), tan pronto llegue:
 - Encienda el aparato y coloque los parches adhesivos sobre el tórax desnudo del paciente.
 - Continúe las instrucciones que le da el DESA.

Respuesta desde CCUS-061

Recurso medicalizado (*)	Derivación telefónica a médico/enfermero consultor	Visita a domicilio
<ul style="list-style-type: none">- Todo paciente en PCR en que se inician medidas de RCP- Si AM está ocupada o no es posible, se enviará ASVB y médico (éste por sus medios si se demora la asistencia). <p>(*) Se movilizará el recurso más próximo con capacidad de desfibrilación</p>	<ul style="list-style-type: none">- Para realización de RCP guiada	<ul style="list-style-type: none">- PCR no susceptible de RCP compatible con éxito esperado- PCR con signos evidentes de muerte

3. PIEL Y FANERAS

LESIONES DERMATOLÓGICAS

Interrogatorio

1. **¿Desde cuándo está así? y ¿Le había ocurrido anteriormente?** Orienta a patología previa.
2. **¿En dónde se localizan las lesiones?**
 - Si son localizadas: orienta a eccemas de contactos, picaduras (pasa a protocolo específico), herpes...
 - Si son generalizadas: sugiere procesos de tipo sistémico.
3. **¿Hay algún factor desencadenante?** Si hay contacto o exposición a alérgenos (dermatitis contacto o urticaria), exposición solar (quemadura solar, fotosensibilidad), exantema viral (en niños sugestivo PTI), ingesta de fármacos (penicilinas, AINE, IECA...)
4. **¿Cómo son las lesiones?:**
 - Manchas:
 - Difusas: exantemas morbiliformes (sarampión) o escarlatiniforme.
 - Confluientes: púrpuras y petequias palpables o no, tiña, dermatitis de contacto, celulitis, dermatitis atópica...
 - Sobrelevadas:
 - Líquido en su interior: enfermedades vesículo-ampollosas (pénfigo, varicela/zoster, herpes simple).
 - Sin líquido en su interior: enfermedades pápulo-nodulares (verrugas, picaduras, LES, sarcoidosis, urticarias).
 - Ronchas: urticaria (fármacos, alergenos, físicas...).
 - Descamativas: psoriasis, pitiriasis rosada, tiñas, dermatitis contacto...
 - Úlceras cutáneas: insuficiencia venosa, HTA, DM, encamados, Behcet.
5. **¿Presenta algún síntoma acompañante?**
 - Disnea, mareos, palpitaciones, angioedema: reacción anafiláctica.
 - Prurito: dermatosis crónicas, varicela, enfermedades sistémicas (DM, uremia, linfomas, hipertiroidismo).
 - Fiebre: procesos infecciosos, autoinmunidad, PTT, trastornos SNC, fallo renal...
 - Dolor: herpes zoster, quemaduras...
6. **¿Padece alguna enfermedad -AP-?** Enfermedades dermatológicas previas (reagudizaciones), enfermedades sistémicas (LES, artritis reactivas, vasculitis, DM, IRC, atopía...), alergias conocidas.

Consejo telefónico

Medidas generales

- Si hay prurito generalizado: aplicar compresas frías durante 30-45 min/preparados de mentol (Sartol® solución) /baños en sales de avena (Mede-baby avena®) /soluciones de urea (Nutraplus4®).
- Si no mejora con las indicaciones anteriores, se puede indicar antihistamínico.
- Para molestias asociadas a exantemas virales, aconsejaremos preferiblemente paracetamol.
- En general, no recomendaremos corticoides tópicos. No obstante, podrían prescribirse si los tiene en el domicilio, los ha utilizado en más ocasiones y sugiere una lesión que justifique su aplicación.

Medidas específicas

- Quemadura solar: hidratación cutánea y compresas frías para el alivio de síntomas.
- Dermatitis atópica: hidratación de la piel por medio de emolientes. Los corticoides tópicos, después del baño.
- Dermatitis del pañal: cambios de pañal, lavado con agua tibia y jabón suave, aplicación de cremas barrera (pasta al agua, Natusan®, Mustela®...).
- Sospecha de herpes simple: aplicación de crema antiviral (Aciclovir®, Zovirax®...).
- Sospecha de enfermedad exantemática: corte de unas, evitar el uso de AINE, hidratación cutánea y antihistamínicos, si los tiene en el domicilio y los ha utilizado en más ocasiones.

Respuesta desde CCUS-061

Recurso medicalizado	Derivación a Urgencias	Visita a domicilio	Derivación AP
<ul style="list-style-type: none">- Reacción anafiláctica- Picaduras en alérgicos- Quemaduras extensas y/o compromiso de vía aérea- Afectación del estado general	<ul style="list-style-type: none">- Reacción alérgica generalizada con buen estado general- Mal control de los síntomas (prurito, dolor...)- Pobre respuesta al tratamiento- Quemaduras 2º o 3º grado extensas sin riesgo vital	<ul style="list-style-type: none">- Reacción alérgica generalizada con buen estado general- Mal control de los síntomas (prurito, dolor...)- Pobre respuesta al tratamiento- Quemaduras 2º o 3º grado extensas sin riesgo vital	<ul style="list-style-type: none">- Quemaduras leves con mala evolución- Reagudización de patología crónica- Lesiones cutáneas sin filiar y sin síntomas asociados en el paciente con buen estado general- Exantema febril- Urticaria

URTICARIA

Interrogatorio

1. **¿Desde cuándo la tiene? ¿Le ha ocurrido en otras ocasiones?** Orienta a patología previa.
2. Inicio brusco (minutos): orienta a gravedad.
3. Paulatino (horas): orienta a leve o menor gravedad.
4. **¿En dónde se localiza?**
 - Localizada: orienta a menor gravedad (de contacto).
 - Generalizada: fármacos, físicas, enfermedades sistémicas/autoinmunes (LES, vasculitis, conectivopatías, Hashimoto..), infecciones (exantemáticas, viriasis ...), alimenticias.
5. **¿Tiene algún tipo de lesión cutánea?**
 - Habones: lesión típica de la urticaria.
 - Otras lesiones: pasa a protocolo de lesiones dermatológicas.
6. **¿Presenta algún síntoma acompañante?**
 - Dificultad respiratoria, sibilancias: sugieren signos de alarma. Pasa a protocolo de disnea, anafilaxia.
 - Inflamación de labios, garganta, lengua, cara: reacción anafiláctica.
 - Mareos, vómitos, dolor abdominal, diarrea: sugiere signos de alarma.
 - Fiebre, adenopatías, ictericia: sugieren signos alarma.
7. **¿Padece alguna enfermedad -AP-?**
 - Alergias: alimentarias (mariscos, frutos secos, leche, huevo..), físicas (frío, calor, sol, vibración), colinérgicas (al aumentar la temperatura corporal)...
 - Fármacos: penicilina, AINE,cefalosporinas, sulfamidas, AAS, contrastes radiológicos.
 - Enfermedades sistémicas: DM, IRC, conectivopatías, vasculitis, inmunodeprimidos.
 - Picaduras de himenópteros reciente (abeja, avispa).

Consejo telefónico

Medidas generales

- Evitar factores de sospecha desencadenantes: calor, frío, fármacos, alimentos, contacto con alérgenos.
- Aplicar una crema emoliente en todo el cuerpo.
- Las medidas para evitar irritantes incluyen cuidados para disminuir el contacto con la piel de alimentos ácidos (tomate, cítricos, etc.), cambio frecuente de pañales y aclarado cuidadoso de la ropa.

Medidas específicas

- Antihistamínicos (cetirizina, loratadina, ebastina...): si los tiene en el domicilio y los ha tomado en otras ocasiones.
- Si sospecha una crisis anafiláctica y tiene autoinyector, se recomienda su utilización.

Respuesta desde CCUS-061

Recurso medicalizado	Pasar a médico de AP	Derivación a centro de Urgencias	Visita a domicilio
<ul style="list-style-type: none">- Sospecha de reacción anafiláctica- Alteración del nivel de conciencia	<ul style="list-style-type: none">- Control de las lesiones- Si persistencia tras aplicar tratamiento- Duración mayor de 48 hr- Antecedentes de alergia- Reaparición sin factor de exposición o desencadenante	<ul style="list-style-type: none">- Disnea, sibilancias, inflamación facial- Fiebre, adenopatía, dolor abdominal, vómitos, diarrea, ictericia, mareos- Prurito intenso que no cede con tratamiento- Rápida evolución tras exposición a un alérgeno (alimentos, fármacos picaduras etc.)	<ul style="list-style-type: none">- Circunstancias basales que impiden la movilización del mismo: paliativos, encamados

EDEMA CUTÁNEO

Interrogatorio

1. ¿Desde cuándo está así?

- Agudo: posible AE histaminergico (inicio rápido de duración entre 24-48 h).
- Menor de 4 días: puede ser angioedema o cualquier otro tipo de edema.
- Mayor de 5 días: no es angioedema, es un edema cutáneo de otro tipo.

2. ¿Dónde está localizado?

- Generalizado: no es angioedema
- Localizado:
 - Cara, orofaríngea: valorar ronquera, disfonía, estridor, disfagia. Indica gravedad, excepto en edema de úvula (edema frecuente en la población, no es angioedema).
 - Periférico, extremidad, genital, tronco.
 - ¿Tiene dolor abdominal? Posible AEH. (En el AE histaminérgico si tiene dolor abdominal, suele ir asociada a otros síntomas en contexto de anafilaxia).

3. ¿Cómo es el edema?

- Doloroso, piel enrojecida y caliente: no es angioedema, orienta a celulitis...
- Blanquecino, pruriginoso, presencia de habones: urticaria con AE.
- Piel enrojecida con picor: posible angioedema histaminérgico.

4. ¿Qué cree que lo ha podido desencadenar?

- Traumatismos físicos (procedimientos odontológicos, endoscopias, intubación), orienta a angioedema bradicinérgico (AEH).
- Fármacos (IECA, ARA-II, estrógenos): posible angioedema bradicinérgico (AEH, angioedema inducido por IECA).
- Fármacos (betalactámicos, aines, AAS), alimentos (mariscos, pescados, huevo, leche), exposición a animales, picaduras: orienta a AE histaminérgico.

5. ¿Lo ha tenido en otras ocasiones- AP-?, ¿Sabe con qué tratamiento respondió?

- Concentrados de C1-inhibidor: angioedema bradicinérgico (AEH, y otros)
- Antihistamínicos, corticoides, adrenalina: AE histaminérgico.

Consejo telefónico

Medidas generales

- Tranquilizar al paciente y familiares.
- Colocar al paciente en posición semiincorporada si tiene compromiso respiratorio.
- Evitar posibles precipitantes: estrés, fármacos (AINE, IECA), alimentos.

Medidas específicas

- Si sospecha de AE histaminérgico, se pueden indicar antihistamínicos y corticoides (si los ha tomado en más ocasiones y no ha tenido efectos adversos).
- Si se sospecha de AEH y tiene edema oro-laringeo-faríngeo o dolor abdominal agudo: se indicará Firazyr® sbc: 1 dosis solo en los pacientes con diagnóstico firme de AEH. Estos pacientes son conocedores del manejo de las crisis por lo que llaman al 061 cuando no las resuelven adecuadamente o han tenido un episodio grave).
- En pacientes con angioedema de vía aérea superior con compromiso respiratorio, que reciben terapia con IECA y no responden a adrenalina, se valorará el tratamiento con Firazyr® sbc.

Respuesta desde CCUS-061

Recurso medicalizado	Derivación a Urgencias	Visita a domicilio
- Paciente con compromiso de la vía aérea - Paciente con dolor abdominal y signos de hipovolemia	- Paciente con suficientes molestias que le obligan a alterar su actividad o estado basal sin compromiso de la vía aérea	- Circunstancias basales que impiden la movilización del mismo: paliativos, encamados

4. APARATO DIGESTIVO

DIARREA

Interrogatorio

1. **¿Desde cuándo está así?** Crónica superior a 4 semanas.

2. **¿Cómo son las heces?**

- Moco, sangre (diarrea inflamatoria): procesos infecciosos, EI, neoplasias de colon, patología isquémica de colon. Algunos procesos benignos pueden cursar con expulsión de moco.
- Acuosa (osmótica/secretora): laxantes, enterotoxinas bacterianas, EI, causa endocrinológica, neoplasias.
- Esteatorrea: enfermedad de Whipple, giardiasis, linfoma, EI, insuficiencia pancreática exocrina...
- Alterna diarrea y estreñimiento: fecalomía, síndrome de intestino irritable.

3. **¿Tiene otros síntomas asociados?**

- Náuseas, vómitos frecuentes en diarreas agudas.
- Fiebre: proceso infeccioso, inflamatorios, fármacos. Puede ser uno de los síntomas de deshidratación.
- Dolor abdominal: edad avanzada + FRCV + dolor abdominal agudo + diarrea sanguinolenta, pensar en enteritis isquémica.
- Aftas recurrentes Crohn, Behçet, celíaca.

4. **¿Qué aspecto tiene?** Pálido, ojeroso, postración, sequedad mucosas, oliguria, TQ, pliegue cutáneo.

5. **¿Lo pone en relación con algo?** Comidas, viajes, más miembros afectados (viriasis, toxifiacción alimentaria).

6. **¿Padece de alguna enfermedad -AP-?** infecciones (VIH,colitis), patología multisistémica (DM, uremia, celíaca..), cirugía previa (gastrectomía, resecciones intestinales, vagotomía..), fármacos de inicio reciente: cualquiera, pero son más frecuentes: antibióticos, antiácidos con magnesio, metformina, colchicina, digital, diuréticos, teofilinas, colinérgicos, quimioterápicos,

Consejo telefónico

Medidas generales

- Buena hidratación: 1,5- 2 l/d. Agua de arroz, limonada alcalina, suero oral.
- Dieta astringente: baja en fibra, sin lactosa y sin alimentos irritantes (café, grasas, picantes, bebidas gaseosas).
- Haga comidas sencillas: hervidas, al vapor o a la plancha y evite fritos, rebozados y guisos.
- Repose sentado 30 min después de las comidas principales.
- No tome alimentos ni muy fríos ni calientes.
- Los fármacos antidiarreicos no están indicados inicialmente.
- Vigile la T^a o si aparecen vómitos o dolor abdominal o rectorragias acudirá a Urgencias.

Medidas específicas

- Fiebre: paracetamol
- Vómitos inicialmente con líquidos en sorbos pequeños, si no cede, puede recomendar un antiemético por vo, si disponen del mismo en el domicilio, lo ha tomado en otras ocasiones y no ha producido efectos adversos.

Respuesta desde CCUS-061

Rellamada	Pasar a médico consultor	Derivación a centro de Urgencias	Visita a domicilio
- Si garantiza la hidratación oral y los síntomas asociados se controlan con una buena respuesta - BEG, sin síntoma de gravedad y familia colaboradora	- Signo de alarma: rectorragia, taquicardia, oliguria, postración, o síntomas de deshidratación - Riesgo de bacteriemia: >50 años, inmunodepresión, patología vascular asociada (aneurismas, valvulopatías), gastrectomizados. - Sospecha de abdomen agudo	- Cuando se sospecha mal estado general o diarrea con mala evolución. - Fiebre >39°, afectación sistémica, tenesmo, heces sanguinolentas, duración mayor de 2 semanas o signos de deshidratación (piel pastosa, mucosas secas, ojos hundidos)	- Las mismas que en la derivación a Urgencias cuando esta no es posible

DISPEPSIA

Interrogatorio

1. ¿Desde cuándo está así?

- Aguda: fármacos, postinfecciones (GEA), agudizaciones de colon irritable y de enfermedad celíaca.
- Crónica: úlcera, dispepsia funcional (síntomas al menos 6 m antes del dx, estar activa 3 m y no se identifica causa tras endoscopia), infestaciones por parásitos, causa tumoral.

2. ¿Dónde se localiza la molestia?

- Epigastro: origen esofágico, gástrico, biliar, pancreático, SCA, RGE.
- Retroesternal: pat de cardias, esófago o cardíaca, RGE.
- Hipocondrio derecho: pat biliar, hepatitis, cirrosis patología de cabeza de páncreas.
- Hipocondrio izquierdo: pat de cola de páncreas, colon irritable, aire atrapado en ángulo esplénico.
- Periumbilical: pat de intestino delgado (obstrucción, enteritis regional), comienzo de apendicitis.

3. ¿Qué cree que puede desencadenarla?

- Relación con comidas: gastritis úlcera, neo gástrica, pat biliar, anafilaxia, RGE, enfermedad celíaca.
- Estrés: colon irritable.
- Relación con menstruación: endometriosis.
- Posición de decúbito: ERGE
- Ejercicio físico: SCA

4. ¿Qué cree que puede mejorarlala?

- Con alimentación, antiácidos, IBP: ulcus gástrico.
- Con deposiciones: colon irritable, EII, pat de colon derecho o íleon terminal, aerofagia.
- Con vómitos: úlcera gástrica o de duodeno. Si no mejora, pensar en pat pancreática o biliar.
- En posición de sedestación o inclinándose hacia adelante: pat pancreática (pancreatitis, neo).
- En posición de bipedestación: ERGE.

5. ¿Presenta otros síntomas?

- Fiebre: EII, colecistitis, GEA.
- Náuseas, vómitos: patología biliar, úlcera péptica.
- Reflujo, tos: ERGE.
- Eruptos: aerofagia.
- Edema facial, disnea: anafilaxia a alimentos.
- Disminución de peso, hiporexia: neo, EII, síndrome de mala absorción podría excluir colon irritable.
- Estreñimiento: lesión obstructiva de colon.
- Sudoración profusa, síntomas vagales: SCA.
- **Síntomas de alarma:** pérdida de peso importante, AF de neo de colon o gástrico, impide conciliar el sueño, anemia no justificada, comienzo agudo en mayores de 50 años, vómitos persistentes, sangrado digestivo, cirugía gástrica previa o masa abdominal palpable.

6. ¿Padece de alguna enfermedad -AP-? Patología digestiva de base, patología oncológica, patología o factores de riesgo cardiovascular o DM (tenerlo en cuenta en ancianos por sospecha de gastroparesia). Hernias. Úlceras. Toma de AINE, tabaquismo.

Consejo telefónico

Medidas generales

- Se evitarán comidas muy condimentadas, grasas y probar comidas ácidas (cítricos tomates, vinagre).
- Evitar café, alcohol y tabaco.
- Disminuir los niveles de estrés y realizar ejercicio de forma regular.

Medidas específicas

- Dispepsia orgánica: tratamiento causal.
- Dispepsia funcional: antiH2 e IBP. Valorar prokinéticos.

Respuesta desde CCUS-061

Recurso medicalizado	Derivación a Urgencias	Visita a domicilio
<ul style="list-style-type: none">- Signos de hipovolemia- Inestabilidad hemodinámica- Alteración de la conciencia- Disnea- Dolor retroesternal que nos haga sospechar SCA	<ul style="list-style-type: none">- Fiebre- Sospecha de abdomen agudo- Vómitos incohérentes- Hemorragia digestiva (hematemesis, melenas).- Masa abdominal palpable- Cirugía gástrica previa	<ul style="list-style-type: none">- Paciente paliativo en el que no están indicadas medidas de reanimación

DOLOR ABDOMINAL

Interrogatorio

1. ¿Desde cuándo tiene el dolor?

- Agudo: inicio (súbito e intenso): SCA, aneurisma de aorta, isquemia mesentérica aguda, cólico biliar, pancreatitis, cólico nefrítico, rotura quiste ovárico, embarazo ectópico...
- Crónico (horas de evolución e inicio más insidioso): GEA, colon irritable, diverticulitis, apendicitis, resto de patología ginecológica...

2. ¿Por dónde le duele, del ombligo hacia arriba o hacia abajo?

- Epigástrico: coronario, úlcera péptica, gastritis, pancreatitis (irradiado en cinturón hacia la espalda), esofagitis, espasmo esofágico, pericarditis, rotura aneurisma de aorta.
- Hipocondrio derecho: patología hepática y biliar, cólico nefrítico, neumonía basal derecha, cardiopatía isquémica.
- Hipocondrio izquierdo: pancreatitis, cardiopatía isquémica, úlcera péptica, rotura esplénica, neumonía basal izquierda, cólico renal.
- Mesogastrio: disección de aneurisma de aorta, GEA, oclusión intestinal, isquemia intestinal.
- FID: apendicitis, cólico renal, patología ginecológica (embarazo ectópico, rotura folículo ovárico...), adenitis mesentérica.
- FII: diverticulitis, cólico renal, patología ginecológica (embarazo ectópico, rotura folículo ovárico...), neo de colon, EII.
- Hipogastrio: obstrucción intestinal, patología urológica, patología ovárica.

3. ¿Cómo es el dolor?

- Continuo: ITU, pancreatitis, colitis isquémica, diverticulitis, hepatitis, aneurisma aórtico, isquemia mesentérica crónica (tras ingesta).
- Cólico: GEA, cólico biliar, cólico nefrítico.
- Irradiado: cólico nefrítico (fosas ilíacas), disección aneurisma aorta torácica (espalda), SCA (tórax, espalda), pancreatitis.

4. ¿Se le alivia con alguna acción?

- Cambio postural: mejora al incorporarse hacia delante (pancreatitis).
- Ingesta: mejoría (úlcera duodenal). Empeoramiento (patología vascular digestiva, pancreatitis...).
- Defecación: alivio (patología colon).
- Decúbito: empeora en RGE.

5. ¿Tiene algún síntoma asociado?

- Disnea o dolor torácico: origen coronario, neumonía, TEP.
- Presenta mareo, sudoración profusa, palpitaciones: posibilidad de inestabilidad hemodinámica.
- Fiebre, vómitos, diarrea o ausencias de expulsión de gases: GEA, obstrucción intestinal.
- Hemorragia digestiva: pasa a protocolo específico.

6. ¿Padece alguna enfermedad -AP-?

- Patología digestiva de base, patología oncológica, cirugías abdominales, antecedentes ginecológicos (valorar posibilidad de embarazo si es paciente joven, DIU), patología o factores de riesgo cardiovascular o DM (tenerlo en cuenta en ancianos por sospecha de gastroparesia). Hernias. Úlceras. Toma de fármacos (AINE, ACO). Tóxicos (setas, mariscos...).

Consejo telefónico

Medidas generales

- Indicaremos aflojar las prendas de ropa, colocarse en decúbito supino y si se acompaña de vómitos, colocar en PLS.
- Dieta absoluta mientras persista el dolor.
- Si presenta vómitos, esperar al menos 20-30 min tras el último vómito para iniciar rehidratación oral y 3-4 h antes de la ingesta de sólidos.

Medidas específicas

- Cuadro compatible con GEA sin repercusión hemodinámica aparente: rehidratación con suero oral, reposo intestinal sin ingesta de sólidos.
- En adultos: retirar lácteos; en niños: no recomendado y posteriormente, dieta astringente.
- Si presenta vómitos, podríamos recomendar metoclopramida, domperidona si la tiene en el domicilio y la ha tomado en otras ocasiones.
- Si sospecha de dispepsia, IBP a dosis doble si lo tiene en domicilio y lo ha tomado en otras ocasiones.
- Si sospecha de cólico biliar o renal, calor local. Analgesia si la tiene en domicilio y la ha tomado en otras ocasiones.

Respuesta desde CCUS-061

Pasar medicalizado	Derivación a Urgencias	Visita a domicilio
<ul style="list-style-type: none">- Signos de hipovolemia- Inestabilidad hemodinámica- Alteración de la conciencia- Disnea- Dolor torácico	<ul style="list-style-type: none">- Fiebre- Cirugía o traumatismo abdominal/pélvico reciente- Sospecha de abdomen agudo- Cólico biliar o nefroureteral de inicio- Vómitos incohérentes- Hemorragia digestiva	<ul style="list-style-type: none">- Paciente paliativo en el que no están indicadas medidas de reanimación

DOLOR BUCODENTAL

Interrogatorio

1. **¿Desde cuándo tiene el dolor?**
 - Agudo: pulpitis aguda, absceso.
 - Crónico: pulpitis crónica, prótesis mal ajustada.
2. **¿Dónde se localiza el dolor?**
 - Dental: absceso, pulpitis, flemón.
 - Mucosa oral: gingivitis (muguet, herpes), mecánico (mordedura, prótesis), patología sistémica (Behçet).
 - Mandibular: cardiopatía isquémica, patología de ATM.
3. **¿Cómo es el dolor?:**
 - Aumenta con el frío: pulpitis.
 - Aumenta al abrir y cerrar la boca: patología de ATM, arteritis temporal.
 - Se desencadena al tocar alguna parte de la cara o al morder: absceso, neuralgia trigémino.
4. **¿El dolor irradia?**
 - Mandíbula: cardiopatía isquémica, patología de ATM.
 - Oído: otitis, patología de ATM, patología de glándulas salivares (sialolitiasis, tumores...).
 - Cara: sinusitis, neuralgia.
5. **¿Tiene alguna lesión?** Boca, encías, paladar (blanquecinas, úlceras, ampollas).
6. **¿Tiene otros síntomas?**
 - Cortejo vegetativo: cardiopatía isquémica.
 - Fiebre: descartar septicemia.
 - Cefalea: migraña, arteritis de la temporal.
 - Sangrado, rotura o movilidad dental o avulsión completa.
7. **¿Padece de alguna enfermedad -AP-?** Trauma facial, manipulación dental reciente, enfermedades sistémicas, fármacos...

Consejo telefónico

Medidas generales

- Higiene bucodental con cepillado suave y enjuague con colutorio sin alcohol.
- Evitar bebidas frías, calientes, dulces o ácidas.

Medidas específicas

- Analgésicos habituales.
- **Paracetamol:** niños: 15 mg/kg/6h. Adultos: 650 mg/6h.
- **Ibuprofeno:** niños: al 2% (peso/3 c/6 h) y al 4% (peso/6 c/6h. Adultos: 400-600 mg/6 h.
- En rotura o avulsión dental: transportar el diente en leche, en menos de 3 h para atención por dentista.
- Hemorragias: compresión, lavado con agua oxigenada, evitar bebidas calientes, no apoyar la cara del lado afecto y evitar escupir.

Respuesta desde CCUS-061

Pasar a médico consultor	Derivación a Urgencias	Visita a domicilio
<ul style="list-style-type: none">- Disnea, mareo, sudación o palidez- Sangrado abundante que no remite con medidas conservadoras- Cambio de algunos síntomas previos- Paciente VIH, inmunodeprimido u oncológico con QT o RT con patología local	<ul style="list-style-type: none">- Dolor refractario persistente- Absceso, fiebre o pulpitis- Lesión de mucosa oral que no mejora tras tratamiento.- Paciente VIH, inmunodeprimido u oncológico con QT o RT con patología sistémica- Rotura dental, movilidad o avulsión (dentista)- Dolor irradiado al oído	<ul style="list-style-type: none">- Las mismas que en la derivación a Urgencias cuando ésta no es posible

ESTREÑIMIENTO

Interrogatorio

1. ¿Cuantos días hace que está estreñido?

- Como regla general, la duración guarda relación inversa con la probabilidad de hallar una causa orgánica. Excepto: cambio en hábitos higiénico-dietéticos, fármacos, viaje, suceso vital estresante, etc.

2. ¿Cómo es el estreñimiento?

- Constante: orienta a cronicidad.
- Intermitente: pseudobstrucción intestinal, colon irritable.
- Altera con períodos de diarrea: tumoral, colon irritable, neuropatía diabética, impacación fecal, síndrome de intestino irritable (síntomas intermitentes, alivia tras la deposición) EII.
- Expulsa gases u oye ruidos intestinales: su ausencia orienta a obstrucción intestinal.

3. ¿Tiene otros síntomas asociados?

- Síntomas de alarma: hematoquecia, síntomas obstructivos, instauración aguda del cuadro, cambio en el calibre de las heces, pérdida de peso, AF de CCR, celiaquía o EII, edad >50 años.
- Dolor abdominal: proceso obstructivo (tumor, diverticulitis, vólvulo...), síndrome de intestino irritable (síntomas intermitentes, alivia tras la deposición), EII.
- Vómitos, hematemesis: orienta a severidad del cuadro.
- Dolor anal: fisura anal, hemorroides, fisuras, EII.
- Fiebre: enfermedad inflamatoria pélvica.
- Otros síntomas digestivos asociados (pirosis/plenitud postprandial/saciedad precoz, etc.): orienta a patología funcional.
- Fiebre: enfermedad pélvica inflamatoria.

4. ¿Padece de alguna enfermedad -AP-? (Orientan a proceso previo)

- Patología digestiva: colon irritable, EII, tumores, cirugía abdominal previa.
- Patología neurológica: enfermedad de Párkinson, EM, ICTUS, meningocele, Hirschprung.
- Patología endocrina: hipotiroidismo, DM, Addison, hiperparatiroidismo

Consejo telefónico

Medidas generales

- Tranquilizar al enfermo y a la familia si no hay datos de alarma.
- Dieta: líquidos 1 - 1,5 l/d + aporte de fibra (si no existe fallo renal y/o tratamiento con sintrom, evitar fibra verde).
- Caminar, realizar ejercicio.
- Evitar medicación que enlentezca el tránsito intestinal en lo posible.

Medidas específicas

- Supositorio de glicerina: 1 suppositorio/24h, 2 días como máximo.
- Plantago®: 1 sobre 2-3 veces/24 h, 3 días como máximo.
- Microenema: 1/24 h, 2 días como máximo.
- Si tomó alguna vez laxantes y le han sentado bien, vuelva a tomarlo según la pauta previa. Hemorragias: compresión, lavado con agua oxigenada, evitar bebidas calientes, no apoyar la cara del lado afecto y evitar escupir.

Respuesta desde CCUS-061

Pasar a médico consultor	Derivación a Urgencias	Visita a domicilio
<ul style="list-style-type: none">- Mareo, desmayo, fiebre- Estreñimiento de más de 7 días- Hemorroides- Síndrome constitucional- Si persiste o empeoramiento	<ul style="list-style-type: none">- Sangrado no asociado a la deposición o si es importante- Patología digestiva conocida con signos de alarma (vómitos, dolor abdominal, etc.)	<ul style="list-style-type: none">- Sangrado no asociado a la deposición o si es importante- Patología digestiva conocida con signos de alarma (vómitos, dolor abdominal, etc.)

HEMATEMESIS

Interrogatorio

1. ¿Habla normal, respira normal?

- Si no es así, pasa al protocolo correspondiente.

2. ¿Desde cuando está así?

- Es la primera vez
- Ha tenido más episodios: orienta a patología previa.

3. ¿Cómo es la hemorragia?

- Roja: sugiere un sangrado de mayor intensidad: lesión encima del píloro, esófago.
- Marrón, negro, posos de café: sugiere un sangrado más limitado.
- Rojo brillante con espuma o expectoración: posible sangrado de origen pulmonar.

4. ¿Frecuencia e intensidad de la hemorragia?

- Ha sido de inicio brusco y masivo: varices esofágicas, úlcera digestiva: orienta a pérdida de volumen importante (1 litro al menos).
- Ha tenido vómitos previos normales sin sangre: síndrome de Mallory-Weiss.
- Ha tenido deposiciones negras: lesiones agudas de la mucosa gástrica, úlcera gástrica/duodenal: orienta a pérdida entre 50-100 ml de sangre.

5. ¿Presenta otros síntomas?

- Palidez, sudoración fría, alteraciones del comportamiento: orienta a hipovolemia (hemorragia severa).
- Dolor abdominal: úlcera péptica. Si el dolor es más bajo podría indicar EII. Patología isquémica intestinal, patología tumoral.
- Diarrea o cambio del hábito: neo de colon, EII.
- Pirosis, RGE: lesión esofágica (úlcera, neoplasia, inflamatoria).

6. ¿Padece de alguna enfermedad -AP-?

- Patología digestiva: úlcera, cirrosis, enolismo, cirugía o traumatismo gastrointestinal reciente, EII, neoplasias.

Consejo telefónico

Medidas generales

- Tranquilizar a la familia.
- Si está vomitando, se le indicará que tengan una bolsa a mano y que no desplacen al paciente al baño.

Medidas específicas

- Si está estable y solo, dejar la puerta abierta del domicilio, permanecer sentado en el suelo (si está solo) con la espalda apoyada en la pared y aflojar la ropa.
- Si el paciente presenta signos de inestabilidad hemodinámica, PLS.
- Si es un paciente paliativo en el que no están indicadas medidas de reanimación, se indicará utilizar sábanas y toallas oscuras, medidas de confort y manejo de medicación si está indicada por HADO (cloruro mórfico, midazolam, haloperidol...).

Respuesta desde CCUS-061

Recurso medicalizado	Derivación a Urgencias	Visita a domicilio
<ul style="list-style-type: none">- Signos de hipovolemia- Inestabilidad hemodinámica- Alteración de la conciencia- Disnea	<ul style="list-style-type: none">- Sangrado único de poco volumen y paciente colaborador y sin signos de hipovolemia ni aparente inestabilidad hemodinámica	<ul style="list-style-type: none">- Paciente paliativo en el que no están indicadas medidas de reanimación

HIPO

Interrogatorio

1. ¿Cuándo empezó el hipo?

- **Agudo:** RGE, enolismo, distensión gástrica (ingesta abundante, bebidas carbonatadas, aerofagia), meningitis, patología respiratoria (laringitis, neumonía, pleuritis, bronquitis...).
- **Crónico (>48 h):** tumoral, hernias abdominales (irritación nervio frénico) patología neuromuscular, bocio, tumores de cuello, desequilibrio electrolítico, DM, TCE, gastritis, úlcera péptica, abscesos abdominales, patología biliar, esofagitis, obstrucción intestinal.

2. ¿Tiene otros síntomas asociados?

- Dolor de pecho: cardiopatía isquémica, alteraciones del ritmo cardíaco.
- Dolor costal: patología respiratoria (pleuritis, neumonía...).
- RGE o algún problema GI: 50% se asocian a RGE, cirugía abdominal previa, patología tumoral.
- Patología neurológica (cefalea, vértigo...): tumores, meningitis. TCE.

3. ¿Padece de alguna enfermedad -AP?

- Traumatismo o cirugía recientes, especialmente de estómago, intestino, vejiga o próstata. Pueden sufrir de ataques de hipo en los primeros cuatro días, lo cual, se considera normal.
- Enfermedades: VIH (considerar candidiasis esofágica, toxoplasmosis y esofagitis herpética).
- Tratamientos previos: corticoides, benzodiazepinas, anestésicos, antibióticos (gentamicina, metronidazol), alfametildopa, barbitúricos.

Consejo telefónico

Medidas generales

- Realizar una apnea forzada ("aguantar la respiración") y respirar en una bolsa.
- Beber agua repetidamente o hacer gargarismos, tragar pan seco o tostado, hielo picado o azúcar granulado.
- Comprimir el epigastrio (la región superior y media del abdomen). Colocarse en posición de Trendelenburg.
- ¿Qué remedios ha utilizado y cuáles le han dado resultado? Usar el mismo.

Medidas específicas: haloperidol, levomepromazina, clorpromazina. Si lo tiene en el domicilio, lo ha utilizado en más ocasiones y ha sido efectivo

Respuesta desde CCUS-061

Recurso medicalizado	Derivación a Urgencias	Visita a domicilio
- Persistencia de menos de 48 h y no mejoría con indicaciones de CCUS - VIH	- Persistencia de más de 48 h - Si produce problemas para comer, disnea, - Si acompaña a dolor de pecho - Si paciente postquirúrgico, alteración en las suturas/heridas	- Encamados/paliativos

SANGRADO RECTAL

Interrogatorio

1. ¿Desde cuando tiene el sangrado?

- Agudo: diarrea aguda sanguinolenta (EI, colitis infecciosa...).

2. ¿Cómo es el sangrado?

- Estrías de sangre rojo y brillante, en la superficie de heces, en el papel: lesión anal o rectal. (hemorroides, fisuras, fistulas).
- Sangre oscura, con coágulos: lesión en colon, pero también en carcinoma rectal.

3. ¿Cómo es la defecación y las heces?

- Cambio en el hábito intestinal o forma de las heces: neo de colon.
- Dolorosa: hemorroides, fisuras o úlcera anal.
- Sensación de evacuación incompleta (tenesmo): fisura anal, hemorroides, neo colon.

4. ¿Presenta otros síntomas?

- Palidez, sudoración, fría, alteraciones del comportamiento: hipovolemia (hemorragia severa).
- Dolor abdominal: neo de colon, EI, colitis isquémica, infecciones (amebiasis, GEA gastroinvasiva..).
- Diarrea: EI, colitis isquémica, neo de recto, colitis infecciosas (shigelosis, amebiasis, salmonella..).
- Vómitos: si tienen sangre pasa a protocolo específico (lesión encima de angulo de Treitz).
- Fiebre: colitis infecciosas, EI.
- Sangrado en otras partes: discrasias sanguíneas.

5. ¿Padece alguna enfermedad -AP-?

- Patología digestiva: lesiones anorrectales, EI, (orienta a diagnóstico previo), cirrosis.
- Enfermedades hematológicas, alteraciones de la coagulación.
- Fármacos: ACO, ANOV (colitis isquémica), AINE.
- Viajes al extranjero, hábitos sexuales...

Consejo telefónico

Medidas generales

- Tranquilizar al paciente.
- Evitar: realización de esfuerzos físicos, comidas muy condimentadas o con picante, alcohol, cafeína y bebidas carbonatadas.

Medidas específicas

- Si sospecha de hemorroides y fisuras: baños de asiento con agua templada tras cada deposición y aplicación de pomadas antihemorroidales que disminuyan la inflamación.
- Si sospechamos un brote de EI: tratamiento del dolor con paracetamol.

Respuesta desde CCUS-061

Recurso medicalizado	Derivación a Urgencias	Visita a domicilio
- Signos de hipovolemia - Inestabilidad hemodinámica	- Sangrado único de poco volumen y el paciente es colaborador y sin signos de hipovolemia ni aparente inestabilidad hemodinámica - Alteraciones de la coagulación - Cirugía, colonoscopia o traumatismos abdominopelvicos recientes - Fiebre - Dolor abdominal - Otros sangrados asociados	- Pacientes con sangrado importante cuya situación funcional o basal impida acudir a un centro sanitario

NÁUSEAS-VÓMITOS

Interrogatorio

1. ¿Desde cuándo está así?

- **Agudo** (h, días): gastroenteritis aguda, intoxicación (medicamentos, toxinas, venenos o infecciones), procesos abdominales agudos (colecititis, pancreatitis, obstrucción intestinal), pat del laberinto, AIM.
- **Crónico** (semanas, meses): procesos pseudoocclusivos digestivos, neoplasia de estómago y/o páncreas, patología intracranial, alteración de la motilidad gastrointestinal (lesión del simpático, DM), patología intracranial, embarazo, psicógeno.

2. ¿Cómo es el vómito?

- Sangre: lesión hemorrágica benigna o maligna del tracto digestivo alto.
- Fecaloides: obstrucción intestinal distal.
- Alimento no digerido: estasis de alimento en la luz del esófago, típico del divertículo de Zenker, acalasia o obstrucción mecánica del esófago.
- Biliosos: obstrucción del intestino delgado por debajo de la papila de Vater, cirugía gástrica.

3. ¿Tiene otros síntomas?

- Dolor torácico y sudoración fría: valorar características isquémicas del dolor (SCA).
- Síntomas neurológicos (cefalea, rigidez nuca): trastorno orgánico SNC.
- Dolor abdominal: a) continuo: enfermedad ulcerosa, trastornos inflamatorios, b) cólico, con alivio tras el vómito: obstrucciones. Valorar epigastralgia de origen cardíaco.
- Diarrea, mialgias y/o fiebre: causa infecciosa, hepatitis, otitis media, meningitis.
- Vértigo, tinnitus: afectación sistema vestibular.
- Ictericia: patología biliar, hepática o pancreática.

4. ¿El vómito guarda alguna relación con la comida?

- Tras 1 h: retención gástrica por obstrucción pilórica o por trastorno de la motilidad del estómago (neuropatía diabética, estado postvagotomía).
- Entre 4-6 h: retención en la luz esofágica (divertículos, acalasia).
- Matutino: uremia avanzada, gestación, alcoholismo crónico, ansiedad, aumento de presión intracranial, postcirugía gástrica.

5. ¿Padece alguna enfermedad -AP-? Patología cardiovascular, neurológicos, traumatismo o cirugía abdominal previas, DM u otras patologías sistémicas.

6. Fármacos: citostáticos, opiáceos, digital, L-dopa, agonistas dopaminérgicos, macrólidos, amoxicilina-clavulánico, analgésicos, salicilatos, ipecacuana, aminofilina, anticolinérgicos, antidepresivos tricíclicos.

Consejo telefónico

Medidas generales

- Reposar: sentarse tras la comida, no acostarse.
- Mantener el entorno relajado, tranquilo, bien ventilado y sin olores desagradables.
- Enjuague la boca con agua tras vomitar.
- Intente tomar algo de aire fresco.
- Hidratación oral: esperar 30 min tras el vómito. Líquidos a pequeños sorbos, suero de rehidratación oral, agua, zumos.
- Dieta: esperar 4-6 h de tolerancia líquida. 6 comidas pequeñas/d (en vez de 3). Alimentos líquidos como sopas claras, helado, gelatina.
- Evitar: alimentos grasos, picantes, procesados, muy salados, cafeína, alcohol, bebidas gaseosas.

Medidas específicas

- Tratamiento sintomático: antieméticos si el paciente los tiene en su domicilio, los ha tomado en otras ocasiones y no hay antecedentes de reacción adversa alguna.

Respuesta desde CCUS-061

Recurso medicalizado	Derivación a Urgencias	Visita a domicilio
- Sospecha de enfermedad grave: IAM, abdomen agudo, HTIC, meningitis, cetoacidosis diabética, Mallory-Weis...	- Sospecha etiológica de una enfermedad no grave (GEA, secundario a fármacos, cólico nefrítico, migraña, embarazo...) y los vómitos impiden una adecuada hidratación. - No orina tras 8 h	- Las mismas que en la derivación a Urgencias cuando esta no es posible

5. APARATO ENDOCRINO

HIPERGLUCEMIA

Interrogatorio

1. **¿Está consciente? ¿Respira con normalidad?** Si no, pasar a su protocolo específico.
2. **¿Qué cifras de glucemia tiene? ¿Desde cuándo?** Orienta a pautas y tratamiento.
3. **¿Está a tratamiento con insulina, ADO, otra medicación?** (corticoides, diuréticos, estrógenos, fenitoína, salbutamol, terbutalina)? Nos orienta para el ajuste de medicación y de insulina.
4. **¿Tiene otros síntomas asociados? Valorar descompensación hiperglucémica aguda**
 - Polidipsia, poliuria, astenia, náuseas, vómitos, dolor abdominal, fetor, disnea.
 - Palpitaciones, boca seca, ojos hundidos, orina menos, hipotensión arterial.
5. **¿Padece de alguna enfermedad -AP?**
 - Infección, traumatismos previos, transgresión dietética, incumplimiento del tratamiento, ayuno, técnica de punción.
 - Drogas: cocaína, anabolizantes.
 - Portador de infusor sc de insulina: problemas con el dispositivo (reservorio vacío, obstrucción o burbujas en el catéter, cánula doblada, zona de inserción inflamada, mal funcionamiento de bomba).

Consejo telefónico

Medidas generales

Tranquilizar al paciente. Incrementar la ingesta hídrica. Realizar controles más frecuentes de glucemia.

Identificar causas de hiperglucemia:

- **Transgresión dietética:** reforzar conceptos básicos en alimentación.
- **Incumplimiento terapéutico:** reforzar importancia de adhesión al tratamiento.
- **Técnica de punción inadecuada:** reforzar conocimientos. Vigilar lipodistrofias.
- **Sedentarismo:** ejercicio moderado (si no presenta cetonuria). Determinar cetonuria/cetonemia si tiene tiras.

Medidas específicas

1. **Glucemia < 250 mg/dl;** ingerir líquidos acalóricos + actividad moderada.
2. **Si Glucemia > 250 mg/dl**
 - **En DM sin tratamiento con insulina:** abordar causas + ingerir líquidos + actividad física moderada.
 - **En DM en tratamiento con insulina:** (valorar signos de cetosis/cetonuria) ingerir líquidos + pauta de insulina rápida.
3. **Esquema Insulina Rápida:**
 - **150 – 200 mg/dl (2-4 UI), 201 – 250 (4-6 UI), 251 – 300 (6-8 UI), 301 – 350 (8-10 UI), 350-400 (10-12 UI).**
 - No bajar glucemia > 100 mg/dl/h y vigilar la aparición de hipoglucemias.
 - Valorar si la insulina en el pico máximo provoca el efecto deseado. Control de glucemia en 60/90 min, excepto si es Actrapid que hay que esperar 3 h.

Infusor Continuo de Insulina: corregir con insulina rápida sc, determinar la causa, solventarla. Todas las casas comerciales de infusores de insulina tienen números de atención las 24 h.

Respuesta desde CCUS-061

Recurso medicalizado	Derivación a Urgencias	Visita a domicilio
<ul style="list-style-type: none">- Inconsciente- Dificultad respiratoria- Infección intercurrente- Síntomas gravedad: náuseas / vómitos, dolor abdominal, deshidratación- Empeoramiento- Aparición de nuevos síntomas	<ul style="list-style-type: none">- DM tipo 1 con cetosis/ cetonuria +- DM tipo 1 con glicemia > 300 con síntomas de cetosis- DM tipo 2 con glicemia > 300 con signos de descompensación aguda	<ul style="list-style-type: none">- Rechazan ir a Urgencias- Encamados/HADO

HIPOGLUCEMIA

Interrogatorio

1. **¿Está consciente? ¿Respira?** Si no, pasa a protocolo específico.
2. **¿Qué glucemia tiene?** (hipoglucemia < 70 mg/dl o sospecha clínica) **¿Y desde cuándo?**
3. **¿Está a tratamiento con insulina o con ADO?** Nos orienta para el ajuste de medicación.
4. **¿Presenta síntomas asociados?**
 - Hambre, irritabilidad, temblor, sudoración, palidez, náuseas, palpitaciones, cefalea: orientan a glucemia < 65 mg/dl.
 - Irritabilidad, visión borrosa, confusión, convulsión, estupor o coma (signos de gravedad): orientan a glucemia < 50 mg/dl.
5. **¿Padece alguna enfermedad -AP-?**
 - Otras patologías (vómitos, diarrea, hepatitis, enf. renal, insulinomas, suprarrenal...).
 - Consumo de drogas/fármacos: enolismo, hipoglucemiantes no insulínicos...

Consejo telefónico

Medidas generales

- Si está consciente: posición cómoda, aflojar la ropa.
- Si está inconsciente y respira: PLS (prevenir aspiración por vómitos).

Medidas específicas

- Si está **consciente**:
 - Regla del 15: ingerir 15 g de HC de absorción rápida, control glucemia en 15 min y si persiste la hipoglucemia, repetir la ingesta de 15 g de HC hasta en 2 ocasiones.
 - Ya normalizado, ingerir HC de larga duración: 30 g de pan 30, 3 galletas María, 1 yogur entero de sabores, 1 pieza de fruta.
 - Si está **inconsciente**:
 - Glucagón im 1 amp/1 mg (>6 años edad y si <6 años se indicará media amp/0,5 mg). Se repetirá a los 10-20 min si es necesario. Próximamente se comercializará glucagón intranasal (1 puff).
 - Si no tienen Glucagón: azúcar, miel en encías.
-
- **REGLA DEL 15:** 15 g HC adultos, 5-10 g niños, 0,2 g/kg niños pequeños.
 - **HC de absorción rápida** (15-20 g): gel de glucosa, vaso agua + 2 terrones/sobres azúcar, 1 cucharada de miel, 3-4 caramelos, 150-200 ml zumo fruta o refresco azucarado.
 - **HC de absorción lenta** (15-20 g): 2 tostadas pan blanco o integral, 1,5 rebanadas pan molde, 1 yogur entero sabores o 1 pieza de fruta (sandía, melón, plátano, pera, naranja, manzana), 4 galletas María, 150-200 ml de leche entera o desnatada.

Respuesta desde CCUS-061

Recurso medicalizado y pasar a médico de CCUS-061	Derivación a Urgencias	Visita a domicilio
- Hipoglucemia severa - Signos de gravedad	- Secundaria a ADO - Causa desconocida - Causa orgánica no diagnosticada - Persistencia de síntomas a pesar de normalizar la glucemia	- Rechazan ir a Urgencias. - Encamados / HADO

ERRORES CON LA ADMINISTRACIÓN DE INSULINA

Interrogatorio

1. **¿Qué cifras de glucemia tiene?** Orienta a la pauta y al tratamiento.
2. **¿Está a tratamiento con insulina y qué tipo utiliza, ADO, otra medicación** (corticoides, diuréticos, estrógenos, fenitoína, salbutamol terbutalina)? Nos orienta para el ajuste de la medicación.
3. **¿Tiene algún signo asociado?** Si es afirmativo, pasará a su protocolo específico.

Consejo telefónico

Medidas específicas según el tipo de insulina:

1. **Insulina LENTA:** Levemir®, Lanatus®, Abasaglar®, Semglee®, Toujeo®, Tresiba®.
 - **No sabe si la administró:** NO PONERLA. Realizar controles. Ajustar con **insulina rápida** si precisa (s/p).
 - **No la administró:** ADMINISTRARLA LO ANTES POSIBLE. No deben pasar más de 18 h entre una dosis y la siguiente.
 - **No disponen de insulina rápida:**
 - **Si glucemia > 300 mg/dl:** acudirán al PAC para recibir insulina rápida.
 - **Si glucemia < 300 mg/dl:** evitar ingesta de HC, ingesta abundante de líquidos acalóricos (agua e infusiones).
2. **Insulina RÁPIDA:** **administró las UI correspondientes a la insulina lenta.**
 - **Determinar glucemia** con controles frecuentes. NO ADMINISTRAR LA INSULINA LENTA, excepto si es diabético tipo 1 que la administrará al menos 3 h después de la rápida. Ingesta de HC
 - **Si hipoglucemia leve (< 60 mg/dl) sin síntomas de gravedad:**
 - Corregir con HC de rápida absorción (regla del 15) y posteriormente HC de absorción lenta o comida correspondiente (desayuno, comida, cena).
 - **Si hipoglucemia severa (< 40 mg/dl) y síntomas de gravedad:**
 - **Si puede deglutir:** regla del 15 pero doble dosis de HC de absorción rápida (30 g de azúcar de mesa, 300 ml de zumo o refresco).
 - **Si no puede deglutir o está inconsciente:** Glucagón im o azúcar en encías.
3. **Insulina MIXTA:** **NO LA ADMINISTRÓ**
 - **Si pasaron < 2 h** poner la dosis correspondiente.
 - **Si pasaron > 2 h** poner la mitad de dosis y realizar controles.

REGLA DEL 15: 15 g HC adultos, 5-10 g niños, 0,2 g/kg niños pequeños.

HC de absorción rápida (15-20 g): gel de glucosa, vaso agua + 2 terrones/sobres azúcar, 1 cucharada de miel, 3-4 caramelos, 150-200 ml de zumo fruta o refresco azucarado.

HC de absorción lenta (15-20 g): 2 tostadas pan blanco o integral, 1,5 rebanadas pan molde, 1 yogurt entero sabores o 1 pieza de fruta (sandía, melón, plátano, pera, naranja, manzana), 4 galletas María, 150-200 ml de leche entera o desnatada.

Respuesta desde CCUS-061

Recurso medicalizado	Derivación a Urgencias	Visita a domicilio
- Si hipoglucemia severa (<40mg/dl) y síntomas de gravedad	- Paciente con insulina lenta con signos de cetosis - Paciente con glucemia > 300 mg/dl	- Rechazan ir a Urgencias. - Paciente encamado / HADO

6. FACTORES EXTERNOS

MORDEDURAS/PICADURAS

Interrogatorio

1. **¿Qué animal le ha picado y cuánto?** Orienta a medidas terapéuticas.
2. **¿En dónde se localiza?** Si desconocemos el animal o insecto, nos orienta al causante, dependiendo del entorno en que se encuentre el paciente.
3. **¿Tiene algún tipo de lesión cutánea?**
 - Localizada: generalmente leves.
 - Extensas: empeora el pronóstico, mediadas por reacción alérgica o infección sobreañadida.
4. **¿Presenta algún síntoma acompañante?**
 - Dificultad respiratoria, sibilancias: signos de alarma. Pasa a protocolo de disnea.
 - Inflamación de labios, garganta, lengua, cara: reacción anafiláctica.
 - Mareos, vómitos, dolor abdominal, diarrea: sugiere signos de alarma.
 - Fiebre, adenopatías, signos de alarma.
5. **¿Padece alguna enfermedad -AP-?** Alergias: (veneno de himenópteros), vacunación antitetánica, enfermedades crónicas: podrían ensombrecer la evolución y el pronóstico.

Consejo telefónico

Medidas generales

- En caso de presentar reacción anafiláctica y disponer dispositivo de adrenalina im.
- Retirar anillos, pulseras, relojes o cualquier otro objeto que pueda comprimir tras la inflamación.
- Lavado y desinfección de la zona con agua y jabón, algún antiséptico y frío local y reposo.
- Si existe sangrado significativo, comprimir la zona y elevar dicha extremidad.
- Tratamiento del dolor: puede administrarse paracetamol o AINE por vo.

Medidas específicas

- **Himenóptero:** extraer el aguijón con pinzas lo antes posible para evitar que siga inoculando veneno.
- **Lepidópteros (orugas)**, retiraremos los pelos de la oruga con una tira de esparadrapo.
- **Garrapatas** extraerlas mediante unas pinzas de punta roma, en paralelo a la piel, tomando la garrapata por debajo de la cabeza, ejerciendo una tracción constante sin aplastar el cuerpo. Si quedan restos de la boca de la garrapata, el cuerpo la expulsará por sí mismo, aunque puede alargar la inflamación. Evitar el uso de aceites, éter, lacas, etc.
- **Serpientes:** vendaje no compresivo suave tipo crepé de la extremidad, afecta desde la zona distal a proximal con leve elevación del miembro. Evitar torniquetes, incisión de la herida, succión del veneno y aplicación de frío local. Profilaxis tetánica si procede.
- **Medusas y anémonas:** lavado con agua salada, aplicar alcohol o bicarbonato, desprender los filamentos con pinzas y volver a lavar con agua salada.
- **Fanecas:** introducir la herida en agua caliente, en su defecto, enfriar la zona con hielo, extraer las espinas sin fuerte manipulación, valorar profilaxis antitetánica y antibiótica.
- **Erizos de mar:** extracción de las púas con una aguja nada más salir del agua y profilaxis antitetánica.
- Mordeduras
 - Antitoxina tetánica: si no es correcta la vacunación y en inmunodeprimidos y ADVP.
 - Antitoxina y toxoide antirrábico: mordeduras de murciélagos o animales confirmados o probables.
 - Vacunación de la hepatitis B: en caso de mordedura humana por una persona de alto riesgo.
 - Profilaxis antibiótica: en heridas con alto riesgo de infección.

Respuesta desde CCUS-061

Recurso medicalizado	Derivación a Urgencias	Visita a domicilio
- Sospecha de reacción anafiláctica - Alteración nivel consciencia	- Disnea, problemas respiratorios - Signos de alarma: ptosis, fiebre, náuseas, vómitos, celulitis - Mordedura de murciélagos o animales venenosos - Heridas profundas, afectación articular, tendinosa, mordeduras cuero cabelludo - Afectación sistémica - Inmunodeprimidos, ADVP	- Circunstancias basales que impiden la movilización del mismo: paliativos, encamados

QUEMADURAS

Interrogatorio

1. **¿Cómo respira?** Si está alterado, pasaría a su protocolo específico, descartar inhalación de humos.
2. **¿Cuándo se ha quemado?** Orienta a la actitud terapéutica.
3. **¿Dónde se localiza y cuál es su extensión?** Orienta al consejo médico y respuesta desde la CCUS. Cara, manos, vía respiratoria o genitales, indican gravedad.
4. **¿Cómo es y cómo duele?** Nos orienta al grado y a la respuesta desde la CCUS. Eritema (1 grado), ampolla (2 grado), zonas negras carbonizadas (3 grado).
5. **¿Cuál ha sido la causa?** Calor, química, eléctrica, inhalación.
6. **¿Padece alguna enfermedad -AP-?** Inmunodeprimidos, VIH, DM, tratamientos previos.

Consejo telefónico

Medidas generales

- Detener el proceso de combustión.
- Retirar las ropas, anillos, relojes, cinturones, SI NO ESTAN ADHERIDOS.
- Enfriamiento de las quemaduras con lo que tengamos a mano, agua, SF.
- Cubrir las lesiones con gasas secas si la cura es domiciliaria o empapadas con SF o agua (T° 18°-20°) si se traslada a un centro sanitario. No trasladar con hielo ni agua fría.
- No desbridar las ampollas hasta llegar a un lugar adecuado (hospital, centro de salud).

Medidas específicas

- Quemadura de 1^{er} grado: hidratación de la zona, Silverderma® y evitar la exposición solar.
- Quemadura de 2º grado superficial: aplicación de Silvederma® espesa, cobertura con apósitos estériles y vendaje de la zona afectada.
- Tratamiento del dolor: paracetamol o ibuprofeno si no es alérgico.
- Si es una quemadura por agente químico, continuar con la irrigación hasta llegar al centro (excepto sosa caustica).
- Quemadura por inhalación: posición semiincorpada, ventilar la zona y retirarlo del medio contaminante.

Respuesta desde CCUS-061

Derivación a AP	Derivación a Urgencias	Visita a domicilio
<ul style="list-style-type: none">- Quemaduras de 2º grado superficial- Inmunodeprimidos o pacientes de riesgo- Signos de infección- Dolor mal controlado- Mala evolución de la quemadura	<ul style="list-style-type: none">- Alteración del nivel de conciencia- Disnea- Quemaduras eléctricas- Quemaduras circunferenciales- Localización en cara, ojos, periné, genitales, articulaciones- Quemaduras de 2º grado extensas- Quemaduras de 3^{er} grado- Quemaduras químicas- Quemaduras por radiaciones ionizantes- Pérdida o ausencia de sensibilidad en la zona afectada	<ul style="list-style-type: none">- Encamados/paliativos que no quieran ser trasladados

7. FARMACOLOGÍA

FÁRMACOS EMBARAZO

CATEGORÍA FDA

CATEGORÍA	RIESGO
A	Estudios controlados no han demostrado riesgo.
B	No hay descritos riesgos para el feto humano. Estudios en animales no han demostrado riesgo teratogénico, pero no hay estudios en embarazadas o bien los efectos secundarios no se han confirmado en embarazo.
C	No puede descartarse riesgo fetal. Estudios sobre animales han demostrado efectos secundarios fetales (teratogénicos, embriocidas u otros). Solo utilizar si beneficios superan riesgos.
D	Hay indicios de riesgo fetal. A valorar riesgo-beneficio (enfermedades que amenazan la vida o si no hay fármacos más seguros).
E	CONTRAINDICADO. Efectos teratógenos que cuyo riesgo supera al beneficio.

Aparato digestivo

Antiácidos	Derivados alumínicos y magnésicos (B). Puntual.
Antiulcerosos	Ranitidina (B) IBP (B), no se recomiendan
Antiespasmódicos	Bultiescopolamina (B)
Antieméticos	Doxilamina + piridoxina – Cariban © (A) Dexclorfeniramina, metoclopramida (B)
Laxantes	Metilcelulosa (B), lactulosa (B) Bisacodilo (C)
Antidiabéticos	Insulina (B)
Vitaminas y sales minerales	Ácido fólico (A)
Antiagregantes	AAS (C)
Anticoagulantes	Heparina si es imprescindible. Enoxaparina (B).
Antianémicos	Sulfato ferroso (A)

Endocrino

Corticoides	Hidrocortisona, Prednisolona, Prednisona Betametasona, dexametasona (C)
Hormonas tiroideas	A
Antitiroideos	Propiltiouracilo (D). En caso de hipertiroidismo fetal
Antidiabéticos orales	Acarbosa (B)

FÁRMACOS LACTANCIA

Dermatología

Antihistamínicos

Dexclorfeniramina, cetirizina, loratadina (B)

Antiinfecciosos

Metronidazol	(B) Excepto primer trimestre
Aminoglucósidos	Amikacina, gentamicina (C)
Penicilinas	Amoxicilina (B)
Cefalosporinas	Cefalexina, cefuroxima, ceftriaxona (B)
Macrólidos	Azitromicina, eritromicina (B)
Lincosamidas	Clindamicina (B, C en primer trimestre)
Tetraciclinas	(D)
Sulfamidas	(D) en segundo y tercer trimestre
Nitrofurantoína	(B, D en semanas 38-42 incluyendo parto)
Fosfomicina	(B)
Ácido nalidíxico	(B)
Antituberculosos	Etambutol (B) Isoniacida, Pirazinamina, Rifampicina (C)
Antivirales	Aciclovir, Oseltamivir (C)
Clotrimoxazol	(B)

Aparato cardiovascular

Digitálicos	Seguros aunque con control. Digoxina (C)
Antianginosos	Antagonistas del calcio (C) Nitratos en angina (C)
Antiarrítmicos	Lidocaína (B)
Antihipertensivos	Metildopa (B) de elección en hipertensión gestacional Fenoxibenzamina (C) si feocromocitoma Hidralazina (C) si preeclampsia
Diuréticos	Tratamiento corto de edemas graves. Torasemida, espirinolactona, amiloride (B) Furosemida (C)
Betabloqueantes	Propranolol (C, D en dos últimos trimestres) Labetalol en urgencia hipertensiva en tercer trimestre (C)

FÁRMACOS LACTANCIA

Aparato locomotor	
AINE	Tercer trimestre posibilidad de cierre prematuro de ductus (D) Ibuprofeno, naproxeno, diclofenaco (B)
Antirreumáticos	Sales de oro teratógenas (C). Posible ante embarazo Hidrocloroquina (C)
Antigotosos	Alopurinol (C) Colchicina (D)

Aparato respiratorio	
Rinológicos	Pseudoefedrina (B,C), fenilpropanolamina (C). Cada 8 h hasta 3 días
Antiasmáticos	Salbutamol (C), Ipratropio (B) Budesonida (B)
Antitusivos	Dextrometorfano (C)

Sistema nervioso central	
Analgésicos no opiáceos	Paracetamol (B)
Analgésicos opiáceos	Morfina (D si prolongado), Meperidina (B en primeros dos trimestres, D en tercero si prolongado). En ausencia de alternativas
Antiepilépticos	Dosis mínimas imprescindibles (C, D)
Antipsicóticos	Haloperidol (C) puntual en crisis psicóticas
Ansiolíticos e hipnóticos	Fenobarbital – Uso como antiepiléptico Buspirona (B) Benzodiacepinas. Evitar uso
Sales de litio	2 últimos trimestres si se precisa
Antidepresivos	Evitar
Alcoholismo	Disulfiram contraindicado
Tabaquismo	Contraindicada nicotina

Endocrino	
Corticoides	Hidrocortisona, Prednisolona, Prednisona Betametasona, dexametasona (C)
Hormonas tiroideas	A
Antitiroideos	Propiltiouracilo (D). En caso de hipertiroidismo fetal
Antidiabéticos orales	Acarbosa (B)

FÁRMACOS LACTANCIA

CATEGORÍA RIESGO

A	Compatible. No han mostrado riesgos para el lactante.
B	Precaución. Vigilar aparición de efectos secundarios.
B*	No se dispone de datos sobre su excreción en leche materna
C	Contraindicado

Aparato digestivo

Antiulcerosos	<ul style="list-style-type: none"> • Sales de aluminio y magnesio (B) • Subcitrato de bismuto (B*) • Antieméticos
Antieméticos	<ul style="list-style-type: none"> • Metoclopramida (B) • Domperidona (A)
Laxantes	<ul style="list-style-type: none"> • Lactulosa (B) • Bisacodilo (A)

Sangre y órganos hematopoyéticos

Anticoagulantes	<ul style="list-style-type: none"> • Heparina. Enoxaparina (B)
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Aparato cardiovascular

Calcioantagonistas	<ul style="list-style-type: none"> • Nifedipino (A), diltiazem (B)
Diuréticos	<p>A valorar:</p> <ul style="list-style-type: none"> • Furosemida (B). • Tiazidas. Hidroclorotiazida (A)
Digitálicos	<ul style="list-style-type: none"> • Digoxina (A)
Betablockeantes	<ul style="list-style-type: none"> • Propranolol (A) • Metoprolol (A)
Antihipertensivos	<ul style="list-style-type: none"> • Metildopa (A) • Hidralazina (A) • Labetalol (B)
Antiarrítmicos	<ul style="list-style-type: none"> • Lidocaína (A) • Flecainida (A).

Dermatología

Antihistamínicos	<ul style="list-style-type: none"> • Cetirizina, loratadina, desloratadina, hidroxizina (riesgo muy bajo) • Clorfenamina, prometazina, ebastina (B)
Anestésicos locales	<ul style="list-style-type: none"> • Lidocaína (A) • Procaína (B)

FÁRMACOS LACTANCIA

Aparato genitourinario

Hormonas sexuales	Evitar anticonceptivos combinados hasta destete o 6 meses desde el nacimiento Desogestrel, levonorgestrel (B)
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Endocrino

Corticoides	Admitidos en dosis moderadas Prednisona (A)
Hormonas tiroideas	Levotiroxina (A)
Antidiabéticos	Acarbosa (B) Insulina (A)
Antitiroideos	A valorar propiltiouracilo

Antiinfecciosos

Antibióticos	• Penicilina, cefalosporinas (A) • Eritromicina (A) • Nitrofurantoína, fosfomicina (B)
Antituberculosos	• Rifampicina, etambutol (A) • Isoniacida, pirazinamida (B)
Antifúngicos	• Nistatina. Clotrimazol (B)
Antipalúdicos	• Cloroquina
Antivíricos	• Aciclovir (tópico)

Osteomuscular

Analgésicos no opioides	• Paracetamol (A) • Ibuprofeno (A) • Diclofenaco (A)
Opiáceos	• Codeína (C) • Meperidina (B)

Aparato respiratorio

Asma	• Salbutamol (B) • Budesonida (B)
Antitusígenos	• Codeína (C)

FÁRMACOS LACTANCIA

Sistema nervioso central	
Analgésicos narcóticos	Metadona: uso aceptado a dosis moderadas Posibilidad de dependencia física del lactante
Antidepresivos	A valorar: <ul style="list-style-type: none">• Amitriptilina, imipramina• Sertralina
Antiepilepticos	• Carbamazepina, ácido valproico (B)
Antipsicóticos	Risperidona, olanzapina A valorar: <ul style="list-style-type: none">• Clorpromazina, haloperidol (B)
Sedantes/hipnóticos	• Benzodiacepinas: tratamientos cortos • Lorazepam
Otros	
Contrastes radiológicos	Evitar la lactancia en las 24 h siguientes
Acamprosato	B
Azetazolamida	A

FÁRMACOS MÁS USADOS EN PEDIATRÍA

Fármaco	Nombres comerciales	Dosis diaria	Concentración por ml	Tabla por peso
	Presentación habitual	Dosis por toma oral	Duración del tratamiento	Observaciones
Analgésicos/Antitérmicos				
AAS	Aspirina Adiro comp: 125, 500 mg	Antitérmico: 60 mg x kg / día Algésico: 100 mg x kg /día 10-15 mg x kg / 4-6 h		Uso hospitalario
Fentanilo	Durogesic, Fendivia Fenantest parches ampollas iv	2 - 5 µgr x kg iv o im		Uso principal en paliativos y como sedación para intubación
Ibuprofeno	Dalsy, Neobrufen, Junifen. sol: 100mg/5ml comprimidos: 400, 600 mg supositorios: 500 mg	Antitérmico: 60-90 mg x kg / día Algésico: 20-30 mg x kg /día (máx 1600mg/día) 10-15 mg x kg / 4 h		anexo 11 No recomendado en menores de 3 meses.
Metamizol	Nolotil, Metalgial	Antitérmico: 10-15 mg x kg / dosis (6-8h) Algésico: 20-40 mg x kg/dosis (6-8h) (máx 2 gr/dosis)		
Morfina	gotas: 500 mg/ml comp: 500, 575 mg suppositorio: 250, 500, 1000 mg comp: 10 mg, 20 mg parches	Antitérmico: 10-15 mg x kg /6-8h = 0,5 gotas x kg /6-8h Algésico: 20-40 mg x kg / 6h		No usar en < 4 meses. No usar supositorios infantiles en < 1 año
Paracetamol	Apiretal, Termalgin, Febrectal, Efferalgan, solución: 120mg/5ml , 150mg/5ml gotas: 100 mg/ml comp: 250, 325, 500, 650, 1000 mg suppositorio: 150, 250, 300, 600	60 mg x kg / día (máx 4 gr) 15 -20 mg x kg en cada dosis (3-4 dosis al día)	gotas: 1 ml = 100 mg solución: 1 ml = 25 -30mg	anexo 13 Si > 25 kg: Paracetamol 500/8h Si > 32 kg: Paracetamol 500/6h Cálculo dosis: peso en kg/6
Tramadol	Adolonta comp: 50 , 100, 150, 200, 300, 400 mg	<12 años: 1 mg x kg / 6-8 h >12 años: 50-100 mg / 6-8h		Dosis máxima 400 mg/día No recomendado en < 12 años
Antibiótico (AB)				
Amoxicilina	Ardine Clamoxil Hosboral susp: 250 mg / 5 ml sobres: 125, 250 mg cp: 250, 500, 750, 1000 mg	80 - 100 mg x kg/día 0,53-0,66 ml x kg/ 8 h	1 ml = 50 mg 7-10 días	anexo 1 Dosis máxima 4 g/día
Amoxi-clavulánico	Augmentine susp: 125/31,25 mg y 100/12,5 mg sobres: 250, 500, 875 mg compr: 500, 875 mg	40-80 mg x kg/día 125/31,25: 0,5 - 1 ml x kg / 8 h 100/12,5: 0,4 - 0,8 ml x kg / 8 h	1 ml = 25/6,25 mg 1 ml = 100/12,5 mg 7-10 días	anexo 2 Dosis máx 3 gr Amox/día Amig/faring: 40 mg x kg al día repartido en 3 tomas Otitis: 80 mg x kg al día repartido en 3 tomas

Fármaco	Nombres comerciales	Dosis diaria	Concentración por ml	Tabla por peso
	Presentación habitual	Dosis por toma oral	Duración del tratamiento	Observaciones
Antibiótico (AB)				
Azitromicina	Zitromax sol: 200 mg/5ml sobr: 100, 150, 200, 250, 500, 1000mg cap: 250 mg	10 mg x kg / día 0,25 ml x kg /24h	1 ml = 40 mg 3-5 días	anexo 3
Cefixima	Denvar sol: 100 mg/5ml sobres: 100 mg cap: 200mg	8 mg x kg / día 0,4 ml x kg / 24 h 0,2 ml x kg / 12 h (máx 400 mg/24 h)	1 ml = 20 mg 7-10 días	anexo 4 No usar en menores de 6 meses
Cefuroxima	Zinnat susp: 125-250 mg/5ml sobres: 125, 250, 500 mg compr: 125, 250, 500 mg	15-30 mg x kg / día 125/5ml: 0,6 - 1,2 ml x kg / 12 h 250/5ml: 0,3- 0,6 ml x kg / 12 h	1 ml = 25 - 50 mg 5-10 días	anexo 5
Eritromicina	Klacid susp: 125 -250 mg/5ml sobres: 250, 500 mg cp: 250, 500 mg	15 mg x kg / día 125/5ml: 0,6 ml x kg / 12 h 250/5ml: 0,3 ml x kg / 12 h	1 ml = 25-50 mg 5-10 días	anexo 6 Dosis máxima 500 mg / día
Fosfomicina	Pantomicina susp: 250-500 mg/5 ml sobre: 250, 500, 1000 mg comp: 500 mg	30-50 mg x kg/día 250/5 ml: 0,2 ml x kg / 6 h 500/5 ml: 0,1 ml x kg / 6 h (máx 4 g/24 h)	1 ml = 50-100 mg 10 días	anexo 9 Elección en alérgicos a penicilina
Antihelmíntico				
Mebendazol	Lomper Sufil comp: 100 mg sol: 20mg/ml	200 mg / día en 2 tomas 5 ml / 12 h o 24 h 100 mg / 12 h o 24 h	1 ml = 20 mg Oxiuros: dosis única + dosis de recuerdo en semana 2 y 4 Ascaridiasis o infec mixta: 100 mg/12h 3 días	No recomendado en menores de 2 años
Pirantel embonato	Trilombrin susp 50 mg/ml comprimidos	11 mg x kg / día (máx 1 gr) < 12 kg : 2,5 ml 12-21 Kg: 5 ml 22-40 kg: 10 ml 41-75 kg: 15 ml	1 ml = 50 mg Oxiuros: dosis única + dosis de recuerdo en semana 2 Ascaridiasis o infec mixta: dosis única o monodosis diaria 3 días	Se puede usar en prematuros, recién nacidos y lactantes de < de 6 meses (fuera de ficha)
Antihistamínicos (AH)				
Desloratadina	Aerius sol: 0,5 mg/ml comp: 5mg	0,2 mg x kg / día Niños 2-5 años: 2,5 ml / 24 h Niños 6-11: 5 ml/ 24 h > 12 años: 10ml / 24 h	1 ml = 0,5 mg sintomático / crónico	anexo 7
Hidroxicina	Atarax sol: 10 mg/ 5 ml comp: 25 mg	1-2 mg x kg / día 0,15-0,3 ml x kg / 6-8 h	1 ml = 2 mg sintomático / crónico	Dosis adulto 250-500 mg/12 h

Fármaco	Nombres comerciales	Dosis diaria	Concentración por ml	Tabla por peso
	Presentación habitual	Dosis por toma oral	Duración del tratamiento	Observaciones
Antihistamínicos (AH)				
Loratadina	Clarityne	<30 kg: 5 mg/día >30 kg: 10 mg/día	1 ml = 1 mg	anexo 12
	sol: 5 mg / 5 ml comp: 10 mg		sintomático / crónico	
Antitusígenos / Mucolíticos				
Acetilcisteína	Fluimucil			
	sobres: 100, 200 mg comp: 600 mg	Niños < 2 años: 100 mg/12 h Niños 2-7 años: 100 mg/8 h Niños >7: 200/8 h o 600/24 h	sintomático	Mucolítico y antitusivo
Ambroxol	Mucosan	1,5 mg x kg / día	1 ml = 3-6 mg	
	sol: 6 mg/ml , 15 mg/5ml comp: 30 mg	0,25 ml x kg / 8-12h:l	sintomático	No recomendado en menores de 2 años
Dextrometorfano	Romilar	3-4 mg x kg / día	20 gotas = 15 ml 1 ml = 5 - 15 mg	anexo 8
	jarabe 15 mg/ 5 ml gotas 15 mg/ 1 ml	1 gota x kilo / 6-8h 0,3 ml x kg / 6-8 h	sintomático	Antitusígeno
Cloperastina fendizoato	Flutox		1 ml = 3,54 mg	
	jarabe 120 ml y 200 ml comprimidos 10 mg	Niños 2 y 4 años: 2 ml / 12 h Niños 5 y 6 años: 3 ml / 12 h Niños 7 y 12: 5 ml / 12 h >12 años: 10 ml / 8 h	sintomático	No recomendado en menores de 2 años
Grindelia, Llanten y Helicriso Extracto hiedra seco	Grintus Prosplantus			
	jarabe	Niños 1-6 años: 5 ml/ 12-8-6h Niños > 6 años: 10 ml / 12-8-6h	sintomático	Acción mucolítica y antitusígena Asociado a afecciones bronquiales benignas
Broncodilatadores (BD)				
Budesonida	Pulmicort soluc aerosol	400-800 mg/ día		
	Pulmicort Turbuhaler	1-2 mg/día en 2 dosis		
	1 ml= 0,25 mg	1-2 ml / 12h		< 3 años: 0,25 mg/dosis 12 h > 3 años: 0,50 mg/dosis 12 h En laringitis: 2 mg/dosis única
	200 mg / puff	2-6 puff/ día		
Fenoterol	Berotec	0,3 mg x kg / día = 1 gota x kg / día	1 mg= 4 gotas	
	jarabe aerosol	jarabe/ 8 horas aerosol/ 4-6 h		
Salbutamol	Ventolin, Aldobronquial	0,4 mg x kg/ día		
	Ventolin soluc aerosol	0,02-0,03 ml x kg / 4 h (máx 1 ml) Completar hasta 2-3 ml con SSF	1 ml = 5mg	
	Ventolin inh con cámara			
	jarabe: 2 mg/5 ml comp: 2, 4 mg	0,3 ml x kg / 8h		
	soluc resp: 0,5% en 10 ml inhalador: 0,1 mg/inh	1-2 puff /4-6h (máx 12/ día)		

Fármaco	Nombres comerciales	Dosis diaria	Concentración por ml	Tabla por peso
	Presentación habitual	Dosis por toma oral	Duración del tratamiento	Observaciones
Broncodilatadores (BD)				
Teofilina	Theo-Dur	1-9 años: 21 mg x kg/día 9-12 años: 18 mg x kg/día 12-16: 13 mg x kg/día	1 ml = 5,3 mg	
	jarabe: 533 mg/100 ml, 80 mg/15 ml comp: 100, 200, 300 mg	0,3 ml x kg/6 h		
Terbutalina	Terbasmin	<12 años: 0,05-0,15 mg x kg/8 h >12 años: 3-4,5 mg (10-15 ml)/8 h		
	Terbasmin soluc aerosol	<20 kg: 0,3 mg x kg/dosis + 5 ml SF/6 h > 20 kg: diluir 2-5 mg en SF hasta 5 ml, admon durante 15 min. Repetible/4-6 h		anexo 15
	Terbasmin Turbuhaler	1-2 inh/4-6h		Máx 8 inh/día
	jarabe: 1,5 mg/5ml comp: 2,5, 5, 7,5 mg			
Corticoides (CT)				
Deflazacort	Zamene Dezacor	1 mg x kg / día (entre 0,5-1,5 mg)	1 gota = 1 mg	
	gotas 22,75 mg/ml comp: 6 y 30 mg	dosis única	3-5 días	
Dexametasona	Fortecortín	0,15- 0,6 mg x kg / 24 h		
	comp 1, 4, 8 mg vial: 4, 8, 40, 200 mg		1-2 días	De primera elección en laringitis Usado en asma
Prednisolona	Estilsona	Asma: 1-2 mg x kg/dia = 6-12 gotas x kg Alergia: 0,1-2 mg x kg = 1-12 gotas x kg (máx 40 mg/dia)	40 gotas = 1 ml	anexo 14
	gotas: 7 mg/ml	dosis única	3 días	Usada en intox por organofosforados Antídoto: Fisostigmina

FÁRMACOS MÁS USADOS EN URGENCIAS PEDIÁTRICAS

Fármaco Indicaciones	Nombres comerciales	Concentración por ml	Dosis	Observaciones
	Vía de admón			
Fármacos para intubación en pediatría				
Atropina Sedante	Atropina im, iv, sc	1 ml= 1 mg	0,02-0,05 mg/kg cada 5 min (dosis min 0,1 mg) Dosis máx 1 mg/ dosis en niños 2 mg/dosis en adolescentes	Usada en intox por organofosforados Antídoto: Fisostigmina
Diazepam Hipnótico	Valium iv, im, it		0,2-0,3 mg x kg	Mayor duracion accion que midazolam
Etomidato Hipnótico	Hypnomidate iv: ampolla de 10 ml con 20 mg	1 ml= 2 mg	0,3 mg x kg (0,2-0,4) iv	Ideal para uso extrahospitalario
Fentanilo Sedante	Fentanest amp 0,05 mg/ml	1 ml = 0,05 mg	2-5 microgramos x kg iv o im	
Ketamina Sedante	Ketolar im, iv	1 ml= 50 mg	Bolo: 1-2 mg/kg iv Perfusion: 1-2 mg x kg / h	Escasa depresión respiratoria. Broncodilatador
Midazolam Hipnótico	Dormicum iv, im, it	1 ml = 1 mg	0,1-0,3 mg x kg	Efecto rápido y corto
Propofol Hipnótico	Propofol iv	10 mg /ml 20 mg /ml	0,5 - 3 mg x kg (1mg x kg)	Efecto rápido y corto
Suxametonio Relajante musc.	Anectine iv	50 mg/ml	RN y lactantes: 2 mg x kg (+resistentes) Niños y adultos: 1 mg x kg	Efecto rápido Acción corta
Tiopental Hipnótico	Pentalal iv: polvo para solucion 0'5, 1 g		3-5 mg x kg	Se diluye 1 gr en 40 ml de SF o SG al 5% o 0,5 g en 20 ml de solución y su administración a 2,5%
Vecuronio Relajante musc.	Norcurón iv		0,1 mg x kg	Escaso efecto hemodinámico Se puede repetir dosis cada hora

Fármaco Indicaciones	Nombres comerciales	Concentración por ml	Dosis	Observaciones
	Vía de admón			
Fármacos SVA pediátrico				
Adenosina Taquicardia QRS estrecho estable	Adenocor iv: ampollas de 6 mg en 2ml	1 ml = 3 mg	1ª dosis: 0,1 mg x kg (máx 6 mg) 2ª dosis: 0,2 mg x kg (máx 12 mg)	Diluir una ampolla en 4ml de SF. Indicado en taquicardia QRS estrecho estable
Adrenalina RCP Anafilaxia	Adrenalina iv, im: ampollas 1/1000	1 ml = 1mg	PCR: 1º dosis 0,01 mg x kg iv. 2º dosis 0,1 mg x kg iv. Alergia: 0,01 mg x kg sc. Nebulizada: 4 mg en suero fisiológico hasta 10 cc (flujo 5-6 l de oxígeno)	Diluir 1 ampolla en 9 ml de SF para 1º dosis y admón 0,1 ml x kg. Resto de dosis sin diluir (excepto en RN que siempre son diluidas)
Amiodarona Taquicardia QRS ancho estable	Trangorex comp: 200 mg iv: ampollas 150mg	1 ml = 50 mg	5 mg x kg en bolo rápido cada 5 min. Máximo 3 dosis	
Atropina Bradicardia sintomática Bloqueo AV 3º	Atropina im, iv, sc	1 ml = 1mg	0,02 mg x kg (dosis min 0,1mg)	1º mejorar ventilacion → 2º adrenalina → 3º atropina
Bicarbonato RCP > 10 min pH< 7,10	comp: 500mg iv: 1 M: 10 ml = 10 mEq 1/6M: 1 ml=1,6mEq		1 mEq x kg	Diluir una ampolla en 10ml de SF (0,5mEq x ml) Limpiar la vía tras pasarlo. Inactiva adrenalina
Cloruro cárlico Hipocalcemia Hiperpotasemia Hipermagnesemia Intox por calcioantag.			20 mg x kg (0,2 ml x kg)	iv pasar en 10-20 segundos
Digoxina Taquicardia QRS estrecho estable en < 1 año	comp: 0,25 mg jarabe: 1 ml= 0,05 mg iv: ampollas 0,5 mg en 2 ml	1 ml= 0,25 mg	Rn pretermino: 25-30 µgr x kg RN: 45 µgr x kg < 2 años: 45 µgr x kg 2-5 años: 35 µgr x kg 5-10 años: 25 µgr x kg > 10 años: 0,75-1,25 mg	vía oral: se calcula la dosis total de digital y se admón 1/4 cada 8 h. iv: se admón el 75% de la dosis oral
Dopamina Estabilización Hemodinámica	iv: ampolla de 10 ml con 200 mg	1 ml = 50 mg	Vasodilat esplánico: 1-3 µgr x kg/min Inotropo: 3-10 µgr x kg/min Inotropo y vasopresor: > 10 µgr x kg/min	Preparación: 0,15 ml x kg diluido en 50 ml de SF → 1ml = 1 µgr x kg. Aumentar de 3 a 5 µgr/min
Glucosa Hipoglucemias	Glucosmon R 50 iv: ampollas de 20 ml con 10 gr		1-2 ml x kg de glucosado al 50% 0,25-0,5 g x kg en bolo	
Líquidos AESP Hipovolemia	Suero fisiológico Ringer lactato		20 ml x kg	Pasar lo más rápido posible (< 20min) Nunca glucosados
Verapamilo Taq QRS estrecho estable en > 1 año	Manidon iv: ampollas de 2 ml con 5 mg	1 ml = 2,5 mg	0,1 mg x kg	iv en bolo lento

ANEXOS

**ANEXO 1:
Amoxicilina**

Dosificación	80-100 mg/kg/día
Dosis máxima	4 g/día
Intervalo de dosis	c/8 horas

Peso (kg)	Dosificación/8 horas	Equivalencia susp. (250 mg/5 ml)
4	100-130 mg/8 h	2-2,5 ml/8 h
6	160-200 mg/8 h	3-4 ml/8 h
8	210-260 mg/8 h	4-5 ml/8 h
10	260-330 mg/8 h	5-6,5 ml/8 h
12	320-400 mg/8 h	6,5-8 ml/8 h
14	375-450 mg/8 h	7,5-9 ml/8 h
16	425-500 mg/8 h	8,5-10 ml/8 h
≥ 20	500-1000 mg/8 h	10-20 ml/8 h

**ANEXO 2:
Amoxicilina/
Ác clavulánico**

Dosificación	80 mg/kg/día (la dosis hace referencia a la amoxicilina)
Dosis máxima	3 g/día
Intervalo de dosis	c/8 horas

Peso (kg)	Dosificación/8 horas	Equivalencia gotas (100 mg/12,5 mg/ml)
4	100 mg/8 h	1 ml/8 h
6	160 mg/8 h	1,6 ml/8 h
8	210 mg/8 h	2,1 ml/8 h
10	260 mg/8 h	2,6 ml/8 h
12	320 mg/8 h	3,2 ml/8 h
14	375 mg/8 h	3,7 ml/8 h
16	425 mg/8 h	4,2 ml/8 h
18	480 mg/8 h	4,8 ml/8 h
≥ 20	500-1000 mg/8 h	5-10 ml/8 h

ANEXO 3:**Azitromicina**

Dosificación	10 mg/kg/día
Dosis máxima	500 mg/día
Intervalo de dosis	c/24 horas

Peso (kg)	Dosificación/24 horas	Equivalencia susp. (200 mg/5 ml)
2	20 mg/24 h	0,5 ml/24 h
4	40 mg/24 h	1 ml/24 h
6	60 mg/24 h	1,5 ml/24 h
8	80 mg/24 h	2 ml/24 h
10	100 mg/24 h	2,5 ml/24 h
12	120 mg/24 h	3 ml/24 h
14	140 mg/24 h	3,5 ml/24 h
16	160 mg/24 h	4 ml/24 h
18	180 mg/24 h	4,5 ml/24 h
20	200 mg/24 h	5 ml/24 h
22	220 mg/24 h	5,5 ml/24 h
24	240 mg/24 h	6 ml/24 h
26	260 mg/24 h	6,5 ml/24 h
28	280 mg/24 h	7 ml/24 h
30	300 mg/24 h	7,5 ml/24 h
32	320 mg/24 h	8 ml/24 h
34	340 mg/24 h	8,5 ml/24 h
36	360 mg/24 h	9 ml/24 h
38	380 mg/24 h	9,5 ml/24 h
40	400 mg/24 h	10 ml/24 h
42	420 mg/24 h	10,5 ml/24 h
44	440 mg/24 h	11 ml/24 h
46	460 mg/24 h	11,5 ml/24 h
48	480 mg/24 h	12 ml/24 h
≥ 50	500 mg/24 h	12,5 ml/24 h

ANEXO 4:**Cefixima**

Dosificación	8 mg/kg/día
Dosis máxima	800 mg/día
Intervalo de dosis	c/24 horas

Peso (kg)	Dosificación/24 horas	Equivalencia susp. (200 mg/5 ml)
2	16 mg/24 h	0,8 ml/24 h
4	32 mg/24 h	1,6 ml/24 h
6	48 mg/24 h	2,4 ml/24 h
8	64 mg/24 h	3,2 ml/24 h
10	80 mg/24 h	4 ml/24 h
12	96 mg/24 h	4,8 ml/24 h
14	112 mg/24 h	5,6 ml/24 h
16	128 mg/24 h	6,4 ml/24 h
18	144 mg/24 h	7,2 ml/24 h
20	160 mg/24 h	8 ml/24 h
22	176 mg/24 h	8,8 ml/24 h
24	192 mg/24 h	9,6 ml/24 h
26	208 mg/24 h	10,4 ml/24 h
28	224 mg/24 h	
30	240 mg/24 h	
32	256 mg/24 h	
34	272 mg/24 h	
36	288 mg/24 h	
38	304 mg/24 h	
40	320 mg/24 h	
42	336 mg/24 h	
44	352 mg/24 h	
46	368 mg/24 h	
48	384 mg/24 h	
≥ 50	400 mg/24 h	

ANEXO 5:
**Cefuroxima
axetilo**

Dosificación	30 mg/kg/día
Dosis máxima	9 g/día
Intervalo de dosis	c/12 horas

Peso (kg)	Dosificación/12 horas	Equivalencia susp.	
		(125 mg/5 ml)	(250 mg/5 ml)
4	60 mg/12 h	2,5 ml/12 h	
6	90 mg/12 h	3,5 ml/12 h	
8	120 mg/12 h	5 ml/12 h	
10	150 mg/12 h		3 ml/12 h
12	180 mg/12 h		3,5 ml/12 h
14	210 mg/12 h		4 ml/12 h
16	240 mg/12 h		4,5 ml/12 h
≥ 18	250 mg/12 h		5 ml/12 h

ANEXO 6:
Clarithromicina

Dosificación	15 mg/kg/día
Dosis máxima	1 g/día
Intervalo de dosis	c/12 horas

Peso (kg)	Dosificación/12 horas	Equivalencia susp.	
		(125 mg/5 ml)	(250 mg/5 ml)
4	30 mg/12 h	1,2 ml/12 h	
6	45 mg/12 h	1,8 ml/12 h	
8	60 mg/12 h	2,4 ml/12 h	
10	75 mg/12 h	3 ml/12 h	
12	90 mg/12 h	3,6 ml/12 h	
14	105 mg/12 h	4,2 ml/12 h	
16	120 mg/12 h	5 ml/12 h	
18	135 mg/12 h		2,7 ml/12 h
20	150 mg/12 h		3 ml/12 h
25	190 mg/12 h		3,8 ml/12 h
≥ 30	250 mg/12 h		5 ml/12 h

ANEXO 7:**Desloratadina**

Dosisificación según edad

Intervalo de dosis c/24 horas

Edad	Dosisificación / 24 horas	Equivalencia susp. (2,5 mg/5 ml)
2-5 años	2,5 mg/24 h	5 ml/24 h
> 6 años	5 mg/24 h	10 ml/24 h
Adultos	10 mg/24 h	20 ml/24 h

ANEXO 8:**Dextrometorfano**

Dosisificación 1-2 mg/kg/día

Intervalo de dosis c/6-8 horas

Peso (kg)	Dosisificación/ 6 horas	Equivalencias solución		Dosisificación/ 8 horas	Equivalencias solución	
		(5 mg/5 ml)	(10 mg/ 5 ml)		(5 mg/ 5 ml)	(10 mg/ 5 ml)
2	0,5-1 mg	0,5-1 ml		0,7-1,3 mg	0,7-1,3 ml	
4	1-2 mg	1-2 ml		1,3-2,7 mg	1,3-2,7 ml	
6	1,5-3 mg	1,5-3 ml		2-4 mg	2-4 ml	
8	2-4 mg	2-4 ml		2,75-5,3 mg	2,75-5,3 ml	
10	2,5-5 mg	2,5-5 ml		3,3-6,7 mg	3,4-6,7 ml	
12	3-6 mg	3-6 ml		4-8 mg	4-8 ml	
14	3,5-7 mg	3,5-7 ml		4,7-9,3 mg	4,7-9,3 ml	
16	4-8 mg	4-8 ml		5,3-10,7 mg	5,4-10,7 ml	
18	4,5-9 mg	4,5-9 ml		6-12 mg	6-12 ml	3-6 ml
20	5-10 mg	5-10 ml	2,5-5 ml	6,7-13,3 mg		3,4-6,7 ml
22	5,5-11 mg		2,75-5,5 ml	7,3-14,7 mg		3,7-7,3 ml
24	6-12 mg		3-6 ml	8-16 mg		4-8 ml
26	6,5-13 mg		3,25-6,5 ml	8,7-17,3 mg		4,4-8,7 ml
28	7-14 mg		3,5-7 ml	9,3-18,7 mg		4,7-9,3 ml
30	7,5-15 mg		3,75-7,5 ml	10-20 mg		5-10 ml
32	8-16 mg		4-8 ml	10,7-21,3 mg		5,4-10,7
34	8,5-17 mg		4,25-8,5 ml	11,3-22,7 mg		5,7-11,3 ml
36	9-18 mg		4,5-9 ml	12-24 mg		6-12 ml
38	9,5-19 mg		4,75-9,5 ml	12,7-25,3 mg		6,4-12,7 ml
> 40	10-20 mg		5-10 ml	13,3-26,7 mg		6,7-13,3 ml

ANEXO 9:
Eritromicina

Dosificación	40 mg/kg/día
Dosis máxima	2 g/día
Intervalo de dosis	c/6-12 horas

Peso (kg)	Dosificación/6 horas	Equivalencia susp. (5 mg/5 ml)	Dosificación/12 horas	Equivalencia susp. (125 mg/5 ml)
2	20 mg/6 h	0,8 ml/6 h	40 mg/12 h	1,6 ml/12 h
4	40 mg/6 h	1,6 ml/6 h	80 mg/12 h	3,2 ml/12 h
6	60 mg/6 h	2,4 ml/6 h	120 mg/12 h	4,8 ml/12 h
8	80 mg/6 h	3,2 ml/6 h	160 mg/12 h	6,4 ml/12 h
10	100 mg/6 h	4 ml/6 h	200 mg/12 h	8 ml/12 h
12	120 mg/6 h	4,8 ml/6 h	240 mg/12 h	9,6 ml/12 h
14	140 mg/6 h	5,6 ml/6 h	280 mg/12 h	11,2 ml/12 h
16	160 mg/6 h	6,4 ml/6 h	320 mg/12 h	12,8 ml/12 h
18	180 mg/6 h	7,2 ml/6 h	360 mg/12 h	14,4 ml/12 h
20	200 mg/6 h	8 ml/6 h	400 mg/12 h	16 ml/12 h
22	220 mg/6 h	8,8 ml/6 h	440 mg/12 h	17,6 ml/12 h
24	240 mg/6 h	9,6 ml/6 h	480 mg/12 h	19,2 ml/12 h
26	260 mg/6 h	10,4 ml/6 h	520 mg/12 h	20,8 ml/12 h
28	280 mg/6 h	11,2 ml/6 h	560 mg/12 h	22,4 ml/12 h
30	300 mg/6 h	12 ml/6 h	600 mg/12 h	24 ml/12 h
32	320 mg/6 h	12,8 ml/6 h	640 mg/12 h	25,6 ml/12 h
34	340 mg/6 h	13,6 ml/6 h	680 mg/12 h	27,2 ml/12 h
36	360 mg/6 h	14,4 ml/6 h	720 mg/12 h	28,8 ml/12 h
38	380 mg/6 h	15,2 ml/6 h	760 mg/12 h	30,4 ml/12 h
40	400 mg/6 h	16 ml/6 h	800 mg/12 h	32 ml/12 h
42	420 mg/6 h	16,8 ml/6 h	840 mg/12 h	33,6 ml/12 h
44	440 mg/6 h	17,6 ml/6 h	880 mg/12 h	35,2 ml/12 h
46	460 mg/6 h	18,4 ml/6 h	920 mg/12 h	36,8 ml/12 h
48	480 mg/6 h	19,2 ml/6 h	960 mg/12 h	38,4 ml/12 h
> 50	500 mg/6 h	20 ml/6 h	1000 mg/12 h	40 ml/12 h

ANEXO 10:
Fosfomicina

Dosificación	100-200 mg/kg/día
Intervalo de dosis	c/8 horas

Edad	Dosificación/8 horas	Equivalencia susp. (250 mg/5 ml)
Prematuros y lactantes	150-300 mg/8 h	3-6 ml/8 h
> 1	250-500 mg/8 h	5-10 ml/8 h
Adultos	500-1000 mg/8 h	10-20 ml/8 h

ANEXO 11:
Ibuprofeno

Dosificación	30 mg/kg/día
Dosis máxima	40 mg/kg/día
Intervalo de dosis	c/8 horas

Peso (kg)	Dosificación/8 horas	Equivalencia gotas (100 mg/12,5 mg/ml)
8	80 mg/8 h	2 ml/8 h
10	100 mg/8 h	2,5 ml/8 h
12	120 mg/8 h	3 ml/8 h
14	140 mg/8 h	3,5 ml/8 h
16	160 mg/8 h	4 ml/8 h
18	180 mg/8 h	4,5 ml/8 h
20	200 mg/8 h	5 ml/8 h
25	250 mg/8 h	6,25 ml/8 h
30	300 mg/8 h	7,5 ml/8 h
35	250 mg/8 h	8,75 ml/8 h
40	400 mg/8 h	10 ml/8 h

ANEXO 12:
Loratadina

Peso (kg)	Dosificación/24 horas	Intervalo de dosis c/24 horas
	Equivalencia susp. (5 mg/5 ml)	
2	0,4 mg/24 h	0,4 ml/24 h
4	0,8 mg/24 h	0,8 ml/24 h
6	1,2 mg/24 h	1,2 ml/24 h
8	1,6 mg/24 h	1,6 ml/24 h
10	2 mg/24 h	2 ml/24 h
12	2,4 mg/24 h	2,4 ml/24 h
14	2,8 mg/24 h	2,8 ml/24 h
16	3,2 mg/24 h	3,2 ml/24 h
18	3,6 mg/24 h	3,6 ml/24 h
20	4 mg/24 h	4 ml/24 h
22	4,4 mg/24 h	4,4 ml/24 h
24	4,8 mg/24 h	4,8 ml/24 h
26	5,2 mg/24 h	5,2 ml/24 h
28	5,6 mg/24 h	5,6 ml/24 h
30	6 mg/24 h	6 ml/24 h
32	6,4 mg/24 h	6,4 ml/24 h
34	6,8 mg/24 h	6,8 ml/24 h
36	7,2 mg/24 h	7,2 ml/24 h
38	7,6 mg/24 h	7,6 ml/24 h
40	8 mg/24 h	8 ml/24 h
42	8,4 mg/24 h	8,4 ml/24 h
44	8,8 mg/24 h	8,8 ml/24 h
46	9,2 mg/24 h	9,2 ml/24 h
48	9,6 mg/24 h	9,6 ml/24 h
> 50	10 mg/24 h	10 ml/24 h

ANEXO 13:
Paracetamol

Dosificación	15 mg/kg/día
Dosis máxima	60-90 mg/kg/día
Intervalo de dosis	c/6 horas

Peso (kg)	Dosificación/6 horas	Equivalencia	
		gotas (100 mg/ml)	solución (100 mg/ml)
4	60 mg/6 h	0,60 ml/6 h	
6	90 mg/6 h	0,90 ml/6 h	
8	120 mg/6 h	1,2 ml/6 h	
10	150 mg/6 h	1,5 ml/6 h	
12	180 mg/6 h	1,8 ml/6 h	
14	210 mg/12 h	2,1 ml/6 h	
16	240 mg/6 h	2,4 ml/6 h	
18	270 mg/6 h		2,7 ml/6 h
20	300 mg/6 h		3 ml/6 h
25	375 mg/6 h		3,75 ml/6 h
30	450 mg/6 h		4,5 ml/6 h
33	495 mg/6 h		4,95 ml/6 h

ANEXO 14:
Prednisolona

Dosificación	1-2 mg/kg/día
Intervalo de dosis	c/8-12-24 horas

Peso (kg)	Dosificación/12 horas	Equivalencia gotas (13,3 mg/ ml)
4	2-4 mg/12 h	0,15-0,30 ml/12 h
6	3-16 mg/12 h	0,22-0,45 ml/12 h
8	4-8 mg/12 h	0,3-0,6 ml/12 h
10	5-10 mg/12 h	0,37-0,75 ml/12 h
12	6-12 mg/12 h	0,45-0,9 ml/12 h
14	7-14 mg/12 h	0,52-1,05 ml/12 h
16	8-16 mg/12 h	0,6-1,2 ml/12 h
18	9-18 mg/12 h	0,67-1,35 ml/12 h
20	10-20 mg/12 h	0,75-1,5 ml/12 h
24	12-24 mg/12 h	0,9-1,8 ml/12 h
28	14-28 mg/12 h	1,05-2,11 ml/12 h
32	16-32 mg/12 h	1,2-2,4 ml/12 h
36	18-36 mg/12 h	1,35-2,7 ml/12 h
40	20-40 mg/12 h	1,5-3 ml/12 h

ANEXO 15:
Terbutalina

Dosificación	0,075 mg/kg/8 h
Intervalo de dosis	c/8 horas

Peso (kg)	Equivalencia gotas (0,3 mg/ ml)
4	1 ml/8 h
6	1,5 ml/8 h
8	2 ml/8 h
10	2,5 ml/8 h
12	3 ml/8 h
14	3,5 ml/8 h
16	4 ml/8 h
18	4,5 ml/8 h
20	5 ml/8 h
24	6 ml/8 h
28	7 ml/8 h
32	8 ml/8 h
36	9 ml/8 h
40	10 ml/8 h

FÁRMACOS DIABETES MELLITUS

A. ANTIDIABÉTICOS ORALES

1. BIGUANIDAS: inhiben la neoglucogénesis hepática.

FÁRMACO	NOMBRE COMERCIAL®	PRESENTACIÓN	A C C I Ó N (HORAS)	DOSIS (mg/día)	EFFECTO SECUNDARIO
Metformina	Diamben Metformina EFG	500 mg 850 mg 1.000 mg	7-8 h	850-3000 mg (inicio 500 mg) En 1-3 tomas	Diarrea en 30% pacientes (dosis dependiente)

2. SULFONILUREAS: estimulan la secreción de la insulina preformada en el páncreas.

Los alimentos interfieren en su absorción por lo que se administrarán preferiblemente 30 min antes del desayuno en dosis única. Si la dosis es elevada, se reparte en 2 tomas (desayuno-cena).

FÁRMACO	NOMBRE COMERCIAL®	PRESENTACIÓN (comprimidos)	DOSIS INICIAL (mg/día)	MÁXIMO (mg/día)	TOMAS AL DÍA	DURACIÓN (horas)
GLIBENCLAMIDA	Daonil Euglucon Gluconon Norglicem	5 mg	2,5	20	1-2	10 h
GLICLAZIDA	Diamicron Uni Diamicrom Diamicrom MR	30 mg 60 mg 80mg	30	120	1	16 h
GLISENTIDA	Staticum	5 mg	2,5-5	20	1-2	4 h
GLIPIZIDA	Minodiab	5 mg	2,5-5	40	1-2	2-4 h
GLIMEPIRIDA	Amaryl Roname	4 mg	1-2	6-8	1	8 h

3. GLINIDAS (SECRETAGOGOS DE ACCIÓN RÁPIDA): producen una liberación rápida y de corta duración de insulina. Inicio de acción 30 min tras su ingesta, debe administrarse 15 min antes de las comidas.

FÁRMACO	NOMBRE COMERCIAL®	PRESENTACIÓN (comprimidos)	DOSIS INICIAL (mg/8 horas)	MÁXIMO (mg/8 horas)	TOMAS AL DÍA	VIDA MEDIA (horas)
REPAGLINIDA	Novonorm Prandin	0,5 mg 1 mg 2 mg	0,5	6 (16 mg/día)	1	4
NATEGLINIDA	Stalix	60 mg 120 mg 180 mg	60	180 (540 mg /día)	1	4

4. GLITAZONAS: su acción se produce aumentando la captación y el uso de glucosa en músculo y tejido graso. No produce hipoglucemia.

FÁRMACO	NOMBRE COMERCIAL®	PRESENTACIÓN (comprimidos)	DOSIS INICIAL (mg/día)	MÁXIMO (mg/día)	TOMAS AL DÍA	DURACIÓN (horas)
PIOGLITAZONA	ACTOS GLUSTIN	15 mg 30 mg	15-30	45	1	5-6

5. INHIBIDORES DE ALFA GLUCOSIDASAS: actúan retardando la absorción de hidratos de carbono a nivel intestinal. No producen hipoglucemias en monoterapia.

Cuando se utilizan en combinación con sulfonilureas, glinidas o insulina pueden producirse hipoglucemias que se tratarán con glucosa oral, pero no con sacarosa (azúcar), debido a que está retardada su absorción.

Se administran inmediatamente antes de las comidas masticados con el primer bocado.

FÁRMACO	NOMBRE COMERCIAL®	PRESENTACIÓN (comprimidos)	DOSIS INICIAL (mg/8 horas)	MÁXIMO (mg/8 horas)	TOMAS AL DÍA	DURACIÓN (horas)	EFFECTOS SECUNDARIOS
ACARBOSA	GLUCOBAY GLUMIDA ACARBOSA EFG	50 mg 100 mg	50	200	3	3	Flatulencia y distensión abdominal (30-50% de los pacientes)
MIGLITOL	DIASTABOL PLUMAROL	50 mg 100 mg	50	100	3	3	

6. INHIBIDORES DE LA DIPEPTIDIL-PEPTIDASA (DPP-4) actúan produciendo la liberación de insulina pancreática e inhibiendo la de glucagón de manera glucosa-dependiente.

FÁRMACO	NOMBRE COMERCIAL®	PRESENTACIÓN (comprimidos)	MÁXIMO (mg/dial)	TOMAS AL DÍA	DURACIÓN (horas)	EFFECTOS SECUNDARIOS
SITAGLIPTINA	Januvia Ristaben Tesavel Xelevia	25,50, 100 mg	100	1	12	Hipoglucemias Cefalea Estreñimiento Mareos
VILDAGLIPTINA	Galvus Jalra Xiliarx	50 mg	50-100	1-2	3	
SAXAGLIPTINA	Onglyza	2,5 y 5 mg	5	1	3,5	
LINAGLIPTINA	Trajenta	5 mg	5	1	12	
ALOGLIPTINA	Vipidia	6'25, 12'5, 25 mg	25	1	21	

7. ANÁLOGOS DEL GLP-1: actúan produciendo la liberación de insulina pancreática e inhibiendo la de glucagón de manera glucosa-dependiente. Además enlentecen el vaciado gástrico y disminuyen el apetito.

FÁRMACO	NOMBRE COMERCIAL®	PRESENTACIÓN (comprimidos)	DOSIS	DURACIÓN (horas)
EXENATIDA	BYETTA pluma precargada	Diaria: 5 ug/dosis y 10 ug/dosis	10-20 ug /12 h	3
	BYDUREON susp iny	Semanal: 2 mg	2 mg/sem	
LIRAGLUTIDA	VICTOZA XACENDA		1,2-1,8 mg	13
LIXISENATIDA	LYXUMIA	10 ug/dosis 20 ug/dosis	20 ug	3
DULAGLUTIDA	TRULICITY	0'75, 1'5 mg	0,75 mg/ sem	4,5 días
ALBIGLUTIDA	EPERZAN	30, 50 mg	30 mg/sem	5 días

8. INHIBIDORES DE LA SGLT-2: actúan a nivel renal inhibiendo al cotransportador de sodio y glucosa tipo 2 del túbulo proximal, lo cual reduce la recaptación de la glucosa del filtrado glomerular, con su consiguiente eliminación a través de la orina. Esto provoca una reducción de la glucemia y pérdida de peso. Además poseen un ligero efecto diurético por lo que tienen un leve efecto hipotensor.

FÁRMACO	NOMBRE COMERCIAL®	PRESENTACIÓN (comprimidos)	DOSIS DIARIA (mg/día)	DURACIÓN (horas)
DAPAGLIFLOZINA	FORXIGA EDISTRIDE	5, 10 mg	10	13
EMPAGLIFLOZINA	JARDIANCE	10, 25 mg	10	12
ESTUGLIFLOZINA	STEGLATRO	5, 15 mg	5	17
CANAGLIFLOZINA	INVOCANA	100 , 300 mg	100	10

B. COMBINACIONES DE FÁRMACOS MÁS USADOS

FÁRMACO	NOMBRE COMERCIAL®	PRESENTACIÓN (comprimidos)
METFORMINA + PIOGLITAZONA	COMPETACT 850 / 15 mg GLUBRAVA 850 / 15 mg	1 cp / 12 h
PIOGLITAZONA + GLIMEPIRIDA	TANDEM ACT 30/2 y 30/4 mg	1 cp / 24 h
METFORMINA + SITAGLIPTINA	EFFICIB 1000/50 mg JANUMET 1000/50 mg RISTFOR 1000/50 mg VELMETIA 1000/50 mg	1 cp / 12 h
METFORMINA + VILDAGLIPTINA	EUCREAS 1000/50 y 850/50 mg ICANDRA 1000/50 y 850/50 mg ZOMARIST 1000/50 y 850/50 mg	1 cp / 12 h
METFORMINA + SAXAGLIPTINA	KOMBOGLYZE 1000/2,5 mg y 850/2,5 mg	1 cp / 12 h
METFORMINA + LINAGLIPTINA	JENTADUETO 1000/2,5 mg y 850/2,5 mg	1 cp / 12 h
EMPAGLIFLOZINA + METFORMINA	SYNJARDY 12,5/1000 y 12,5/850 mg 5/1000 y 5/850 mg	1 cp / 12 h
CANAGLIFLOZINA + METFORMINA	VOKANAMET 150/1000 mg y 150/850 mg	1 cp / 12 h
ALOGLIPTINA + PIOGLITAZONA	INCRESYNC 12,5/30 mg y 25/30 mg	1 cp / 24 h
ALOGLIPTINA + METFORMINA	VIPDOMET 12,5/850 y 12,5/1000 mg	1 cp / 12 h
DAPAGLIFLOZINA + METFORMINA	XIGDUO 5/850 mg y 5/1000 mg	1 cp / 12 h
ERTUGLIFLOZINA + METFORMINA	5SEGGLUROMET 2,5/850-2,5/1000 mg 7,5/850-7,5/1000 mg	1 cp / 12h

C. MANEJO DE INSULINA

INSULINA			NOMBRE COMERCIAL	INICIO	PICO	DURACIÓN	
Prandiales	Ultrarrápidas		ASPART ^a	NovoRapid FlexPen®		3-5 h	
			LISPRO ^a	Humalog 100 KwikPen® Humalog 200 KwikPen®			
			GLULISINA ^a	Apidra SoloStar®			
Rápida		Actrapid InnoLet®		30 m	2-4 h	6 h	
Basales	Intermedias		NPH	Insulatard FlexPen® Humulina NPH KwikPen		12 h	
			DETEMIR ^a	Levemir FlexPen® Levemir InnoLet®			
	Prolongadas		GLARGINA ^a	U 100: Lantus SoloStar® Abasaglar KwikPen U 300: Toujeo SoloStar®		20-24 h 36 h	
			DEGLUDEC ^a	Tresiba FlexTouch			
Mezclas	Rápida + NPH ^a		Mixtard 30 InnoLet Humulina 30/70 KwikPen		30 m	12 h	
	ASPART ^a + NPA ^a		NovoMix 30 FlexPen NovoMix 50 FlexPen NovoMix 70 FlexPen®		10-15 m		
	LISPRO ^a + NPL ^a		Humalog Mix 25 KwikPen Humalog Mix 50 KwikPen				

^a análogo de insulina

8. APARATO GENITAL Y MAMAS

AMENORREA

Interrogatorio

1. **¿Cuál ha sido la fecha de la última regla y el número de reglas que han faltado?:** Posibilidad de embarazo. Lactancia. Patología endocrina (hipogonadismos, hiperprolactinemia, Cushing), menopausia, estrés, trastornos alimenticios, ejercicio.
2. **¿Presenta otros síntomas?:**
 - Alteraciones del comportamiento: depresión, ansiedad, trastornos alimenticios.
 - Alteraciones de la visión: descartar patología tumoral, collagenopatías (AR, LES...).
 - Dolor abdominal previo al ciclo: síndrome premenstrual, endometriosis.
 - Metrorragia irregular o profusa: endometriosis, mioma, alteraciones hormonales (patologías tiroideas, hipogonadismos, Cushing...), SOP.
 - Secrección de leche por el pezón: hiperprolactinemia lactancia, tumoración hipofisaria.
 - Aumento o disminución de vello: patología tiroidea, SOP.
 - Intolerancia al calor o frío: hiper/hipotiroidismo.
 - Estrías violáceas o hematomas, debilidad: síndrome de Cushing.
 - Anosmia: patología hipofisaria.
 - Aumento de peso: hipotiroidismo, Cushing.
 - Sofocos (sudoración profusa o nocturna): premenopausia.
3. **¿Padece de alguna enfermedad-AP-?**
 - Enfermedades crónica: DM, IRC.
 - Fármacos: quimioterapia, ANOV, antipsicóticos, antidepresivos, drogas de abuso (cocaina, opiáceos), antihipertensivos.
 - Traumatismo o cirugía abdominopelvica previa (legrado, hysterectomia..).
 - Meningitis o encefalitis, fractura de la base del cráneo, aborto, legrado, hysterectomy, SOP, adenoma de hipófisis.

Consejo telefónico

Medidas generales

- Tranquilizar a la paciente

Medidas específicas

- Sospecha de embarazo: indicar la realización de un test de embarazo.
- Sospecha premenopausia: modificar el estilo de vida (ejercicio regular, regular T^a ambiente y vestimenta).
- Sospecha estrés, anorexia, ansiedad o depresión: modificar el estilo de vida, alprazolam si lo tiene en el domicilio y lo ha tomado en otras ocasiones.
- Ajustes de medicación si la está tomando previamente: ISRS...

Respuesta desde CCUS-061

Derivación a Urgencias	Derivación a AP
<ul style="list-style-type: none">- Test de embarazo positivo con dolor abdominal importante o sangrado escaso.- Cefalea- Náuseas o vómitos- Alteraciones visuales	<ul style="list-style-type: none">- Si amenorrea mayor a 3 meses- Test de embarazo positivo sin síntomas de alerta.

ANTICONCEPCIÓN HORMONAL DE URGENCIA

Interrogatorio

1. **¿Cuándo ha sido la relación sin protección (fecha y hora)?** Orienta hacia la actitud a tomar.
2. **¿Cuándo ha sido la FUR?** Nos puede orientar a embarazo previo.
3. **¿Cuál ha sido el motivo?** Fallo de dispositivos de barrera, no método anticonceptivo alguno, marcha atrás, eyaculación en genitales externos, olvidó la toma de ANOV. Es importante descartar violación.
4. **¿Está tomando algún tratamiento -AP-?**
 - Toma de ANOV: no contraindicada la anticoncepción de urgencia.
 - Tratamientos concomitantes: antiepilepticos, rifampicina, espironolactona, clorpromazina, diazepam, antihistamínicos, griseofulvina: aumentar la dosis de anticonceptivo habitual.
 - ¿ANOV de urgencia previa en este ciclo? Puede ser menos efectiva, pero no es motivo para negar una nueva toma.

Consejo telefónico

Medidas generales

- Educación sanitaria: la anticoncepción de urgencia no funciona tan bien como la anticoncepción habitual, no debe usarse como método rutinario.
- Explicar otras opciones, recordar que no protege frente a ETS: valorar derivación posterior a AP o COF.
- La anticoncepción de urgencias funciona mejor en las 24 primeras horas, pero puede prevenir el embarazo hasta 5 días después.
- Recordarle a la paciente que no está financiada por la Seguridad Social y que puede adquirirla sin receta médica en una farmacia.

Medidas específicas

- Administración lo antes posible.
 - EllaOne®: 1 comp, antes de las 120 h.
 - Norlevo®: 1 comp, antes de las 72 h.
- Método de barrera el resto del ciclo. Continuar con ANOV si los tomaba.
- Repetir la toma si hay vómito dentro de las 3 primeras horas. Opción vaginal si no tolera la ingesta oral.
- Esperar a la siguiente menstruación, que puede adelantarse o retrasarse. Si el retraso es >7 días, se realizará el test de embarazo.
- Si tras la toma aparece cefalea, tensión mamaria o dolor abdominal, se recomienda tratamiento sintomático.

Respuesta desde CCUS-061

Derivación a Urgencias hospitalarias	Derivación a Urgencias	Visita a domicilio
- Sospecha o consumación de violación	- Fuera de horario de CS o COF si no pudiese adquirirse por cuenta propia. - Se demora la administración > 24 h tras la relación de riesgo	- Dentro del HAO si no pudiese adquirirse por cuenta propia y siempre que la derivación no demore la administración >24 h tras relación de riesgo

HEMORRAGIA GENITAL

Interrogatorio

1. ¿Desde cuándo está el sangrado y cuál es la cuantía?

- Descartar embarazo. Si es afirmativo pasará a protocolo de hemorragia gestacional.
- Descartar menstruación normal.

2. ¿Cómo es el sangrado?

- Único y agudo: patología aguda (complicación de embarazo, rotura quistes ováricos, torsión anexial).
- Subagudo: complicación de cirugía ginecológica, trastornos de la coagulación, infecciones, cuerpos extraños vaginales.
- Cíclica: lesiones orgánicas.
- Sangrados irregulares: anovulación.
- Aparece al orinar (descartar patología urinaria), aparece con deposiciones (descartar origen digestivo).
- Tras relaciones sexuales: patología orgánica de genitales externos y cérvix (pólips, tumor, malformación).

3. ¿Presenta otros síntomas?

- Valorar estado hemodinámico: palpitaciones, mareo, sudoración, náuseas, estupor (signos de gravedad).
- Dolor abdominal:
 - Agudo: embarazo ectópico.
 - Subagudo y crónico: infecciones, neoplasias.
 - Relacionado con menstruación: antes y durante la menstruación (endometriosis), empieza horas antes y persiste durante 72 h (dismenorrea 1^a), empieza 2 semanas antes y persiste tras su cese (dismenorrea 2^a).
- Lesión en genitales externos: traumatismos, cuerpos extraños, lesiones dermatológicas (herpes, leucoplasias, condilomas).
- Prurito vaginal, flujo anómalo, maloliente: infecciones vaginales, endometritis, cuerpos extraños.
- Fiebre: EPI, infecciones, abortos retenidos.

4. ¿Padece de alguna enfermedad -AP-?:

• Métodos anticonceptivos:

- DIU: frecuente hipermenorrea. Riesgo de perforación uterina.
- ANOV toma incorrecta, dosis estrogénicas bajas, patología intercurrente e interacciones farmacológicas, spotting, hemorragias por disrupción o intermenstruales.

• Enfermedades previas, fármacos (fenotiacidas, testosterona, corticoterapia, ACO, antidepresivos, tratamiento hormonal sustitutivo, hemodiálisis, metoclopramida, metildopa, hidantoinas, carbamacepina, penicilina y derivados).

• Valorar la edad:

- Neonatos (por estimulación del endometrio por estrógenos placentarios).
- Niñas premenarquía: pubertar precoz, el 90% son idiopáticas.
- Adolescentes: tras menarquia hay ciclos anovulatorios que pueden persistir hasta tres años.
- Mujeres en edad fértil: embarazo y sus complicaciones son la causa más frecuente. <20% es funcional.
- Perimenopausia: anovulación por folículos viejos, patología tumoral.
- Menopausia: descartar cáncer de endometrio.

Consejo telefónico

- Tranquilizar a la paciente y a su entorno.
- Si el sangrado es intenso y hay síntomas de bajo gasto cardíaco, indicar que la acuesten y le levanten las piernas.
- Si hay disminución del nivel de conciencia, indicar PLS.

Respuesta desde CCUS-061

Recurso medicalizado	Derivación a Urgencias	Derivación a AP	Visita domiciliaria
<ul style="list-style-type: none">- Hemorragia masiva- Datos de bajo gasto cardíaco- Disminución del nivel de conciencia- Datos de abdomen agudo	<ul style="list-style-type: none">- Hemorragia moderada que precise tratamiento- Coagulopatías- Sospecha de infección- Dolor abdominal- Neonatos por sangrado no leve	<ul style="list-style-type: none">- Hemorragia leve- Perimenopausia- Portadoras DIU- Spotting ACO- Sospecha de enfermedad orgánica- Sospecha de interacción farmacológica- Neonatos con sangrado leve	<ul style="list-style-type: none">- Pacientes cuya situación funcional o basal impida acudir a un centro sanitario

HEMORRAGIA GESTACIONAL (incluye PUERPERAL)

Interrogatorio

1. **¿Desde cuando está el sangrado y cuantía?** Número de compresas que ha manchado, manchado de ropa interior, puede orientar al volumen del sangrado.
2. **Confirmar edad gestacional y la fecha probable del parto:**
 - Hemorragia de la 1^a mitad del embarazo. A descartar: aborto/amenaza de aborto, embarazo ectópico, mola, postmanipulación, postimplantación.
 - Hemorragia de la 2^a mitad del embarazo: descartar placenta previa, desprendimiento prematuro de placenta, expulsión del tapón mucoso, rotura uterina.
 - Hemorragia del puerperio: descartar retención de restos placentarios, atonía uterina, menstruación.
3. **¿Presenta otros síntomas?**
 - Palidez, sudoración fría, alteraciones del comportamiento: orienta a hipovolemia (hemorragia severa).
 - Dolor abdominal agudo:
 - En 1^a mitad: embarazo ectópico, aborto (tipo dismenorreico).
 - En 2^a mitad: rotura uterina, desprendimiento prematuro de placenta.
4. **¿Ha tenido embarazos previos u otras patologías -AP-?**
 - ¿Embarazo de riesgo?, ¿Bien controlado? Orienta a patología previa.
 - Tacto vaginal, relaciones sexuales previas: sangrado no obstétrico postmanipulación.

Consejo telefónico

Medidas generales

- Tranquilizar a la paciente

Medidas específicas

- **1^a mitad:** reposo absoluto en decúbito supino.
- **2^a mitad:** reposo absoluto en decúbito lateral izquierdo

Respuesta desde CCUS-061

Recurso medicalizado	Derivación a Urgencias	Derivación a AP/Ginecólogo
- Hemorragia abundante con signos de hipovolemia o inestabilidad hemodinámica	- Hemorragia escasa sin signos de hipovolemia. - Dolor abdominal	- Hemorragia atribuible a expulsión del tapón mucoso.

MAMA

Interrogatorio

1. ¿Qué le ocurre? ¿Desde cuándo? Generalmente nos llaman por tres motivos de consulta:

- **DOLOR MAMARIO.** **Momento en el que lo nota, frecuencia** (cíclico o no), severidad y localización (uni o bilateral) causas y exacerbación (trauma, sobreesfuerzo), dieta y estrés, valorar problemas extramamarios, cambio hormonal (embarazo, lactancia, tratamientos hormonales), cirugías recientes o prótesis mamarias. Tipos:

- Dolor cíclico (mastodinia): frecuente premenstrual, bilateral, agudo o punzante. 7-10 días antes de la regla en CSE, irradiación axilar, asociado a cambios hormonales, influye en relaciones sexuales, ejercicio, estrés.
- Dolor no cíclico (mastalgia): más frecuente unilateral, 40-50 años y localizado. Asociado a traumatismo previo, proceso inflamatorio o mastitis (puerperal o no), ectasia ductal, o adenosis esclerosante (nódulo doloroso). **Cáncer de mama < 2% (<0,5% si no hay masa asociada).**
- Dolor torácico extramamario: condrocostal, muscular, cutáneo, raquídeo o referido (esófago, cardíaco, pleural, biliar).

• SECRECIÓN MAMARIA:

- **BILATERAL: galactorrea fuera de embarazo:** Generalmente bilateral: valorar hipotiroidismo, IR o hepática, hiperprolactinemia.
- **UNILATERAL: NINGUNA.** Descartar malignidad.
 - Funcional (mastopatía fibroquística) serosa y escasa, generalmente a la presión.
 - Inflamatoria: galactoforitis (purulenta) o ectasia ductal (verde grisáceo).
 - Tumoral: espontánea, no asociada a trauma, sanguinolenta (telorragia) o clara y transparente (telorreya): benigna (papilomas, adenomas pezón), o maligna 5-8% sobre todo si se asocia a masa palpable.
- **TUMORACIÓN O BULTOMA:** considerar todo nódulo mamario de nuevo, persistente 2-3 semanas que no desaparece tras la menstruación. Criterios clínicos benignidad: 18-40 años, Nódulos elásticos, lisos, delimitados, móviles, 2-3 cm, No dolorosos. No retraen la piel ni el complejo areola-pezón. No adheridos. Pueden ser múltiples y bilaterales.

2. ¿Padece de alguna enfermedad -AP?- Tratamiento hormonal, AP quirúrgico o traumático, familiar, mamografía reciente. Orienta a causa no neoplásica.

Consejo telefónico

Medidas generales

- Explicar la posible causa. Tranquilizar al paciente. Consulta presencial con MAP/PAC/hospital, especialmente en mastalgias, secreciones unilaterales espontáneas y nódulos palpables o masas inflamatorias.

Medidas específicas

- Dolor mamario: sujetador de buen soporte y ajuste, evitar metilxantinas, tiraminas y tabaco; dieta baja en grasas y suplementos vit E, B1, B6, AINE orales o fármacos tópicos, valorar cambios de ANOV.
- Mastitis: en madres lactantes: reposo, aplicar compresas calientes antes de las tomas y frío después. Recolocar al lactante. Si en 24 h no hay mejoría, se recomendará tratamiento antibiótico.
 - Puerperal: cloxacilina 500 mg/6 horas/10 d, sin interrupción de lactancia, salvo para desbridar el absceso.
 - No puerperal: clindamicina 300 mg/6 h/10 d.

Respuesta desde CCUS-061

Derivación a Urgencias	AP	Visita domiciliaria
- Sospecha de absceso. - Mastitis con MEG o sospecha de sepsis	- Resto de patologías, incluida vía rápida ante sospecha de neo de mama	- Inmovilizados ante mastalgias, nódulos o secreción mamaria.

METRORRAGIA

Interrogatorio

1. **¿Podría estar embarazada?** Si es afirmativo, pasar a hemorragia gestacional.
2. **Descartar el origen de otros sangrados.** Rectal o urinario: si se confirma, pasaría al protocolo correspondiente de rectorragia o hematuria.
3. **¿Desde cuándo está sangrando y cuantía?** Número de compresas que ha manchado, manchado de ropa interior, puede orientar al volumen del sangrado.
4. **¿Presenta otros síntomas?:**

- **Datos de alarma, potencialmente grave:**

- Valoración del estado hemodinámico: palidez, sudoración, fría, alteraciones del comportamiento: orienta a hipovolemia (hemorragia severa).
- Valorar datos de abdomen agudo: embarazo ectópico.
- Traumatismo, cuerpo extraño o abuso sexual.
- Hemorragia moderada que precisa tratamiento
- Fiebre: EPI, infecciones, aborto retido.
- Alteraciones de la coagulación.

- **Sin datos de alarma: hemorragias leves:**

- Hemorragias en perimenopausia.
- Usuarias de DIU: frecuente la hipermenorrea. Riesgo de perforación uterina.
- Sospecha de interacciones farmacológicas: fenotiacidas, testosterona, corticoterapia, ACO, antidepresivos, tratamiento hormonal sustitutivo, hemodiálisis, metoclopramida, metildopa, hidantoinas, carbamacepina, penicilina y derivados.
- Usuarias de ACO tras tres meses de hemorragias intermenstruales leves (spotting). ANOV toma incorrecta, dosis estrogénicas bajas, patología intercurrente e interacciones farmacológicas, hemorragias por disrupción o intemestrualles
- Síntomas sugerentes de enfermedad orgánica.
- Neonatos con sangrado leve.

- **Valoración de la edad**

- Neonatos (por estimulación del endometrio por estrógenos placentarios).
- Niñas: descartar siempre lesión/agresión sexual. En premenarquia descartar pubertar precoz.
- Adolescentes: tras menarquia hay ciclos anovulatorios que pueden persistir hasta tres años.
- Mujeres en edad fértil: descartar embarazo y sus complicaciones (ectópico) es la causa más frecuente. <20% es funcional
- Perimenopausia: anovulación por folículos viejos, patología tumoral.
- Menopausia: descartar cáncer de endometrio.

Consejo telefónico

Medidas generales

- Tranquilizar a la paciente.

Medidas específicas:

- Si hay sangrado intenso o datos de bajo gasto, colocarla en posición de Trendelenburg.
- Si hay disminución de nivel de conciencia, colocarla en decúbito lateral izquierdo. Puerperal: cloxacilina 500 mg/6 horas/10 d, sin interrupción de lactancia, salvo para desbridar el absceso.
- No puerperal: clindamicina 300 mg/6 h/10 d.

Respuesta desde CCUS-061

Recurso medicalizado	Derivación a Urgencias	Derivación a AP	Visita a domicilio
<ul style="list-style-type: none">- Hemorragia masiva- Datos de bajo gasto- Disminución del nivel de conciencia- Datos de abdomen agudo- Focalidad neurológica	<ul style="list-style-type: none">- En general, hemorragia moderada que precise tratamiento.- Coagulopatía- Sospecha infección- Dolor abdominal concomitante	<ul style="list-style-type: none">- Hemorragia leve- Perimenopausia- Portadoras DIU- Spotting ACO- Sospecha de enfermedad orgánica	<ul style="list-style-type: none">- Pacientes cuya situación funcional o basal impida acudir a un centro sanitario

PARTO

Interrogatorio

1. **¿Cuándo fue la fecha de última regla y la fecha probable del parto?** Orienta a parto prematuro, a término o aborto.
2. **¿Nota contracciones, cómo son y cuánto duran?**
 - Inicio de parto: 2 contracciones cada 10 min.
 - Trabajo de parto: contracciones irregulares de entre 3 y 10 min.
3. **¿Nota pérdidas de líquido y coloración?** Descartar rotura de bolsa amniótica.
4. **¿Cree que ha expulsado el tapón musoco?** No es indicativo de parto inminente, pero lo aproxima.
5. **¿Nota movimientos fetales?** Orienta a la vitalidad fetal (generalmente es menor antes del parto).
6. **¿Presenta otros síntomas?**
 - Vómitos y/o diarrea: suelen aparecer durante el trabajo de parto y no revisten gravedad.
 - Fiebre: sugiere complicación.
7. **¿Padece alguna enfermedad -AP-?** Complicaciones previas (eclampsia, placenta previa), DM, medicaciones, drogas, enfermedades autoinmunes. GPAC. Orienta a diagnóstico o complicación previa.

Consejo telefónico

Medidas generales

1. **Mantener la calma** e intentar tranquilizar a la mujer.
2. **La posición no es importante.** Si la mujer no quiere moverse, no hay que obligarla. Si la mujer acepta moverse, sería aconsejable que se tumbase o sentase, puesto que es más sencillo ver la salida del bebé.
3. El único material que se necesita son unas **toallas secas**. Si pueden ser calientes, mejor.
4. Si se objetiva la salida del bebé **intentar frenarlo un poco para que no salga bruscamente, protegiéndolo con la palma de una mano**. No hacer episotomía.
5. Una vez que salga la cabeza, saldrá el resto del cuerpo en el siguiente pujo. **No forzar ni tirar, solo recibir al bebé.**
 - Se puede ver un sangrado antes, durante o después de la salida del bebé que es normal.
 - Todos los bebés salen cianóticos, es normal y poco a poco cogerán el color normal.
6. Una vez que sale el bebé, se debe colocar **encima de la madre en contacto piel con piel cubriéndolo con una toalla y secándolo suavemente para estimular el llanto**.
7. **No hace falta hacer nada con el cordón (ni cortar, ni tirar)**, una vez que llegue al hospital se cortará con material estéril. La salida de la placenta puede tardar hasta 30 min tras el nacimiento. Si sale, dejarla al lado de la madre. Una vez llegue al hospital o a la ambulancia se cortará.

Respuesta desde CCUS-061

Recurso medicalizado	Derivación a Urgencias
<ul style="list-style-type: none">- Período expulsivo- Complicaciones: parto pretérmino, hemorragia en posparto precoz, sospecha de shock hemorrágico, sospecha de rotura uterina, estado hipertensivo, distocia de hombros, malposición fetal o alteraciones del cordón.	<ul style="list-style-type: none">- Pérdida de líquido sin otros datos de parto.- Probable trabajo de parto, pero no parto inminente.

SÍNTOMAS MAMARIOS EN MUJER LACTANTE

Interrogatorio

1. **¿Cuándo ha dado a luz?** Entre los 3 y 5 primeros días, debemos pensar que pueda haber ingurgitación mamaria y no mastitis.
2. **¿Tiene dolor antes, durante o después de la toma?**
 - Antes: eyección brusca de leche.
 - Durante: mal agrarre o eyección brusca.
 - Despues: traumatismo del pezón por mal agarre, S de Raynaud.
3. **¿Cómo está el pezón?**
 - Se pone blanco inmediatamente tras la toma: S de Reynaud.
 - Tiene forma de pintalabios o está aplastado cuando lo suelta el bebé: indica mal agarre.
 - Tiene grietas: indica mal agarre.
 - Las grietas tienen secreción amarillenta: infección de la grieta.
 - Tiene una ampolla blanca: perla de leche.
 - Hay secreción oscura, marrón o rojiza a través del pezón: papiloma intraductal.
4. **¿Cómo está la mama?**
 - Roja y caliente unilateral: obstrucción de un conducto o mastitis (Dg dif: en mastitis hay fiebre).
 - Roja y caliente bilateral: ingurgitación mamaria.
5. **¿Qué aspecto tiene la leche?**
 - Color rosa: si tiene grietas, puede ser sangre y si no, valorar consumo de remolacha.
 - Color azulado o verdoso: variante de la normalidad.
6. **¿Tiene malestar general, fiebre?** Obstrucción de un conducto o mastitis.

Consejo telefónico

Medidas generales

- Continuar amamantando si es lo que desea. Si no es así, informar que los procesos inflamatorios de la mama no son el mejor momento para el abandono de la lactancia.
- Dar pautas para un agarre correcto.
- En todos los casos, derivar a su matrona o que contacte con una IBCLC (asesora de lactancia profesional).
- SIEMPRE: el dolor al amamantar tiene que ir acompañado de una valoración de la ingestión en el bebé.

Medidas específicas

- **Ingurgitación:** ibuprofeno, vaciado con extractor, a mano o con el bebé (previa aplicación de calor húmedo durante 1 min. masaje y presión inversa suavizante), frío tras la toma si le proporciona alivio.
- **Mastitis u obstrucción de conducto:** durante 24-48 h ibuprofeno, reposo físico, vaciado efectivo y frecuente (previa aplicación de calor húmedo 1 min y masaje), frío tras la toma si le proporciona alivio. Se le recordará que tras una mastitis puede haber disminución de la producción de leche durante semanas, que mejorará con sesiones intensivas de pecho.
- **Grietas:** lavado con agua y jabón, mantener secos los pezones y mejorar el agarre. Si presenta secreción amarillenta de varios días de evolución, se pautará Mupirocina pomada 4 veces/d/10 d.
- **Perlas de leche:** calor húmedo en el pezón antes de la toma y mejorar el agarre.
- **Si hay dolor muy intenso después de las tomas y el pezón se pone blanco,** sospechar S. Raynaud: evitar el tabaco y cafeína. Mejorar el agarre. Aplicar calor en el pezón inmediatamente después de la toma y valorar necesidad de tratamiento vasodilatador (Nifedipino).

Respuesta desde CCUS-061

Pasar a médico consultor	Derivación a centro de Urgencias	Derivación a su matrona o ginecólogo
- Si presenta fiebre	- Si no mejora la sintomatología tras 24-48 h de medidas específicas para mastitis, derivar para pauta de ATB, preferiblemente Cefadroxilo (mínimo 10 días)	- Si tras 3 días de tratamiento con Mupirocina no ha mejorado la grieta - Si hay secreción oscura, marrón o rojiza en el pezón

9. APARATO RESPIRATORIO

DISNEA

Interrogatorio

1. **¿Habla, contesta?** Si no habla, seguirá protocolo del inconsciente.
2. **¿Desde cuándo está así?**
 - Aguda: neumotórax, TEP, EAP, asma, edema glótis, inhalación de humos, ansiedad, atragantamiento.
 - Crónica: ICC, derrame pleural o pericárdico, bronquitis crónica, enfisema, obesidad, embarazo.
3. **¿Habla seguido o entrecortado? ¿Tiene ruidos sobreañadidos?** Indica severidad del cuadro.
4. **¿Coloración labial?** Cianosis, palidez: indica severidad del cuadro.
5. **¿Dolor torácico?**
 - Pleurítico: empeora al respirar. Neumotórax, neumonía, derrame pleural, TEP.
 - Opresivo: SCA con ICC o TEP. Valorar el protocolo de dolor torácico.
 - Fugaz, en varias localizaciones: perfil psicógeno.
6. **¿Ortopnea, DPN, nicturia, edemas?** Fallo cardíaco.
7. **¿Tos, sibilancias...?** Asma, EPOC, ICC.
8. **¿Fiebre, escalofríos, síntomas de vías respiratorias altas?** Perfil infeccioso.
9. **¿Crisis emocional, disestesias, temblor, palpitaciones?** Perfil ansioso.
10. **¿Uso de fármacos, drogas?** Enf. intersticial: amiodarona, bloqueantes, penicilina, sulfamidas, nitrofurantoína, quimioterápicos. EAP: heroína, metadona, hidroclorotiacida, contrastes, propoxifeno. Asma: AINES, bloqueantes, colinérgicos, penicilina, cefalosporinas.
11. **¿Padece de alguna enfermedad-AP-?** Asma, EPOC, cardiopatía, enf. neuromusculares, inmunosupresión, O₂ domiciliario.

Consejo telefónico

Medidas generales

- Tranquilizar al paciente y familiares, y colocar al paciente en posición semiincorporada.
- Evitar posibles precipitantes: humo, tabaco, polvo, polen, perfumes, fármacos, etc.
- Si tiene O₂ domiciliario se recomendará no variar el flujo de administración previo.

Medidas específicas

- Paciente **asmático**, con una crisis aguda, que relata como igual a la de otras ocasiones. Se le indicará que se coloque con el tronco elevado y, si es posible, sentado y con los brazos apoyados. Si dispone de inhaladores (simpaticomiméticos β₂) se le dirá que administre un par de inhalaciones. Si el paciente no es capaz de inhalar, se le puede indicar que utilice una cámara de inhalación o cámara casera.
- Si se sospecha **fallo cardíaco**, se le indicará que permanezca sentado y si es posible, con las piernas colgando.
- Si se sospecha **patología isquémica cardíaca**, se recomendará permanecer sentado y en reposo. Al mismo tiempo se indicará la administración de nitroglicerina sublingual y medio comprimido de aspirina.
- Ante disnea tras **traumatismo torácico**, se recomendará colocar al paciente con el tronco elevado, indicando que sea movilizado lo menos posible.
- Si sospecha **hiperventilación psicógena**, se le recomendará que respire su propio aire en una bolsa.

Respuesta desde CCUS-061

Recurso medicalizado	Derivación a Urgencias	Visita a domicilio
<ul style="list-style-type: none">- Paciente con patología crónica reagudizada de comienzo agudo o subagudo y que impresiona de gravedad.- Crisis asmática que no mejora con medicación habitual- Paciente con disnea y dolor torácico opresivo- Paciente con disnea y alteración del estado de conciencia- Paciente con sospecha de atragantamiento	<ul style="list-style-type: none">- Paciente con disnea psicógena que no mejora con las medidas indicadas- Crisis asmática que no mejora con medicación habitual- Paciente con patología crónica (no terminal) reagudizada de varias horas de evolución y sin mejoría significativa.	<ul style="list-style-type: none">- Adultos en los que no es posible la derivación.- Ancianos cuya situación funcional o basal dificulta su movilización- Negativa de la familia o el paciente al traslado pese a las recomendaciones de CCUS y cuya patología aconseje ser vista por un médico

HEMOPTISIS

Interrogatorio

1. ¿Desde cuándo tiene el sangrado?

- Es el primer episodio: infecciones respiratorias, neoplasias, TEP, traumatismos...
- Episodios recurrentes filiados previamente: BT, aspergiloma, bronquitis crónica...

2. ¿Cuál es la cantidad del sangrado?

- Más de 200 cc/día aprox o más de 150 cc/hora (1 vaso de agua) o compromiso respiratorio: hemoptisis amenazante.

3. ¿Cómo es el sangrado? (distinguirlo de otros como epixtasis, lesión oral, hematemesis)

- Precedido de tos, disnea, dolor torácico: orienta a hemoptisis.
- Sangrado nasal previo: orienta a epistaxis. Pasar a protocolo específico.
- Lesiones orales, patología dental, dolor de garganta: orienta a sangrado oral o de VAS.
- Precedido de náuseas, vómitos, molestias abdominales, ap de ulcus: orienta a hematemesis.
- Color marronáceo con restos de comida, posos de café: orienta a hematemesis. Pasar a su protocolo.

4. ¿Cómo es el esputo?

- Hemorragia franca, roja brillante, sin mucosidad: TEP, BT, TB, estenosis mitral.
- Teñido con estrias sanguinolentas: bronquitis cónica, neo broncopulmonar, BT.
- Purulento mezclado con sangre: neumonía, absceso de pulmón, BT.
- Espumoso, rosado: EAP.

5. ¿Presenta otros síntomas?:

- Palidez, sudoración fría, alteraciones del comportamiento: orienta a hipovolemia (hemorragia severa).
- Tos, disnea, dolor torácico, espectoración, fiebre, sudoración nocturna: EPOC, infección pulmonar, absceso pulmonar.
- Náuseas o vómitos: orienta a hematemesis.

6. ¿Padece alguna enfermedad -AP-? Orientan a patología previa.

- Patología cardiovascular: insuficiencia cardíaca izquierda, estenosis mitral.
- Patología broncopulmonar: TB, BCO, BT, tumores.
- Patología renal: Goodpasture, Wegener.
- Patología hematológica: dietesis hemorrágica, tratamiento con ACO, antiagregantes.
- Factores ambientales: tabaquismo, antecedentes laborales (cantero, minero, cuidadores de animales..), drogas (embolismo séptico), inmovilización prolongada, trauma/cirugía torácica reciente.

Consejo telefónico

Medidas generales

- Tranquilizar al paciente y familiares.
- Reposo absoluto tanto físico como mental, incluso se recomienda no hablar.
- Colocar al paciente en posición semisentada, respirar acompasadamente y evitar o aguantar la tos.
- Si conoce la localización de la patología previa pulmonar (BT, tumores...) acostarse sobre ese lado.
- Si es posible, recoger en un recipiente toda la expectoración para valorar y cuantificar.

Medidas específicas

- Si está estable y solo: dejar la puerta abierta del domicilio, permanecer sentado en el suelo (si está solo) con la espalda apoyada en la pared y aflojar la ropa.
- Si el paciente presenta signos de inestabilidad hemodinámica: PLS.
- Si es un paciente paliativo en el que no están indicadas medidas de reanimación, sí indicará poner sábanas y toallas oscuras, medidas de confort y manejo de medicación si está indicada por HADO (cloruro mórfico, midazolam, haloperidol...).

Respuesta desde CCUS-061

Recurso medicalizado	Derivación a Urgencias	Visita a domicilio
- Signos de hipovolemia - Inestabilidad hemodinámica - Alteración de la conciencia - Disnea - Hemoptisis amenazante	- Sangrado único de poco volumen y el paciente es colaborador y sin signos de hipovolemia ni aparente inestabilidad hemodinámica - Alteraciones de la coagulación - Cirugía o traumatismo torácico reciente - Fiebre	- Paciente paliativo en el que no están indicadas medidas de reanimación

TOS

Interrogatorio

1. ¿Desde cuándo?

- Días-1 mes: infección aguda, laringotraqueobronquitis víricas, inhalación de sustancias irritantes, cuerpo extraño.
- > 4 semanas: infección por mycoplasma. Procesos con tendencia a cronificarse como TB, tumores pulmonares.
- Años: asmáticos, fumadores, bronquitis crónica, BT.

2. ¿Cómo es la tos?

- No productiva: estímulos irritantes, TB e insuficiencia cardíaca (DPN: nocturna más frecuente) en estadios iniciales, compresión extrínseca traqueal, fibrosis pulmonar, ansiedad, irritación del conducto auditivo externo o timpánica (cerumen, cuerpo extraño, etc.), asma, tratamiento con IECA.
- Productiva: esputo claro (infección vírica, estímulos irritantes, algún caso de carcinoma). Verdoso o amarillo (infección pulmonar o traqueobronquial). Rosada, espumoso (EAP), hilitos de sangre (BT, TB, neopulmonar, infarto pulmonar), sanguinolento (TB, neopulmonar, infarto pulmonar).
- Perruna que empeora al acostarse: laringitis.
- Breve, repetitiva: de VAS.

3. ¿Cuándo aparece la tos?

- Nocturna: sinusitis, asma, RGE, IC.
- Desaparece por la noche: psicógena.
- Al levantarse: goteo nasal posterior, EPOC o bronquitis crónica.
- Diurna y nocturna: tratamiento con IECA.
- Estacionalidad: asma.
- Tras comidas: RGE.

4. ¿Padece de alguna enfermedad -AP-? Tabaquismo activo/pasivo, tto con IECA, alergias, RGE, exposición ambiental o laboral.

Consejo telefónico

Medidas generales

- Se respirará en un ambiente húmedo: humidificador, vapor de agua, etc., (sin añadirle eucalipto u otras sustancias, ya que en ocasiones llega a ser irritante).
- Se evitará el aire acondicionado.
- Si la tos es seca e irritativa, se pueden recomendar fármacos antitusivos (en pacientes jóvenes sin patología previa): dextrometorfano a la dosis de 15 mg, 4 veces al día. Codeína, a la dosis de 15 mg, 4 veces al día. Este fármaco no lo recomendaremos telefónicamente en pacientes con tos y dificultad respiratoria, ya que puede producir un cuadro de depresión respiratoria.

Medidas específicas

- Si la causa es la reactividad bronquial, suele responder al tratamiento con broncodilatadores inhalados.
- Si la causa es por agentes exógenos (productos de limpieza, animales, humo del tabaco, etc.), se recomendará evitar la exposición a la misma.
- Si la sospecha es por IC, colocar al paciente en posición semiincorporada.
- Si RGE, cambios estilo de vida y medidas antiRGE.

Respuesta desde CCUS-061

Derivación a consulta ambulatoria	Derivación a Urgencias	Visita a domicilio
<ul style="list-style-type: none">- Tos asociada a pérdida de peso importante en las últimas fechas- Tos asociada a ronquera de larga evolución- Tos asociada a sudoración nocturna y febrícula- Tos durante todo el día, de semanas de evolución sin diagnosticar	<ul style="list-style-type: none">- Tos con ruidos respiratorios sobreañadidos.- Tos con fiebre, artromialgias y escalofríos, que no remite tras consejo telefónico- Por inhalación de sustancias irritantes y que no remite tras la supresión del agente causal- Cardiópata con tos irritante, espasmódica que mejora al incorporarlo- Tos con expectoración sanguinolenta	<ul style="list-style-type: none">- Adultos en los que no es posible la derivación- Ancianos cuya situación funcional o basal dificulta su movilización

10. SISTEMA NERVIOSO

CEFALEA

Interrogatorio

- 1. ¿Desde cuándo tiene el dolor?**
 - Agudo (minutos a 1 h): hemorragia subaracnoidea, hematoma epidural, glaucoma agudo.
 - Paulatino (días, semanas): irritación meníngea, arteritis de la temporal, tensional, lesión expansiva intracraneal.
- 2. ¿Cómo es la intensidad del dolor? (Signos de alarma)**
 - Es el peor dolor de cabeza de su vida.
 - El dolor le despierta por la noche o le impide moverse.
 - Le produce agitación o somnolencia.
 - Es diferente al de otras ocasiones: mayor intensidad, frecuencia o no mejora con analgesia.
- 3. ¿Dónde localiza el dolor?** Occipital-cuello (tensional, patología cervical), cara y oido (patología ORL, meningitis), hemicraneal (migrana), frontal-ocular (cefalea en racimos, patología oftalmológica).
- 4. ¿Síntomas acompañantes?**
 - Fiebre, mialgias: la cefalea suele acompañar a muchos procesos febriles banales. Considerar meningitis, arteritis de la temporal.
 - Náuseas y vómitos: persistentes desde el inicio puede orientar a gravedad (migrana, hemorragia subaracnoidea).
 - Alteraciones de la visión, ojo rojo: tumores, neuropatía diabética, aneurismas, arteritis temporal, glaucoma agudo.
- 5. ¿Padece de algo -AP-?**
 - TCE previos, sobre todo en pacientes anticoagulados.
 - Neoplasia: descartar expansión tumoral.
 - Cirugía craneal previa: descartar meningitis, descartar patología ORL.
 - Fármacos: vasodilatadores cerebrales, antihistamínicos H₂, simpáticomiméticos, corticoides, anticonceptivos y estrógenos, anfetaminas. El abuso de analgésicos puede perpetuar la cefalea.

Consejo telefónico

Medidas generales

- Reposo en lugar oscuro y sin ruido. Colocar paños húmedos en la frente.
- Evitar desencadenantes: trasnochar, alcohol, estrés, insolación.

Medidas específicas (se iniciarán lo antes posible)

- Paracetamol (de elección desde CCUS). Adulto 650mg/6-8 h. Niños 15 mg/kg/6 h.
- Ibuprofeno: adulto 400-600/6-8 h. Niños 7-10 mg/kg/8 h.
- Metamizol: adulto 1 o 2 caps/6-8 h. Niños 10 mg/kg/6-8 h (1 ml=20 gotas) (1 gota=25 mg).

Respuesta desde CCUS-061

Recurso medicalizado	Derivación a Urgencias	Visita a domicilio
- Cefalea brusca y/o acompañada de alteración del nivel de conciencia	- Cefalea con signos de alarma	- Ancianos o paliativos cuya situación funcional o basal desaconseja su movilización

COMA-ESTUPOR

Interrogatorio

1. **Verificar inconsciencia:** abre los ojos, habla, se mueve.
2. **¿Respira o no?** Paciente que no respira: pasar a protocolo de PCR.
3. **¿Cuánto tiempo lleva así?** Orienta a la actitud terapéutica y respuesta desde la CCUS.
4. **¿Ha sufrido un traumatismo previo?** Si hay TCE/accidente/precipitado/agresión: presuponer lesión cervical.
5. **¿Tiene algún síntoma acompañante?**
 - Movimientos tónico-clónicos, espumación bucal, incontinencia de orina: crisis epiléptica.
 - Presenta focalidad neurológica: ICTUS (los isquémicos no suelen asociar disminución de conciencia, los hemorrágicos sí).
 - Presentó dolor torácico opresivo previo: SCA, arritmias, fallo cardíaco...
 - Presentó disnea, tos, sibilancias, somnolencia: encefalopatía hipercápnica (reagudización EPOC).
 - Tenía fiebre: meningitis, encefalitis o descartar otros procesos sépticos.
 - Ansiedad, hiperventilación, parestesias bucales: crisis de ansiedad, trastorno conversivo.
6. **Valoración del entorno:** domicilio (autolisis pastillas), bar (intoxicación etílica, drogas, jeringuillas), industria (tóxicos industriales). Humo combustión, motor en marcha (sospecha intox por CO), intemperie o ahogamiento (hipotermia). Señales de violencia, armas.
7. **¿Padece alguna enfermedad -AP-?** Orientan a una causa específica: DM, cardiopatía, broncopatía, hepatopatía, IRC, epilepsia, intentos autolíticos previos o adicciones. Neoplasias u otras enfermedades avanzadas, vida basal previa.

Consejo telefónico

Medidas generales

- PLS y retirar la dentadura. Aflojar la ropa apretada en el tórax y el cuello. Vigilar ABC.

Medidas específicas

- Si sospecha de PCR reciente, se indicará RCP.
- Si sospecha de hipoglucemia: aportar azúcar, miel en el labio inferior. Si es posible, solicitar glucemia capilar.
- Si TCE, presuponer lesión cervical: no mover al paciente.
- Si sospecha de convulsión, se recomienda no sujetar al paciente, separar los objetos que tenga alrededor y colocar en PLS.
- En caso de incendio o intoxicación por CO, ventilar el lugar y retirar a la víctima al exterior.
- Si sospecha hipotermia, abrigar al paciente.
- Si sospecha de neoplasias u otras enfermedades avanzadas, se valorará si se inicia la RCP.

Respuesta desde CCUS-061

Recurso medicalizado	Derivación a Urgencias	Visita a domicilio
<ul style="list-style-type: none">- Todo paciente en coma constatado- Paciente recuperado pero persiste la sintomatología (dolor torácico, disnea, cortejo vegetativo, desorientación, agitación, o tóxicos en sangre)	<ul style="list-style-type: none">- Solamente en paciente totalmente recuperado y que por proximidad es más rápido el traslado por medios propios, con algún familiar.	<ul style="list-style-type: none">- Ancianos o paliativos cuya situación funcional o basal desaconseja su movilización

ICTUS

Interrogatorio

1. **¿Está consciente?** Habla y se le entiende, abre los ojos: valorar el protocolo de coma y estupor.
2. **¿Respira? ¿Cómo? ¿Ruidos respiratorios? ¿Fatiga al hablar? ¿Cianosis?** Valorar el protocolo de disnea.
3. **¿Está de pie, sentado, acostado? ¿Se aguanta de pie sin ayuda? ¿Puede mover las extremidades?** Valorar localización grosera del ictus.
4. **¿Desvía la comisura bucal?** Pensar en ictus, no descartar parálisis facial.
5. **¿Desvía la mirada?** Ictus, lesión ocupante de espacio cerebral.
6. **¿Tiene dificultad para hablar? (afasia, disartria)** Orienta a ictus.
7. **¿Pérdida de visión? ¿Mirada fija, dirige la mirada, les mira?** Orienta a ictus.
8. **¿Desde cuándo está así?** Si es menor de 6 horas, valorar código ictus.
9. **¿Padece de alguna enfermedad -AP-?**
 - HTA, cardiopatías, DM, DLP: factores de riesgo para sufrir un ictus.
 - Tratamiento con antiagregantes o ACO: orienta a ictus hemorrágico.

Consejo telefónico

Medidas generales

- Tranquilizar a la familia, explicándoles la sospecha médica y la decisión médica.
- PLS si hay náuseas o vómitos, si no, tumbado semiincorporado a 30°.
- Retirar las prótesis dentales.
- Si convulsiona: retirar los objetos de alrededor, no sujetarle y al finalizar, PLS sobre el lado izquierdo.

Medidas específicas:

valorar la inclusión en el código ictus.

- Edad: mayor de 18 años.
- Existencia de déficit neurológico agudo, focal y objetivable.
- Situación previa al episodio: independiente para las ABVD.
- Exactitud de la hora de inicio: posibilidad de llegar al hospital 1 h antes (tiempo que se necesita para el protocolo hospitalario) de la ventana terapéutica para la realización de fibrinólisis intravenosa (4 h y media) o trombectomía mecánica (6 h).
- Preaviso hospitalario: si va en ASVB, a Urgencias y si va en USVA, al teléfono del neurólogo.

Respuesta desde CCUS-061

Recurso medicalizado	Derivación a Urgencias en ambulancia	Visita a domicilio
<ul style="list-style-type: none">- Inconsciencia con Glasgow indicativo de intubación orotraqueal- Inestabilidad hemodinámica- Estuporoso con cefalea previa de inicio brusco o vómitos o rigidez de nuca	<ul style="list-style-type: none">- Siempre que no exista inestabilidad para el traslado	<ul style="list-style-type: none">- Paciente que la familia no acepta derivación- Paciente encamado o terminal o con varios episodios de ictus

11. PATOLOGÍA OFTALMOLÓGICA Y ANEJOS

LESIONES OFTALMOLÓGICAS

Interrogatorio

1. ¿Nota disminución de la visión? ¿Desde cuándo?

- Brusca: glaucoma agudo y uveítis, oclusión arterial retiniana (indolora), perforación ocular (hipotonía globo ocular, alteración pupilar), hemorragia vítreo (visión de puntos negros), desprendimiento de retina (fotopsias o miodesopsias).
- Paulatina: oclusión venosa retiniana, uveitis posterior, hemorragia vítreo, neuritis óptica (dolor retrobulbar al mover el ojo).

2. ¿Tiene dolor ocular? Glaucoma agudo (fotofobia, vómitos, midriasis, cortejo vegetativo), queratitis, escleritis, uveitis, dacriocistitis aguda, orzuelo (palpebral), neuritis óptica.

3. ¿Tiene el ojo rojo? Glaucoma, queratitis, epiescleritis, conjuntivitis, uveitis.

4. ¿Tiene otros síntomas oculares?

- Picor, lagrimeo: conjuntivitis, ojo seco, blefaritis.
- Sensación de arena: conjuntivitis, queratitis, epiescleritis, glaucoma, uveitis. Descartar traumatismo o cuerpo extraño intraocular.
- Fotofobia, traumatismo previo, estuvo soldando, exposición solar: quemadura térmica, Queratoconjuntivitis actínica (suele ser bilateral), abrasiones oculares.
- ¿Se le ha metido algo en el ojo? Cuerpos extraños intraoculares.
- Valorar el tamaño las pupilas? Midriasis (glaucoma), miosis (uveitis y epiescleritis), normal (resto de patología).
- Visión doble: patología del cristalino (catarata, luxación), patología del SNC (EM, migraña gravis)....

5. ¿Presenta otros síntomas generales?

- Fiebre, artralgias, náuseas, dolor abdominal, sangre en heces: EII, conetivopatías, vasculitis.

6. ¿Padece de alguna enfermedad-AP-? Puede orientar a descompensación de patología previas: DM, HTA, conectivopatías.

Consejo telefónico

Medidas específicas

- Ante ojo rojo:
 - Sospecha de conjuntivitis aplicación de gasas embebidas en agua de manzanilla o lágrimas artificiales a demanda.
 - Otros casos de ojo rojo: oclusión ocular.
- Ante cuerpo extraño ocular, oclusión ocular, al menos se usarán gafas de sol.
- Si hay contacto ocular con cualquier sustancia, incluyendo sosa caustica, se debe irrigar con agua durante 20-30 min.
- Ante pérdida de agudeza visual, se aconsejará evitar esfuerzos y bajar la cabeza.

Respuesta desde CCUS-061

Derivación a AP	Derivación a Urgencias	Visita a domicilio
<ul style="list-style-type: none">- Conjuntivitis- Patología palpebral- Ojo rojo sin patología asociada	<ul style="list-style-type: none">- Sospecha de cuerpo extraño intraocular- Ojo rojo con síntomas asociados- Cualquier pérdida de visión- Presencia de dolor ocular asociado a síntomas oculares o sistémicos	<ul style="list-style-type: none">- Pacientes con pluripatología, encamados y que precisan valoración urgente

LESIONES PALPEBRALES

Interrogatorio

1. **¿Desde cuándo está así y si le había ocurrido anteriormente?** Orienta a patología previa.
2. **¿En dónde se localizan de las lesiones?**
 - En borde palpebral: verruga viral (pediculada), orzuelo, chalazón, blefaritis, queratosis seborreica.
 - Superficie del párpado: dermatitis de contacto (edema, eritema, hiperemia conjuntival y secreción acuosa), xantelasma (suele ser bilateral), hemorragia palpebral (de causa sistémica o por traumatismo), enfisema (crepitación a la palpación).
 - Estructuras vecinas: órbita (celulitis, periostitis), globo ocular (úlcera corneal, conjuntivitis, panoftalmitis), cavidad craneal (sinusitis, trombosis seno cavernoso).
3. **¿Hay algún factor desencadenante?** Si hay contacto o exposición a alérgenos (dermatitis contacto), ingesta de fármacos (penicilinas, AINE, IECA...), traumatismos.
4. **¿Tiene alterada la posición de los párpados?**
 - **Ectropion:** produce lagrimeo y conjuntivitis crónica.
 - **Entropion:** produce queratitis, lagrimeo y úlceras corneales.
 - **Ptosis:**
 - Bilateral: se asocia con miastenia gravis, distrofias miotónicas o seniles.
 - Unilateral: etiología traumática (frecuentemente en usuarios de lentes de contacto) o neurogénica.
 - **Lagoftalmos:** produce queratitis por exposición.
 - **Blefarospasmo:** puede ser por un reflejo irritativo (conjuntivitis, cuerpo extraño) o causas idiopáticas, (bilateral, desaparece durante el sueño y puede acompañarse de movimientos bucofaciales o de cabeza).
5. **¿Tiene afectación lagrimal?**
 - Dacrioadenitis: tumefacción en la zona del reborde orbitario temporal superior. Causas inflamatorias, infecciosas o tumorales.
 - Daciocistitis aguda: localizada en saco lagrimal. Puede producir síntomas sépticos generales. El pus puede evacuarse al saco conjuntival, a la nariz o más frecuentemente fistulizar la piel directamente.
 - Obstrucción del conducto lagrimal del recién nacido: epífora crónica. La resolución espontánea es frecuente, pero si no ocurre así debe instaurarse tratamiento precoz.
6. **¿Padece alguna enfermedad -AP-?** Enfermedades oftalmológicas previas (reagudizaciones), alteraciones de la coagulación, alergias conocidas, usuario de lentes de contacto.

Consejo telefónico

Medidas específicas

- Blefaritis: limpieza diaria de bordes palpebrales con jabones neutros suaves y lágrimas artificiales. Se puede aplicar una pomada con tetraciclinas en casos resistentes.
- Dermatitis por contacto: evitar el alérgeno y aplicar compresas con agua fría, corticoides de baja potencia en párpado (2 veces/día durante 4 o 5 días) y lágrimas artificiales si hay afectación conjuntival.
- Orzuelo/Chalazón: ungüento combinado con antibiótico y corticoide 3 veces al día y aplicación local de compresas calientes secas.
- Lagoftalmos: aplicación de lágrimas artificiales frecuentemente y oclusión ocular nocturna con lágrimas artificiales tipo gel.
- Daciocistitis aguda: aplicación de calor húmedo local y antibióticos de amplio espectro por la vía local y sistémica.
- Obstrucción del conducto lagrimal del recién nacido: masaje sobre el saco, acompañado de antibióticos tópicos.
- Enfisema: el tratamiento es conservador, se deben evitar las maniobras de valsalva.
- Hemorragia palpebral: frío local.

Respuesta desde CCUS-061

Recurso medicalizado	Derivación a Urgencias	Visita a domicilio	Derivación a AP
- Reacción anafiláctica	<ul style="list-style-type: none">- Enrojecimiento ocular grave, fotofobia o dolor ocular- Déficit visual- Mal control de los síntomas- Celulitis preseptal	<ul style="list-style-type: none">- Sintomatología del apartado anterior en pacientes con circunstancias basales que impiden la movilización del mismo	<ul style="list-style-type: none">- Ptosis palpebral con el fin de alcanzar el diagnóstico etiológico- Ptologías recidivantes o falta de respuesta al tratamiento

12. APARATO AUDITIVO

EPÍSTAXIS

Interrogatorio

1. ¿Cuándo se ha producido el sangrado por la nariz?

- Es el primero: rascado de fosas nasales, infecciones VAS (sinusitis, resfriado), cuerpo extraño.
- Otros sangrados y cuándo se han producido: puede orientar a patología previa.

2. ¿Es muy abundante? Si es afirmativo, orienta a indicar consejo telefónico antes de continuar con el interrogatorio clínico telefónico.

3. ¿Cómo se ha producido? Traumatismos, cuerpos extraños, factores ambientales (sequedad, calor).

4. ¿Tiene otros síntomas asociados?

- Palidez, sudoración, mareo: cuadro vagal.
- Cefalea: crisis hipertensiva, infecciones de VAS.

5. AP:

- HTA.
- Fármacos/drogas: abuso de fármacos intranasales, toma de antiagregantes o ACO, drogas.
- Enfermedades sistémicas: hematológicas (coagulopatías, leucemias..).
- Oxígenoterapia.
- Patología tumoral: pólipos nasales, angiofibromas, tumor de cavum.

Consejo telefónico

Medidas generales

- No echar nunca la cabeza hacia atrás, siempre hacia delante, mirando a los pies.
- Presionar durante 5-10 min con el pulgar e índice. Respirar por la boca tranquilamente.
- Se indicará la posición de sedestación para evitar el mareo, nunca acostado.
- Frío local.
- No sonarse para no eliminar los restos de posibles coágulos.
- Evitar el ejercicio y pesos en las horas siguientes.
- Si tras la presión continúa sangrado, se indicará taponamiento compresivo con una gasa (no algodón) impregnada en agua oxigenada, siempre y cuando no existan problemas asociados (cirugía reciente, traumatismos o la presencia de un cuerpo extraño).

Medidas específicas

- Si hay cefalea, mareo, palidez, o HTA, tomar una PA si tiene un esfingomanómetro disponible.
- Si hay posibilidad de perforación septal, no taponar, solo presionar.

Respuesta desde CCUS-061

Recurso medicalizado	Derivación a Urgencias	Visita a domicilio
- Paciente con sospecha de inestabilidad hemodinámica por el volumen de sangrado	<ul style="list-style-type: none">- Si la hemorragia no cede tras el taponamiento- Coagulopatías o tratamiento anticoagulante- Palidez, palpitaciones- Crisis HTA- Alteración del nivel de conciencia- Traumatismos nasales o craneales- Epistaxis recurrentes en 48 horas- Sospecha de cuerpo extraño	<ul style="list-style-type: none">- Encamados/paliativos sin destreza de taponamiento

MAREO Y VÉRTIGO

Interrogatorio

1. **¿Habla, contesta, abre los ojos?** Descartar cuadro sincopal, hipotensión ortostática, bajo gasto cardíaco, hiperventilación.
2. **¿Cómo es el mareo?** ¿Tiene sensación de movimiento o giro de objetos?
3. **¿Desde cuándo está mareado?**
 - Brusco: VPP, neuronitis vestibular, laberintitis, TCE reciente.
 - Insidioso: insuficiencia vertebrobiliar, patología cerebelosa, esclerosis múltiple, cervicoartrosis, migraña basilar, tumores de la fosa posterior, otoesclerosis.
4. **¿Síntomas acompañantes?**
 - Pérdida de fuerza de alguna extremidad, alteraciones del habla: descartar focalidad neurológica.
 - Dolor torácico: pasar al protocolo correspondiente.
 - Le cuesta respirar: pasar al protocolo correspondiente.
 - Náuseas, vómitos, sudoración profusa, palidez: VPP, neuronitis vestibular, migraña basilar.
 - Acúfenos: vértigo.
 - Dolor de cabeza: valorar pasar al protocolo de cefalea.
 - Fiebre: procesos infecciosos.
 - Disestesias, ansiedad, cefalea tensional: vértigo psicógeno.
5. **¿Padece de alguna enfermedad -AP?**
 - Patologías crónicas: HTA, DM, ortostatismo, patología ORL, cardiopatías, ansiedad.
 - Fármacos: diuréticos, AINE (tramadol, indometacina, ibuprofeno), sedantes (diazepam...), citotóxicos, drogas (alcohol, cocaína, cannabis).
 - TCE o cirugía en días previos.
 - Episodios previos: orienta a patología previa.

Consejo telefónico

Medidas generales

- Permanecer en posición acostada, intentar respirar despacio, aflojar la ropa y elevar las piernas.
- Medición de la presión arterial si es posible.

Medidas específicas

- Si es un cuadro vertiginoso claro, similar al de otras ocasiones, se puede indicar la toma de medicación que el paciente tenga en el domicilio, la haya tomado en otras ocasiones y le haya sentado bien (betahistina, sulpirida...).
- Si se sospecha un cuadro ansioso, se puede indicar la toma de medicación que el paciente tenga en el domicilio, la haya tomado en otras ocasiones y le haya sentado bien (alprazolam, lorazepam....).

Respuesta desde CCUS-061

Derivación a Urgencias	Visita a domicilio
<ul style="list-style-type: none">- Otalgia intensa que no se atenúa con analgesia- Otalgia con síntomas locales y/o generales	<ul style="list-style-type: none">- Otalgia acompañada de síntomas de alarma (fiebre alta, ampollas CAE, parálisis facial) e imposibilidad de movilización.

OTALGIA

Interrogatorio

1. ¿Desde cuándo lo tiene y cómo ha empezado?

- Agudo: otitis aguda, petrositis, patología dental.
- Crónico: patología ATM, tumores, colesteatoma, aneurismas, Menière, herpes zóster.

2. ¿En dónde localiza el dolor?

- Unilateral: procesos infecciosos, cuerpos extraños, Menière, neurinoma, tumores, colesteatoma, herpes, traumatismos.
- Bilateral: trauma acústico, lesiones de la ATM, bruxismo.

3. ¿Tiene otros síntomas locales?:

- Supuración: OE, colesteatoma, otitis media perforada, mastoiditis.
- Acúfenos: cierre tubárico, OMA, Menière, HTA, trauma acústico.
- Ampollas en el CAE: herpes zóster.
- Dolor con presión en trago/mastoides: OE, OMA, mastoiditis.

4. Valorar síntomas generales:

- Fiebre: OMA, mastoiditis.
- Vértigo: Menière, neurinoma.
- Dolor en otra zona: patología dental/ATM, bruxismo.
- Focalidad neurológica: neurinoma, tumores.
- Parálisis facial: posible otitis para la descompresión urgente.

5. AP: cuadro catarral (OMA), OMA (petrositis/mastoiditis), trauma bucal o maxilar (lesión de la ATM), exposición a factores externos (trauma acústico, barotrauma) herpes zóster (neuralgia), pérdida de audición no brusca (neurinoma, patología de oído interno o tubárica, tumores).

Consejo telefónico

Medidas generales

- Si hay otalgia aislada, pautar analgesia oral.
- Evitar la humedad en los oídos.
- Si se acompaña de otros síntomas, valoración y recomendaciones adecuadas a cada unos de ellos.
- Vigilancia de aparición de síntomas locales o generales acompañantes.
- Si hay sospecha de cuerpos extraños, evitar la manipular el conducto auditivo.

Respuesta desde CCUS-061

Recurso medicalizado	Derivación a Urgencias	Visita a domicilio
- Pérdida de conciencia - Emergencia hipertensiva	- Paciente oncológico - Hipertensión mal controlada - Inestabilidad hemodinámica - Vómitos incohérebles	- Paciente encamado - Paciente muy afectado y que no acepta o no tolera traslado

13. PROBLEMAS PSICOLÓGICOS

ALTERACIONES DE LA CONDUCTA

Interrogatorio

1. ¿Desde cuándo está así?

- Brusco: generalmente patología orgánica (infecciones SNC, TCE, hipoglucemia, hipoxia, abstinencia o intoxicación drogas, HIC, epilepsia), pero no descarta patología psiquiátrica.
- Paulatino: valorar alteración respiratoria, cardiovascular, temperatura, traumatismos, convulsiones, focalidad neurológica, en caso de alteración ir a protocolo específico.

2. ¿Sabe en dónde está, reconoce a los familiares, fecha actual? Valorar la orientación. Si alteración: valorar demencia, delirium, trastornos disociativos.

3. ¿Presenta ansiedad, tristeza o llanto, euforia, irritabilidad? Valorar trastornos afectivos, ansiedad, depresión o cuadros de manía y/o psicosis.

4. ¿Está agresivo? Auto/heteroagresividad. Criterio de riesgo. Orienta a dificultad de autocontrol.

5. ¿Presenta alucinaciones o delirio? Valorar la estructura del pensamiento. Valorar cuadro de psicóticos, esquizofrenia, epilepsia, consumo de tóxicos, fármacos o patología orgánica.

- Si presenta alucinaciones: auditivas orienta a patología psiquiátrica. Visuales, olfativas, gustativas orientan a patología orgánica y somatosensoriales orientan a patología orgánica más frecuentemente.

6. Presenta disestesias, formicación. Valorar trastornos de ansiedad, delirium tremens, intoxicaciones.

7. ¿Presenta otros síntomas ?

- Fiebre: cuadros infecciosos (si fiebre elevada, valorar manchas cutáneas).
- Dolor torácico: pinchazos (ansiedad, duelo). Se valorará pasar a protocolo de dolor torácico.
- Dificultad respiratoria: taquipnea (ansiedad, duelo). Se valorará pasar a protocolo de disnea.

8. ¿Padece de alguna enfermedad -AP?- Puede orientarnos la patología previa (deterioro cognitivo) o los desencadenantes situacionales.

Consejo telefónico

Medidas generales

- Actitud y entorno tranquilizador. Mantener la calma. Apoyo al paciente.
- Si hay disminución de nivel de conciencia, se recomendará colocar al paciente en PLS.

Medidas específicas

- Demencia, delirium: habitación con luz, puntos de referencia. Reajuste de medicación de rescate.
- Trastornos disociativos: entorno de apoyo, estrategias de recuperación de memoria.
- Trastornos de ansiedad: maniobras de relajación, ventilación de aire espirado. Alprazolam si, si lo tiene en el domicilio y lo ha tomado en otras ocasiones.
- Depresión: soporte psicológico, contacto con familiares.
- Duelo: psicoterapia de "ventilación".
- Manía, psicosis, esquizofrenia: no discutir el contenido del pensamiento ni percepción, disminuir el estrés ambiental, actuar sobre la familia. Valorar el reajuste de medicación en la crisis.
- Convulsiones: evitar golpes, no meter nada en la boca, PLS en cuanto sea posible.
- Intoxicaciones: si hay agitación, tratamiento sintomático (haloperidol o BZD).
- Delirium tremens: actitud y entorno tranquilizador. BZD.

Respuesta desde CCUS-061

Emergencia	Derivación a Urgencias	Derivación a AP	Visita a domicilio
<ul style="list-style-type: none">- Alt de conducta que sugiera pat orgánica grave- Alt nivel de conciencia- Cortejo vegetativo- Dificultad respiratoria- Manchas en la piel de aparición brusca- Sospecha intoxicación grave- Convulsiones- Traumatismo previo- Delirium tremens	<ul style="list-style-type: none">- Jóvenes, adultos o ancianos si no lo impide circunstancia alguna- Conducta que entraña peligro- Dificultad en el manejo del paciente- Alteración de la conducta que sugiera pat orgánica leve- Patología que no remite tras la llamada- Tras la ingestión de fármacos - o estupefacientes- Entorno no colaborador	<ul style="list-style-type: none">- Alteración de la conducta leve con entorno colaborador y que consiga controlar al paciente	<ul style="list-style-type: none">- Situación basal que impida derivación- Pacientes que no acepten la derivación

ALTERACIONES DEL SUEÑO

Interrogatorio

1. ¿Desde cuándo le cuesta dormir?

- Aguda (días): cambios de horario (laboral, residencia, viajes), ansiedad, acontecimiento estresante reciente.
- Corta duración (menor a 3 semanas): duelo, estrés, situacional, patología orgánica aguda.
- Crónica (meses): descartar patología orgánica crónica o psiquiátrica subyacente (depresión...).

2. ¿Cómo es la característica del sueño?

- Le cuesta conciliar el sueño: generalmente relacionado con patología ansiosa, valorar si duerme la siesta (motivo frecuente de insomnio en ancianos), actividad física excesiva vespertina, actividad mental excesiva por la noche (pantallas de datos), estimulantes vespertinos (cafeína).
- Duerme fácilmente pero se despierta muy temprano: frecuente en ancianos por la menor necesidad de dormir, abuso de depresores del SNC (alcohol), situacional, depresión, ansiedad.
- Despierta varias veces por la noche: ansiedad, enolismo, drogas de abuso, fármacos, patología orgánica (síndrome de piernas inquietas, prostatismo, algias en general, apnea del sueño).
- Somnolencia diurna: apnea del sueño, narcolepsia, exceso de sedantes.

3. ¿Presenta otros síntomas?:

- Valorar la afectividad: depresión, ansiedad, trastornos alimenticios.
- Presenta algún dolor: cefalea (en racimos), dolor torácico (angor, RGE), abdominal (pirosis, ulceras), espalda (lesiones vertebrales), piernas (insuficiencia venosa periférica).
- Disnea: DPN, BCO, asma.
- Nicturia: DM, prostatismo.

4. ¿Padece alguna enfermedad -AP-? Orientan a la etiología.

- DM, patología tiroidea, IC, patología psiquiátrica, menopausia, tratamientos (diuréticos, simpaticomiméticos, corticoides, betabloqueantes, broncodilatadores, antihipertensivos, ANOV...)

Consejo telefónico

Medidas generales

- Explicar la necesidad real del sueño: un anciano tiene una necesidad de 4-5 h con sueño fragmentado.
- Explicarle las necesidades individuales (cada persona tiene sus necesidades) y circunstanciales (laborales, viajes, cambios de residencia, preocupaciones temporales, patologías temporales).
- Levantarse y acostarse a la misma hora, incluido el fin de semana.
- Evitar cenas copiosas y acostarse inmediatamente después.
- Realizar ejercicio regularmente, evitándolo ante de acostarse y de forma intensa.
- Evitar siestas diurnas.
- Evitar alcohol y estimulantes (té, café, colas....) antes de acostarse.
- Levantarse si no se concilia el sueño en 45 min y realizar una actividad relajante hasta sentir sueño nuevamente (ducha caliente....), toma de infusiones (valeriana, manzanilla...).

Medidas específicas

- Si hay una causa identificable, abordarla: revisión/ajuste de fármacos, patología orgánica o psiquiátrica.
- Recomendación de melatonina o hipnóticos: si los tiene en el domicilio y los ha utilizado en otras ocasiones.

Respuesta desde CCUS-061

Pasar a médico consultor	Derivación a AP	Visita a domicilio
<ul style="list-style-type: none">- Si precisa indicación de hipnóticos- Si precisa reajuste de alguna medicación específica	<ul style="list-style-type: none">- Tras varios días de evolución sin mejoría con medidas indicadas- Sospecha de patología orgánica o psiquiátrica subyacente- Enolismo o drogas de abuso- Reajuste de medicación previa que no se consigue desde CCUS	<ul style="list-style-type: none">- Paciente encamado o incapacitado con un cuadro de agitación sobreañadida

IDEACIÓN SUICIDA

Interrogatorio

Sex (sexo)	1 varón
Age (edad)	1
Depression (depresión)	1 <20 o >45 años
Previous (intento previo)	1
Ethanol (abuso alcohol)	1
Rational thinking loss (pérdida pensamiento racional)	1
Social support lacking (falta de apoyo social)	1
Organised plan (planificación)	1
No spouse (sin pareja)	1
Sickness (enfermedad)	1

Si puntuación total = 1 a expensas de sexo, edad o ausencia de pareja, no contabiliza.

Valorar otros factores de riesgo:

- AP enf. psiquiátrica/somática.
- Problemas laborales.
- Consumo de otras drogas.
- Pérdida de independencia.
- Acceso a armas/fármacos.
- Falta de expectativas futuras.
- Situación límite.
- Violencia de género.

SAD PERSONS	
0-2	Seguimiento ambulatorio
3-4	Seguimiento ambulatorio (control estrecho)
5-6	Hospitalización, salvo muy buen apoyo y control
7-8	Hospitalización

Consejo telefónico

Si el alertante es diferente del paciente

- No abandonar al paciente.
- Ambiente controlado, acompañante tranquilo, no reclamar.
- Retirar del alcance del paciente fármacos, drogas, armas, etc.

Si el alertante es el propio paciente

- Se trata de una demanda de ayuda.
- Empatizar, actitud tranquila y no crítica.
- Dar mensajes positivos, transmitir esperanza.
- Ofrecer, si es posible, soluciones al problema que precipita la ideación.
- Averiguar el teléfono: fijo o de algún contacto cercano.
- Si es de alto riesgo y paciente solo, mantener el contacto telefónico.
- Hacer reflexionar al paciente sobre los motivos que puedan evitar la ideación (vínculos afectivos estrechos, cuidador de terceros...)
- Si se decide hacer seguimiento ambulatorio, enfatizar en la existencia de recursos sanitarios disponibles las 24 h para proporcionar ayuda.
- Si existe sospecha de violencia de género, ofrecer contacto con 016 y teléfonos/centros específicos de ayuda.

Respuesta desde CCUS-061

Recurso medicalizado	Derivación a Urgencias	Derivación a AP/USM	Visita a domicilio
SAD PERSONS 5-10 y si: - Entorno no colaborador. - Si el paciente no acepta derivación, enviar también a fuerzas de seguridad.	SAD PERSONS 5-10 si: - Paciente que acepta - derivación, valorar necesidad de traslado en ambulancia si el entorno no es colaborador. - Siempre que exista intento/gesto suicida	SAD PERSONS 0-2 SAD PERSONS 3-4 con estrecho control	- Ancianos o paliativos cuya situación funcional o basal desaconseja su movilización

TRASLADO INVOLUNTARIO

Interrogatorio

1. **¿Cómo está el paciente, acepta voluntariamente el traslado?** Nos orienta sobre el recurso a enviar.
 - ¿Cómo ha empezado el cuadro? Puede ayudar a decidir si se trata de una urgencia o emergencia.
2. **¿Tiene orden judicial?**
 - Sí: indica traslado obligatorio, aunque no se trate de patología urgente.
 - NO: continuamos el interrogatorio.
3. **¿Tiene síntomas o hay alguna situación que puede justificar el traslado involuntario?**
 - Tiene riesgo autolítico, auto/heteroagresividad, percepción distorsionada de la realidad: indicación de traslado.
 - No entraña riesgo ni premura: pasar a protocolo específico (alteraciones de la conducta, ideación autolítica).
4. **¿Padece alguna enfermedad -AP?** Puede orientarnos la patología previa (deterioro cognitivo) o los desencadenantes situacionales, patología orgánica

Consejo telefónico

Medidas generales

- Si hay peligro hacia terceros, abandonar la zona donde está el paciente. Ponerse a salvo.
- Retirar del alcance del paciente agitado o agresivo todo aquello con lo que pueda hacerse daño a él mismo o a terceros.
- Discurso tranquilizador, no juzgar ni amenazar al paciente por su actitud.

Respuesta desde CCUS-061

Recurso medicalizado + FOP	Derivación a Urgencias
- Paciente que no acepta traslado	- Paciente que acepta traslado

- Paciente que no acepta traslado
- Paciente que acepta traslado
- PROGRAMA ACOUGO: Protocolo general sobre traslados e ingresos no voluntarios y urgentes de personas con enfermedad o trastorno mental en Galicia, de 24 de febrero de 2004, entre la Consellería de Sanidad, la Delegación del Gobierno en Galicia y la Consellería de Justicia, Interior y Administración Local

14. APARATO LOCOMOTOR

ACCIDENTE/ LESIÓN DOMICILIARIA

Interrogatorio

1. **¿Interrogatorio ABC?** Habla, contesta y respira normal. Si no es así, pasar a protocolos correspondientes.
2. **¿De qué altura se ha caído?** La misma o diferente.
3. **¿Cuál ha sido la causa de la caída?** Tropezón, resbalón, mareo, síncope. Oriente a causa y protocolo específico.
4. **¿Dónde se localiza el traumatismo?** Orienta al consejo y a la respuesta telefónica.
5. **¿Cómo está la zona o el miembro afectado?** Deformidad, herida o sangrado, impotencia funcional (puede moverse, puede apoyar), pérdida de sensibilidad.
6. **¿Padece alguna enfermedad-AP-?** Enfermedades, vida basal, tratamiento que toma (anticoagulantes, BZD, antiparkinsonianos...) por hemorragias o inestabilidad de la marcha.

Consejo telefónico

Medidas generales

- No movilizar al paciente hasta que llegue la ayuda.
- Si hay sangrado, se indicará compresión de la zona con un paño limpio.
- Abrigar al paciente si lo precisa: vía pública, condiciones meteorológicas adversas, hipovolemia.
- Aplicar frío local en la zona del traumatismo si es posible.
- Tranquilizar al enfermo o a la familia.

Respuesta desde CCUS-061

Pasar a médico consultor	Derivación a centro de Urgencias
<ul style="list-style-type: none">- Mareo, sudación o palidez- Dolor torácico- Disnea- Cambios de algunos síntomas previos	<ul style="list-style-type: none">- Derivación a su CS o PAC según horarios:<ul style="list-style-type: none">• Si es un trauma leve y sin pérdida de sensibilidad, ni impotencia funcional y no toma ACO• Resto de pacientes para descartar fracturas, sangrado internos

DOLOR DE ESPALDA

Interrogatorio

1. **¿Dónde le duele?** Lumbosacro, cervical, dorsal.
2. **¿Hacia donde irradia?**
 - Tórax: SCA, neumonía, derrame pleural, disección de aorta (interescapular).
 - Abdomen: ulcus gástrico, cólico biliar, pancreatitis, dismenorrea.
 - Ingle: cólico nefrítico.
 - Extremidad superior: discopatía cervical, cervicobraquialgias, Pancoast, costilla cervical.
 - Extremidad inferior: lumbociatalgia, artropatía de cadera.
3. **¿Cuándo empezó? ¿Ya lo tuvo antes?** Reagudización dolor crónico (artrosis, artritis, osteoporosis...).
4. **¿Cómo empezó?**
 - Brusco: trauma previo, esfuerzo físico, SCA, disección o rotura aneurisma aorta, cólico renal, infección.
 - Insidioso: dolor mecánico (artrosis) o inflamatorio (espondilitis anquilosante).
 - Empeora al moverse: origen mecánico.
 - Empeora al tumbarse: origen radicular.
 - Persiste en reposo (incluso le despierta): dolor inflamatorio u oncológico.
 - Empeora al toser o con inspiración profunda: pleurítico (neumonía, derrame pleural, enfisema..).
 - Empeora con maniobras de Valsalva: dolor de origen radicular.
5. **¿Presenta algún otro síntoma?**
 - Disnea, mareo, cortejo: SCA, rotura o disección aneurisma de aorta.
 - Fiebre: osteomielitis, pancreatitis, cólico biliar, viriasis.
 - Cefalea: meningismo.
 - Náuseas o vómitos: origen visceral.
 - Rígidez matutina: artropatías inflamatorias. (AR, espondilitis...).
 - Déficit motor y/o sensitivo y/o relajación de esfínteres, dolor radicular: hernia, fractura vertebral.
6. **¿Padece de alguna enfermedad -AP-?** Neoplasias, cardiovascular, anticoagulados (hemorragia retroperitoneal).

Consejo telefónico

Medidas generales

- Explicar la necesidad.
- Advertir de los signos de alarma (red flags de la lumbalgia).
- Si los signos de alarma son negativos, tranquilizar al paciente y advertir de la lenta evolución.
- Evitar el reposo absoluto.
- Calor seco 15-20 min/3-4 veces/d.
- Medidas posturales antiálgicas.

Medidas específicas

- Antiinflamatorios (vo y tópicos) o im (corticoides) en ciatalgias.
- Analgésicos:
 - Paracetamol: sg peso (máx 4 g/d).
 - AINE: ibuprofeno, diclofenaco, naproxeno, dexketoropofeno.
 - Metamizol: (575, 3-4 veces al dia); Tramadol: 50-100/6-8 h (máx 400 mg/d); Codeína (30 mg/4-6 h).
 - Relajantes musculares: si los tiene en el domicilio, lo ha tomado previamente y le han sentado bien.

Respuesta desde CCUS-061

Recurso medicalizado	Derivación a Urgencias	Visita a domicilio
<ul style="list-style-type: none">- Dolor de espalda con afectación del estado general- Dolor de espalda con perfil anginoso o sospecha de disección aórtica- Traumatismo con sospecha de fractura o lesión medular	<ul style="list-style-type: none">- Dolor de espalda con signos de alarma: obnubilación, cefalea, fiebre, déficits motores y/o sensitivos, relajación de esfínteres y vómitos- Dolor con impotencia funcional refractario al tratamiento	<ul style="list-style-type: none">- Imposibilidad de movilización para el traslado- Mismos supuestos, pero en pacientes con imposible derivación (encamado, terminal)- Negativa de la familia o el paciente al traslado y cuya patología aconseje ser vista por un médico.

DOLOR DE MIEMBRO INFERIOR

Interrogatorio

1. ¿Cuánto tiempo lleva con el dolor?

- Inicio súbito (horas): postraumático, isquemia arterial aguda, rotura de tendón aquileo, gota.
- Inicio gradual (días): tendinitis, bursitis, osteomielitis, artritis, inflamatorias, TVP.
- Inicio insidioso: insuficiencia venosa periférica, isquemia crónica de MMII, artrosis, fibromialgia.

2. ¿Dónde se localiza?

- En la articulación: cadera, rodilla, pie, primer dedo.
- Fuera de la articulación.

3. ¿Cómo es la coloración y T^a de la piel?

- Piel pálida y fría: isquemia arterial (aguda o crónica).
- Piel enrojecida y caliente: Procesos inflamatorios agudos: brotes de artritis, celulitis, tromboflebitis superficiales.
- Piel edematosas, caliente y violácea: TVP.

4. ¿Qué factores lo han desencendido y cómo se modifica el dolor?

- Traumatismo previo: fractura, luxación, derrame articular.
- Empeora a la palpación: reumatismos de partes blandas (tendinitis, bursitis...).
- Empeora con el movimiento y alivia con el reposo.
- Al subir o bajar escaleras, o al sentarse o levantarse: artrosis de cadera y/o rodilla.
- Durante la deambulación: isquemia arterial crónica; estenosis del canal medular.
- No alivia con el reposo: artropatías inflamatorias, dolor oncológico.
- Empeora con las maniobras de Valsalva: dolor de origen radicular.
- Elevación del miembro: isquemia arterial crónica (empeora); IVC (alivia).
- Sentado con las piernas colgando: isquemia arterial crónica (alivia); IVC (empeora).

5. ¿Padece de alguna enfermedad -AP?- Pueden orientar a la causa.

- Laborales, deporte, fármacos (ANOV, ACO, esteroides), conectivopatias, vasculitis, IV.

Consejo telefónico

Medidas específicas

- Dolor postraumático: reposo (evitando la movilización de las articulaciones implicadas), elevación del miembro y aplicar frío local.
- Dolor en partes blandas (ej.: tendinitis, bursitis, esguinces) reposo relativo con el miembro elevado y frío local. Vendajes compresivos y analgésicos (valorar tópicos, si los tiene en el domicilio y lo ha utilizado en otras ocasiones y siempre que no tenga heridas abiertas).
- Dolor mecánico: se recomendará la aplicación de calor local a intervalos, analgésicos. Utilización de un bastón del lado contrario al miembro afectado.
- Analgésicos si no hay contraindicaciones y/o alergias:
 - Paracetamol: sg peso (máx 4 g/d).
 - AINE: ibuprofeno, diclofenaco, naproxeno, dexketoropofeno.
 - Metamizol: 575 mg/3-4 veces al dia.
 - Tramadol: 50-100/6-8 h (max 400 mg/d).

Respuesta desde CCUS-061

Recurso medicalizado	Derivación a Urgencias	Visita a domicilio
- Traumatismo con afectación del estado general	<ul style="list-style-type: none">- Traumatismo reciente (sospecha de fractura, luxación, esguince)- Dolor articular con fiebre- Síntomas neurológicos sugestivos de radiculopatía lumbo-sacra- Brote de dolor crónico con pobre respuesta a la analgesia- Primer episodio de dolor inflamatorio o de dolor mecánico que no cede con analgésicos del primer escalón- Tromboflebitis- Isquemia arterial aguda- Dolor de tipo vascular en pacientes con factores de riesgo para TVP	<ul style="list-style-type: none">- Mismos supuestos, pero en pacientes con imposible derivación- Dolor oncológico

DOLOR DE MIEMBRO SUPERIOR

Interrogatorio

1. ¿Cuánto tiempo lleva con el dolor?

- Inicio súbito (horas): posttraumático, fractura, luxación, desgarro, angor, gota, embolia arterial.
- Inicio gradual (días): tendinitis, bursitis, brotes de artropatías inflamatorias, artritis sépticas.
- Inicio insidioso: fibromialgia, artrosis, neoplasias, túnel carpiano.

2. ¿Dónde localiza el dolor? ¿Se irradia hacia algún lugar?

- Hombro
 - Dolor local: tendinitis en manguitos rotadores, capsulitis adhesiva, artropatías, neoplasias.
 - Dolor referido: angor, pericarditis, tumor Pancoast, TEP, cólico biliar, absceso subfrénico, rotura víscera abdominal.
- Codo (suele irradiar hacia antebrazo) epicondilitis, epitrocleitis, bursitis, artropatías (gota).
- Mano/dedos: artritis reumatoide (simétrica), S del túnel carpiano, rizartrosis, tendosinovitis de Quervain.
- Punta de los dedos: fenómeno de Raynaud.
- Dolor irradiado por todo el MMSS: SCA, radiculopatía cervical, síndrome del estrecho torácico.
- Difuso (sobre todo en espalda): fibromialgia.

3. ¿Tiene algún otro síntoma?

- Dolor torácico, disnea: SCA, TEP, neumotórax, pleuritis.
- Cortejo neurovegetativo, mareos, hipotensión: SCA, disección aórtica, rotura víscera abdominal.
- Palidez y frialdad: embolia arterial aguda.
- Dolor abdominal, náuseas: cólico biliar, absceso subfrénico (en ambos dolor referido a hombro).
- Fiebre: artritis infecciosas, osteomielitis agudas.
- Signos inflamatorios locales (calor, rubor, tumefacción e impotencia funcional):
 - Articulares: gota, artritis reumatoide, artritis infecciosas.
 - Extra-articulares: celulitis, flebitis, tendinitis.
- Rigidez, disminución de la movilidad de la articulación: artritis reumatoide, tendinitis, calcificaciones.
- Deformidad: fracturas, luxaciones.
- Hormigueos, alteraciones de la sensibilidad, debilidad muscular: radiculopatía cervical, compromiso nervio periférico (síndrome del tunel carpiano).

4. ¿Padece de alguna enfermedad -AP?- Puede orientar al diagnóstico

- Hábitos de vida, cardiopatías, patología pulmonar, conectivopatías, vasculitis, fármacos...

Consejo telefónico

Medidas específicas

- Dolor posttraumático: reposo (evitando la movilización de las articulaciones implicadas), cabestrillo y aplicar frío local.
- Dolor en partes blandas (ej.: tendinitis, bursitis, esguinces): reposo relativo, cabestrillo y frío local. Vendajes compresivos y analgésicos (valorar tópicos, si los tiene en el domicilio y los ha utilizado en otras ocasiones).
- Dolor mecánico: se recomendará la aplicación de calor local a intervalos y analgésicos.
- **Analgésicos** si no hay contraindicaciones y/o alergias:
 - Paracetamol: (máx. 4 g/d); AINE: ibuprofeno, diclofenaco, naproxeno, dexketoprofeno.
 - Metamizol: (575 mg, 3-4 veces/d); Tramadol: 50-100/6-8 h (máx 400 mg/d); codeína (30 mg/4-6 h).

Respuesta desde CCUS-061

Recurso medicalizado	Derivación a Urgencias	Visita a domicilio
<ul style="list-style-type: none">- Traumatismo con afectación del estado general- Dolor de miembro superior sugestivo de SCA disección aórtica- Dolor de miembro superior sugestivo de embolismo arterial	<ul style="list-style-type: none">- Trauma reciente (sospecha fractura, luxación)- Dolor articular con fiebre- Síntomas neurológicos sugestivos de radiculopatía cervical- Dolor de etiología desconocida o mal controlado- Brote de dolor crónico con pobre respuesta a la analgesia	<ul style="list-style-type: none">- Mismos supuestos, pero en pacientes con imposible derivación (encamado, terminal)- Dolor oncológico

15. APARATO URINARIO Y GENITAL MASCULINO

SÍNDROME MICCIONAL

Interrogatorio

1. **¿Desde cuándo?** Aguda (bacteriana), paulatina (clamydia).
2. **¿Cómo es la micción?**
 - Pequeña cantidad, más frecuente sin dolor: hipertrofia prostática, ansiedad, vejiga neurógena.
 - Pequeña cantidad, más frecuente con dolor: ITU, en ancianos obstrucción en salida por HBP.
 - Gran cantidad sin dolor: DM, diabetes insípida, potomanía, IRC, diuréticos.
 - Ganas de orinar frecuentes: infección, neo de vejiga, tratamiento por RT o QT, disfunción neurógena.
 - Le cuesta iniciar la micción: patología prostática, vejiga neurógena.
3. **¿De qué color es la orina?**
 - Incolora: DM, diabetes insípida, alcohol, diuréticos, IR avanzada, hidratación abundante.
 - Turbia, lechosa: piuria, quiluria, cristales de fosfato.
 - Verdosa: infección por bacilo piociánico.
 - Roja: pasar a protocolo de hematuria
4. **¿Tiene incontinencia urinaria?**
 - Intervalos frecuentes y en pequeña cantidad: por rebosamiento, retención crónica.
 - Continuas, más frecuente al levantarse o sentarse: hipertrofia o neo de próstata, neuropatía diabética, fistula vesícuovaginal. retención crónica
 - Con Valsalva: pérdidas por estrés.
5. **¿Tiene otros síntomas asociados?**
 - Fiebre con dolor suprapúbico (citis, prostatitis aguda) o con dolor costovertebral (pielonefritis).
 - Artromialgias, sinusitis crónica, vasculitis.
6. **¿Padece de alguna enfermedad -AP-?** ITU recurrente, cálculos, patología prostática, trauma, cirugía genitourinaria, DM, enfermedad neurológica, hábitos sexuales (ETS, uretritis..).

Consejo telefónico

Medidas generales

- Hidratación abundante, eliminar irritantes (alcohol, tabaco, condimentos y picantes en comida), instar a orinar frecuentemente, lavado perineal de delante atrás, micción postcoital.
- Infusiones de cilantro (propiedad antiinflamatoria) o arándanos (bloquea ciertas bacterias).
- Usar ropa interior cómoda, preferiblemente de algodón. Evitar trajes de baño húmedos mucho tiempo.
- Calor local en hipogastrio (disminuye presión sobre la vejiga) y fosa renal.
- Administrar vitamina C (acidifica orina) si no tiene antecedentes de nefrolitiasis.

Medidas específicas.

- Si hay sonda urinaria: ingesta abundante de líquidos, bolsa de drenaje siempre por debajo del nivel de la vejiga, lavado de manos previamente por parte de la persona que manipula la sonda.

Respuesta desde CCUS-061

Recurso a Urgencias	AP/PAC	Visita a domicilio
<ul style="list-style-type: none">- Retención urinaria- Fiebre- Dolor costovertebral- Traumatismo abdominopélvico- Tras cirugía de aparato genitourinario, abdominopélvica- En el pacientes monorreno	<ul style="list-style-type: none">- Disuria y/o polaquiuria y/o tenesmo- Dificultad para inicio micción- Incontinencia de orina de debut	<ul style="list-style-type: none">- Pacientes cuya situación funcional o basal impida acudir a un centro sanitario

SÍNDROME ESCROTAL AGUDO

Interrogatorio

1. **Edad:** 0-14 años (torsión de apéndices), de 11-18 años (torsión testicular), pospuberal. (epididimitis/orquitis). No haría falta preguntarlo, ya que aparece reflejado tras el interrogatorio telefónico.
2. **¿Cuándo comenzó el dolor?** Agudo (torsión testicular), gradual (epididimitis/orquitis), agudo/gradual (torsión de apéndices).
3. **¿En dónde se localiza el dolor?**
 - En el testículo afecto con irradiación suprapúbica, inguinal o fosa lumbar: torsión testicular.
 - En polo superior testicular con menor irradiación que la torsión testicular: torsión de apéndices.
 - En el testículo afecto y puede irradiar a región inguinal ipsilateral: epididimitis/orquitis.
4. **¿Qué aspecto tiene el escroto?**
 - Aumentado: orquitis/epididimitis, torsión testicular.
 - Normal: torsión de apéndices (suelen asociar edema).
 - Elevado y transversal, y no disminuye el dolor al elevar el testículo: torsión testicular.
 - Normal con mejoría del dolor al elevar el testículo: epididimitis/orquitis, torsión de apéndices.
 - Enrojecido, inflamado: epididimitis/orquitis. En la torsión evolucionada a veces tiene aspecto enrojecido (orquitis isquémica).
 - Retraído y dolor intenso: torsión testicular.
 - Gota azul y pequeño nódulo doloroso en polo superior del testículo: torsión de apéndices.
5. **¿Síntomas acompañantes?**
 - Náuseas y vómitos: frecuente en torsión testicular y menos frecuente en torsión apéndices.
 - Fiebre, afectación estado general, síntomas miccionales: orquitis/epididimitis.

Consejo telefónico

Medidas específicas

- Si hay sospecha de torsión testicular: le indicaremos que vaya urgentemente al hospital, para garantizar la viabilidad testicular (< 6 h → 85-100%, 6-12 h → 70%, 12 h → 20%).
- Si hay sospecha de torsión de apéndices testiculares: tratamiento sintomático para el dolor. Resolución por autoinfarto tras una semana aproximadamente.
- Epididimitis/orquioepididimitis: antibióticos (etiología bacteriana), AINE, analgésicos, reposo en cama, aplicar frío local, actividad física limitada, suspensorio testicular (calzoncillo tipo slip o similar).

Respuesta desde CCUS-061

Derivación a AP/PAC	Derivación a Urgencias hospital	Visita a domicilio
- Epididimitis. - Orquioepididimitis	- Torsión testicular - Tosión apéndices testiculares	- Pacientes cuya situación funcional o basal impida acudir a un centro sanitario

HEMATURIA

Interrogatorio

1. ¿Desde hace cuánto tiempo tiene el sangrado?

- Agudo: traumatismos, aparición de cualquier patología genitourinaria.
- Crónico: orienta a episodios previos.

2. ¿Cuándo tiene el sangrado?

- Al principio de la micción: lesión distal al cuello vesical o uretra.
- Al final de la micción: patología prostática, uretra posterior o cuello vesical.
- Toda la micción: origen intra o supravesical.

3. ¿Cómo es el sangrado?

- Marrón oscuro tipo Coca-Cola: origen en vías urinarias superiores.
- Rojo brillante: hipertrofia prostática, litiasis renal u origen vesical.
- Valorar pseudohematuria: metrorragias, alimentos (remolacha, judías, mora...) y fármacos (rifampicina, amitriptilina, fenotiacinas, salicilatos, meticilina, sulfamidas).

4. ¿Tiene otros síntomas asociados?

- Síndrome miccional: despistaje de ITU como desencadenante.
- Fiebre: ITU, glomerulonefritis, prostatitis, neo renal.
- Edemas en cara, párpados, pies: síndrome nefrótico.
- Náuseas o vómitos: glomerulonefritis, nefrourolitiasis, IR.
- Dolor de espalda, costolumbar o abdominal: nefrourolitiasis, ITU, neoplasias, infarto renal.
- Exantemas, dolor articular: colagenosis (LES...), vasculitis.

5. ¿Padece de alguna enfermedad -AP-?

Cálculos renales, patología tumoral prostática, gota, TB, collagenosis, vasculitis, trasplantado renal, traumatismos, cirugía abdominopélvica o técnicas diagnósticas recientes (biopsia prostática, cistoscopia -hematuria 3-4 días posteriores), patología renal congénita (poliquistosis), trabajadores de industrias con productos químicos (orientan a síndrome previo).

Consejo telefónico

Medidas generales

- Tranquilizar al paciente. Aflojar la ropa si presenta dolor abdominal. Vigilancia del estado hemodinámico si el sangrado es muy abundante.
- Si hacemos manejo domiciliario, le explicaremos signos de alerta: fiebre, dolor abdominal o aumento del sangrado.

Medidas específicas

- Si presenta clínica miccional SIN FACTORES DE RIESGO con leve hematuria intermitente podríamos recetar antibióticos como Monurol® 3 g en monodosis, ingesta hídrica abundante y vigilancia sintomática. Control MAP.
- Si presenta hematuria con coágulos en paciente sondado y familia colaboradora, indicar lavado de sonda.

Respuesta desde CCUS-061

Derivación a Urgencias	Visita a domicilio
<ul style="list-style-type: none">- Alteraciones de la coagulación o que tomen anticoagulantes- Retención de orina- Tras traumatismo reciente- Tras cirugía abdomino-pélvica reciente- IRC- Fiebre- Trasplantado renal	<ul style="list-style-type: none">- Pacientes cuya situación funcional o basal impida acudir a un centro sanitario

OLIGOANURIA

Interrogatorio

1. ¿Desde cuándo?

- Agudo: prerrenal: perfusión insuficiente (hipovolemia, ICC, sepsis,...), renal: GN, NTA,... postrenal: obstrucción de la vía excretora (cálculo, coágulo,...). Fármacos (inicio o modificación reciente de tratamientos pueden favorecer retención urinaria (antidepresivos, ansiolíticos neurolépticos, opioides..), estreñimiento.
- Crónico: empeoramiento de la IRC, fármacos nefrotóxicos.

2. ¿Cuál es el volumen de orina al día (< 400 ml/d)?

Nada (uropatía obstructiva), alternante (uropatía obstructiva, ICC).

3. ¿Cómo es la orina? Con sangre (pasa a guía de hematuria), turbia (ITU).

4. ¿Tiene otros síntomas acompañantes?

- Afectación del estado general (dolor): globo vesical.
- Disnea, ortopnea, edemas: ICC.
- Hemorragia: obstrucción de la vía secretora, ITU.
- Fiebre, síndrome miccional: ITU.
- Diarrea, vómitos (por hipovolemia): IR prerrenal.
- Dolor articular, manchas en la piel: collagenopatías (LES, esclerodermia,...).
- Epistaxis, sinusitis: vasculitis.
- Edemas palpebral, facial, piernas, expectoración hemoptoica: glomerulonefritis, IRC.
- Estreñimiento: posible causa de oligoanuria.

5. ¿Padece alguna enfermedad -AP-?

- Patología urinaria: sonda urinaria, patología prostática, gota (uropatía obstructiva, nefropatía gotosa), ITU, infección faríngea o vírica, monorreno, poliquistosis renal.
- Tratamientos: antibióticos (cefaloridina, nitrofurantoina, trianterene), NTA, nefritis intersticial, diuréticos (nefritis intersticial, IRA prerrenal).
- Patología neurológica: Parkinson, EM...

Consejo telefónico

Medidas generales

- Tranquilizar al paciente y familia.

Medidas específicas

• Si sospecha etiología prerrenal, según causa:

- IC: sentado con piernas colgando.
- Hemorragia: comprimir zona sangrado.
- Diarrea, vómitos, exposición altas temperaturas: hidratación abundante.

• Si sospecha etiología renal o postrenal, según causa:

- Cólico renal: hidratación abundante, calor local y analgesia.
- IRC moderada: restricción ejercicio intenso, reposo nocturno ≥ 9 h, evitar tabaco, restricción de proteínas en la dieta, ingesta de líquidos proporcional a la insuficiencia renal

Respuesta desde CCUS-061

Derivación a AP	Derivación a Urgencias	Visita a domicilio
- Oligoanuria filiada: paciente con patología crónica adecuadamente vigilado y entorno colaborador - - Oligoanuria filiada: paciente con patología crónica adecuadamente vigilado y entorno colaborador	- Anuria - Patología crónica reagudizada, de varias horas de evolución y sin mejoría significativa - Sospecha de cólico nefroureteral	- Cambio de sonda urinaria, si no puede desplazarse. - Pacientes cuya situación basal o funcional impida acudir a un centro sanitario (encamados, pluripatología)

16. PROBLEMAS GENERALES

ATRAGANTAMIENTO RESUELTO

Interrogatorio

1. **¿Presenta dificultad para respirar o ruidos respiratorios?** Orienta a obstrucción parcial de VA.
2. **¿Qué estaba haciendo en ese momento?** Comiendo, bebiendo, jugando (cuerpo extraño).
3. **¿Sialorrea, disfagia, odinofagia?** Orienta a obstrucción esofágica.
4. **¿Sensación de cuerpo extraño, molestias a nivel cervical o retroesternal?** Impactación.
5. **¿Fiebre? ¿Clínica acompañante?** Palidez, mareos: neumonía, sepsis.
6. **¿Padece alguna enfermedad -AP-?**
 - Alimentación a través de dispositivos (SNG, SNY/D, PEG), traqueotomizado, prótesis dentales: broncoaspiración.
 - Enfermedades degenerativas: ELA, esclerosis múltiple, alzhéimer, epilepsia, osteomalacia.

Consejo telefónico

Medidas generales

- Colocar al paciente en sedestación, incorporado 90º si es posible.
- Nunca se debe intentar empujar los cuerpos extraños/bolos de alimento impactados, ya que podemos producir lesiones mayores.
- Vigilar Tª y ruidos respiratorios.

Medidas específicas

- En caso de cuerpos extraños de especial atención:
 - Moneda (5-2-1 céntimos): vigilancia y en caso de no expulsarla en menos de 24 h derivar al paciente. Acelerar el tránsito intestinal con dieta rica en fibra.
 - Pilas e imanes: hacer un control de rx, ya que si queda en el esófago, se adhiere a pared y la puede perforar.
 - Resto de cuerpos extraños sin aristas menores de 2 cm: vigilancia y acelerar el tránsito intestinal con dieta rica en fibra.

Respuesta desde CCUS-061

Derivación a AP	Derivación a Urgencias	Visita a domicilio
- Control evolutivo o Rx	<ul style="list-style-type: none">- Disnea o ruidos respiratorios- Sospecha de broncoaspiración/fiebre- Sialorrea, disfagia, sensación cuerpo extraño, dolor cervical o retroesternal- Deterioro en enfermedades degenerativas de nueva aparición- Ingestión objetos cortantes/punzantes, paquetes drogas, pilas, imanes y monedas con zinc- Impactación de bolo alimenticio	<ul style="list-style-type: none">- Encamados/paliativos sin datos de alarma

ÉXITUS ESPERADO

Interrogatorio

1. **¿Está consciente?** NO. Si está estuporoso, pasará a protocolo de coma y estupor.
2. **¿Respira con normalidad?** NO RESPIRA. Si respira con dificultad, pasará a protocolo de disnea.
3. **¿Era un fallecimiento esperado, era previsible que pudiera fallecer? (AP enfermedad terminal...)?**
 - Si la respuesta es SÍ: orienta a éxitus esperado.
 - Si la respuesta es NO: se pasará a protocolo de RCP.

Consejo telefónico

- Intentar tranquilizarlos si es preciso. Explicando que puede haber algún movimiento extraño como reflejos de desinhibición del cadáver y que es normal.
- Informar de los pasos a dar. No se informará de los tiempos.
- Dar el pésame/condolencias a la familia: ofrecerse a gestionar cualquier intervención a través de los médicos de AP en el caso de que el duelo sea mal tolerado.

Respuesta desde CCUS-061

Visita domiciliaria	Pasar a médico consultor
<ul style="list-style-type: none">- VD P 2 en general- VD P 1 si hay mucha ansiedad en la familia	<ul style="list-style-type: none">- Si el paciente:<ul style="list-style-type: none">• Respira• Se mueve• El fallecimiento no estaba previsto
<ul style="list-style-type: none">- Médico a enviar:<ul style="list-style-type: none">• HAO: su MAP.• HAC, médico PAC.• Paciente de HADO fallecido en horario HADO, acudirá médico de HADO.	

FIEBRE

Interrogatorio

1. **¿Cuánta fiebre tiene y desde cuando?** Información aportada por teleoperador del 061.
2. **¿Está muy postrado?** En niños si está activo, juega, ve la tele al disminuir la fiebre. Si no hay mejoría, podría indicar un dato de alarma.
3. **Tiene otros síntomas:**
 - Rigidez de nuca, vómitos, manchas en la piel que no remiten con la vitropresión: meningitis.
 - Tos, espectoración, fatiga, dolor costal: infección vía aérea inferior.
 - Dolor faringeo, odinofagia: infección VAS.
 - Náuseas, vómitos, diarrea, dolor abdominal: gastroenteritis.
 - Manchas en la piel (exantemas, pápulas): viriasis, enfermedades exantemáticas.
 - Molestias urinarias (disuria, polaquiuria, tenesmo): ITU.
 - Disminución del nivel de alerta, está adormilado, habla lentamente: descartar sepsis.
4. **AP:** asma, epoc, cardiopatías, inmunosupresión, oncológicos, conectivopatías, vasculitis, fármacos (neurolépticos, fenitoína, isoniacida), drogas de abuso.

Consejo telefónico

Medidas generales

- Tranquilizar al enfermo/familia y evitar comentarios sobre convulsiones febriles (genera angustia).
- Mantener T^o ambiente fresca, ropa ligera. Si tiene escalofríos, se arropará con una manta ligera.
- Dieta ligera e hidratación abundante.

Medidas específicas.

En este apartado el enfermero pudo preguntar:

- ¿Usted qué le da habitualmente para la fiebre?
- ¿Tiene esa medicación en casa y le sentó bien en otras ocasiones? No tiene alergia a medicamentos.
- ¿Quiere que le diga la dosis?
 - **Paracetamol:** antitérmico de elección. Dosis 15 mg/kg de peso cada 6 h o peso x 0,15.
 - **Ibuprofeno:** dosis 20 mg/kg/día/peso/repartidas en 3 dosis o peso/3 (20%) o peso/6 (40%).

Respuesta desde CCUS-061

Pasar a médico consultor	Derivación a Urgencias	Visita a domicilio
<ul style="list-style-type: none">- Disnea o dolor costal- Dolor abdominal- Manchas en piel- Persistencia o empeoramiento- Intranquilidad familia/paciente	<ul style="list-style-type: none">- Fiebre muy alta que no remite tras medidas indicadas- Niño con fiebre, irritable o mal estado general- Niño menor de 3 meses- Puerperio- Con molestias urinarias- Mal aspecto o familia ansiosa- Paciente VIH, inmunodeprimido, oncológico con quimioterapia o radioterapia- Vómitos que no remiten o de más de 6 h de evolución- Disminución del nivel de alerta	<ul style="list-style-type: none">- Pacientes cuya situación funcional o basal impida acudir a un centro sanitario

SÍNTOMAS MAL DEFINIDOS

Interrogatorio

1. **¿Está consciente? ¿Puede hablar? ¿Se mueve? ¿Abre los ojos?** Descartar coma o estupor. Desorientación o agitación en ancianos puede hacernos sospechar ITU, IVAS, estreñimiento.
2. **¿Respira? ¿Ruidos al respirar?, ¿Cianosis?** Descartar parada respiratoria y valorar disnea.
3. **¿Cuánto tiempo hace? ¿Qué estaba haciendo ? ¿Ha empeorado desde el inicio del cuadro?**
4. **¿Está de pie, sentado, acostado ? ¿Puede mantenerse en pie sin ayuda?** Indica gravedad.
5. **¿Qué síntomas tiene?**
 - ¿Dolor o malestar torácico? Pasará al protocolo correspondiente.
 - ¿Palpitaciones, mareos, sudoración profusa, náuseas, palidez? Valorar cortejo neurovegetativo.
 - ¿Pérdida de fuerza en algún miembro? ¿Desvía la comisura bucal? ¿Desviación de la mirada? Focalidad. Pasar a protocolo del ICTUS.
 - ¿Ha tenido convulsiones o movimientos anormales? ¿Incontinencia? Convulsión.
 - ¿Reconoce a sus familiares? ¿Sabe en qué lugar se encuentra y la fecha? Investigar orientación.
 - ¿Sangra por algún sitio? Valorar hipovolemia y hemorragias.
 - ¿Dolor o malestar abdominal? Pasar al protocolo correspondiente.
 - ¿Sensación de disternia o escalofríos? ¿Artromialgias, cefalea? Comprobar T^a corporal.
 - ¿Tos, expectoración, disfonía, dolor garganta? Proceso catarral. Virasis. Faringoamigdalitis.
 - ¿Dolor o escozor al orinar? ¿Orina menos de lo habitual? ITU/Oliguria.
 - ¿Manchas por la piel? Enfermedad dermatológica o manifestación de enfermedad sistémica.
6. **¿Padece de alguna enfermedad -AP-?** Puede orientar a la descompensación de una patología previa (enfermedades neurodegenerativas...). DM, tratamientos habituales y cambios hechos en la medicación.

Consejo telefónico

Medidas generales

- Se tranquilizará al paciente y/o familiares.
- Colocar al paciente en la posición más adecuada según corresponda el signo o síntoma que hayamos podido identificar.
- Si no tenemos clara la patología que presenta, evitaremos recomendarle medicación alguna.
- Se tendrá en cuenta siempre las medidas ABC.
- Medidas específicas
- Correspondrán al de cada patología específica, siempre y cuando la consigamos definir, y serán las ya descritas en la guía de actuación correspondiente a dicha patología.

Respuesta desde CCUS-061

Recurso medicalizado	Derivación a Urgencias	Visita a domicilio
<ul style="list-style-type: none">- Alteración nivel de conciencia: estupor/ coma, de comienzo reciente (minutos, horas)- Disnea- Crisis convulsivas- Dolor torácico- Signos de cortejo vegetativo- Hemorragias con posibilidad de complicación aguda (abundante, coagulopatías, tratamiento con anticoagulantes, etc)	<ul style="list-style-type: none">- Dolor abdominal inespecífico- Movimientos anormales- Incontinencia de esfínteres de debut- Hemorragias bancales- Mareo inespecífico- Cuadros de desorientación- Signos de focalidad neurológica	<ul style="list-style-type: none">- Pacientes cuya situación funcional o basal impida acudir a un centro sanitario



Comprehensive Guide for First Aid & CPR



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The Fundamental Principles of the International Red Cross and Red Crescent Movement

Humanity

The International Red Cross and Red Crescent Movement, born of a desire to bring assistance without discrimination to the wounded on the battlefield, endeavours in its international and national capacity to prevent and alleviate human suffering wherever it may be found. Its purpose is to protect life and health and ensure respect for the human being. It promotes mutual understanding, friendship, co-operation, and lasting peace amongst all peoples.

Impartiality

It makes no discrimination as to nationality, race, religious beliefs, class, or political opinions. It endeavours to relieve the suffering of individuals, being guided solely by their needs, and to give priority to the most urgent cases of distress.

Neutrality

In order to continue to enjoy the confidence of all, the Movement may not take sides in hostilities or engage at any time in controversies of a political, racial, religious, or ideological nature.

Independence

The Movement is independent. The National Societies, while auxiliaries in the humanitarian services of their governments and subject to the laws of their respective countries, must always maintain their autonomy so that they may be able at all times to act in accordance with the principles of the Movement.

Voluntary Service

It is a voluntary relief movement not prompted in any manner by desire for gain.

Unity

There can be only one Red Cross or one Red Crescent Society in any one country. It must be open to all. It must carry on its humanitarian work throughout its territory.

Universality

The International Red Cross and Red Crescent Movement, in which all Societies have equal status and share equal responsibilities and duties in helping each other, is worldwide.

The Fundamental Principles were proclaimed by the XXth International Conference of the Red Cross, Vienna, 1965. This is the revised text contained in the Statutes of the International Red Cross and the Red Crescent Movement, adopted by the XXVth International Conference of the Red Cross, Geneva, 1986.

In keeping with the Fundamental Principles of the Red Cross, the Society is committed to Social Justice in the elimination of Society structures and actions that oppress, exclude, limit, or discriminate on the basis of race, gender, ethnicity, financial ability, sexual orientation, religion, disability, or age.



1 The Red Cross

Our History



In June of 1859, Henry Dunant saw an unforgettable scene: 40,000 dead and wounded soldiers left on the field after the Battle of Solferino in Italy. Dunant organized local villagers into first aid teams to help as many of the wounded as possible, saving thousands of lives.

To prevent this horror from happening again, Dunant decided to create a neutral organization to care for wounded soldiers and prisoners—an organization that would be respected and protected by both sides in any conflict. The result was the Red Cross. Dunant spent the rest of his life trying to reduce the suffering caused by war. He lobbied governments, organized Red Cross Societies in different countries, and spoke to the public.

In the spring of 1885, during Louis Riel's Northwest Rebellion, Dr. George Sterling Ryerson stitched a Red Cross made of cotton onto white material and used this as a flag to distinguish the horse drawn wagon being used to transport the wounded. This was one of the first Red Cross flags ever flown in Canada.

In 1896, Dr. Ryerson founded the first overseas branch of the British Red Cross, which later became the Canadian Red Cross.

In 1901, Dunant won the first Nobel Peace Prize. By founding what is now the International Red Cross and Red Crescent Movement, he has saved the lives of millions of people.



On May 19, 1909, *The Canadian Red Cross Society Act* was approved by Parliament, and decreed that the Canadian Red Cross would serve as an auxiliary to the Government of Canada for Canadians, which was a measure that was in accordance with the Geneva Conventions. (Prior to 1909, the Canadian Red Cross operated as a branch of the British Red Cross.) As a result, for more than a century, Canadians have had their own national Red Cross Society dedicated to improving the situations of the most vulnerable people in Canada and around the world.

Today, there are Red Cross or Red Crescent Societies in more than 190 countries, all dedicated to the same ideals and fundamental principles.

The Fundamental Principles

In every country, our programs and activities are guided by seven Fundamental Principles. The Tanzanian Red Cross has created a short, simple version of these principles:

Humanity: We serve people, but not systems.

Impartiality: We care for the victims and the aggressors alike.

Neutrality: We take initiatives, but never take sides.

Independence: We bow to needs, but not rulers.

Voluntary Service: We work around the clock, but never for personal gain.

Unity: We have many talents, but a single idea.

Universality: We respect nations, but our work knows no bounds.

Essentially, we provide help to people in need, whatever their race, gender, culture, ethnicity, financial ability, sexual orientation, religion, disability, or age.

Red Cross Symbols

The International Red Cross and Red Crescent Movement has three official symbols: the Red Cross, Red Crescent, and Red Crystal.

All three symbols are equivalent and share the same status under international law. Each national society of the International Red Cross and Red Crescent Movement chooses one of these three symbols to use in their country.

The three emblems are used to identify military medical services as well as the people, programs, and objects connected with the activities of the International Red Cross and Red Crescent Movement.

Recognized as a symbol of humanity and neutrality, the emblem is the only protection Red Cross workers have when they bring relief and protection to victims of armed conflicts. The emblem identifies and protects the sick, the wounded and those who come to their aid, and medical equipment, buildings, and vehicles.



The Red Cross

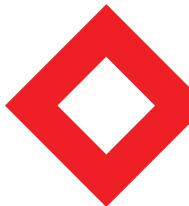
The Red Cross symbol—five red, equal-sized squares forming a cross resting on a white background—was adopted in 1863 at the first International Conference of what would one day be the Red Cross and Red Crescent Society. Today it is one of the most recognized emblems in the world, and continues to be an internationally respected symbol of protection and neutrality.

The Red Cross is the emblem that is used by the Canadian National Society. No organization—except the Canadian Red Cross and the medical services of the armed forces—has the right to use the Red Cross emblem in Canada. The Red Cross emblem must be readily recognized and respected around the world as a trusted symbol of protection and humanitarian aid. Its use is legislated by the Geneva Conventions Act, the Trade Marks Act, and the Canadian Red Cross Society Act.



The Red Crescent

Although the Red Cross emblem has no religious, political, or cultural associations, it was sometimes believed to be related to the Christian cross, and this association was problematic in certain regions and conflicts. In 1929, the International Federation of the Red Cross agreed to the adoption of an additional, equivalent emblem: The Red Crescent. This emblem could be used by any national society in place of the Red Cross.



The Red Crystal

In December of 2005, the International Red Cross and Red Crescent Movement welcomed the decision to create an additional emblem alongside the Red Cross and Red Crescent: the Red Crystal.

Who We Are

Our Mission

The mission of the Canadian Red Cross is to improve the lives of vulnerable people by mobilizing the power of humanity in Canada and around the world.

Our Vision

The Canadian Red Cross is the leading humanitarian organization through which people voluntarily demonstrate their caring for others in need.

Our Values

Our actions and decisions are based on:

- Humanitarian values, as expressed in our Fundamental Principles;
- Respect, dignity, and care for one another within and outside the Canadian Red Cross; and
- Integrity, accountability, effectiveness, and transparency.

Our Volunteers

The Canadian Red Cross relies on more than 25,000 volunteers across the country to fulfill its mission. Red Cross volunteer opportunities are dynamic and varied, with engagement levels varying by geographic location and program. For more information on volunteering, visit redcross.ca or contact your local Red Cross office.

How We Help

The Canadian Red Cross provides help in many ways:



Disaster Management

While many associate the Canadian Red Cross with its disaster relief efforts around the world, each year thousands of Canadians receive aid following emergencies such as house fires, flooding, ice storms, and even chemical

spills. Following a disaster, Canadian Red Cross volunteers ensure those affected have access to shelter, food, clothing, hygiene items, and emotional support. As part of a global network of 190 national Societies, the work and expertise of the Canadian Red Cross often extends beyond Canada's borders. Trained Canadian personnel and resources, including an Emergency Response Unit specializing in health, are poised for deployment within hours of a disaster.



International Operations

The Canadian Red Cross works around the world to protect and promote the rights of all people affected by armed conflict. The Geneva Conventions, laws that protect the wounded, the sick, prisoners of war, and civilians, serve as a mandate for the Canadian Red Cross

in its mission to provide assistance to those in need. The Canadian Red Cross educates Canadians on international issues including humanitarian law and development efforts. The Society recruits and trains qualified Canadian delegates for international field operations in countries affected by conflict or disaster or for long-term development missions.



First Aid Programs

As the largest provider of first aid training in Canada, the Canadian Red Cross has been offering first aid and CPR training for more than 50 years. With courses for individuals, groups, workplaces, and first responders, participants learn how to prevent injuries and to think, react, and respond in emergency situations.



Swimming and Water Safety Program

Since 1946, the Canadian Red Cross has been teaching Canadians how to stay safe around the water through our Swimming and Water Safety programs. Water safety activities are offered at community pools, beaches, schools and summer camps to help people of all ages and abilities gain knowledge and skills in every aspect of water safety.



Respect Education

The Canadian Red Cross aims to prevent abuse, neglect, harassment, and interpersonal violence to ensure everyone's right to live, play, and learn in a safe environment. Nationally recognized, award-winning programs teach children, youth, and adults about healthy relationships,

the signs of abuse, dating violence, personal safety, bullying prevention, and how to get help. Prevention educators with extensive training in abuse prevention deliver workshops to school and community groups, sports teams, coaches, educators, and parents or guardians. The aim is to stop the hurt before it starts.



Community Health and Wellness

Canadian Red Cross staff and volunteers work together to provide a variety of services that help people remain living independently in their homes with comfort and dignity, despite injury, illness, or other circumstances. Nutrition-based programs, such as Meals on

Wheels, provide balanced meals that eliminate the guesswork for clients and caregivers in meeting daily dietary requirements; transportation services ensure people in the community get to and from medical appointments, the grocery store, and more; and health equipment loans provide short-term loans of clean, safe medical equipment to people who are recovering from injury, illness, or surgery. Our programs are designed to enhance quality of life, support independence, and provide peace of mind. The services offered in each area vary according to the needs of the community.



2 Responding to Emergencies

Preparing to Respond

Make sure you have easy access to items that will help you respond to an emergency. Keep a first aid kit in your home and vehicle, and ensure that you know the location of the first aid kit and automated external defibrillator (AED) in your workplace. Download the Canadian Red Cross First Aid App to your mobile device so that you always have a first aid reference readily available.



You can purchase first aid kits and supplies from the Canadian Red Cross online store (products.redcross.ca), a drug store, or a medical supplies store. Whether you buy a first aid kit or assemble one yourself, make sure it has all of the items you may need. Perform regular maintenance and safety checks on all first aid kits and equipment. Remove or replace any items that are broken, expired, discoloured, or contaminated (e.g., a sterile tool in a torn package). You should also decontaminate any reusable equipment that has been used (e.g., a stretcher).



All workplace first aid kits must meet provincial/territorial legislation and occupational health and safety guidelines. Go to redcross.ca/firstaidlegislation for more details.

First aid kits should include at least the following supplies:

- Emergency telephone numbers for EMS/9-1-1, your local Poison Control Centre, and your personal doctor(s)
- Home and office phone numbers for family members, friends, or neighbours who can help in an emergency
- Sterile gauze pads (dressings) in small and large squares to place over wounds
- Adhesive tape
- Roller and triangular bandages to hold dressings in place or make slings
- Adhesive bandages in assorted sizes
- Scissors
- Tweezers
- Safety pins
- Cold packs or instant ice packs
- Disposable non-latex gloves, such as surgical or examination gloves
- Flashlight, with extra batteries in a separate bag
- Antiseptic wipes or soap
- Pencil and pad
- Emergency blanket
- Eye patches
- Thermometer
- Barrier devices, such as a pocket mask or face shield
- Canadian Red Cross first aid manual

Preparing For Emergencies at Home

To be ready for an emergency at home:

- Keep important information about yourself and your family in a handy place. Include your address, everyone's date of birth, health card numbers, medical conditions, allergies, and prescriptions and dosages. List the names and phone numbers of your doctors.
- Post the numbers for the police, fire department, emergency medical services (EMS), and Poison Control Centre near every phone in your home and save these numbers in your mobile phone's contacts list.
- Teach children how to call for help.
- Install smoke and carbon monoxide detectors. Test them regularly.
- Keep first aid kits handy in your home and car. Make sure everyone in the family knows where they are and what is in them.
- Review and practice the first aid skills that you learn so that you will have the confidence and knowledge to respond in an emergency.

Most communities are served by the emergency telephone number 9-1-1. If your community does not operate on a 9-1-1 system, search online or in your local phone directory for the numbers of the police department, fire department, and EMS system. Also include the number for your provincial or territorial Poison Control Centre's hotline on your list. Teach everyone in your home how and when to use these numbers.

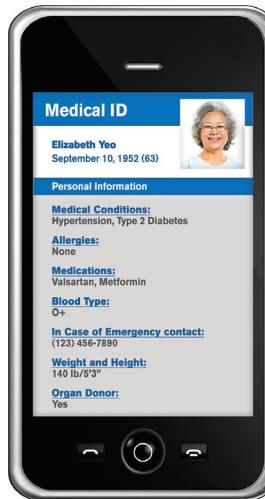
Take steps to make it easier for EMS personnel and others to help you, should an emergency occur:

- Make sure your house or apartment number is large, easy to read, and well-lit at all times. Numerals (e.g., "87") are easier to see and read than words (e.g., "eighty-seven").
- Keep relevant medical information, such as a list of the medications that each family member takes, in an accessible place at home and when you go out (e.g., on the refrigerator door and in your wallet or mobile phone).

Mobile phones and other electronic devices can display emergency contacts. The letters "ICE" (for "In Case of Emergency") may appear in the phone's contacts list next to the name of a doctor, spouse, or other important contact. Assigning "ICE" to a contact allows emergency personnel to reach someone who knows important facts about the ill or injured person. If the mobile phone has been programmed to include the ICE contact with a "0" in front, it will appear as the first contact in the person's list.

If you have a chronic medical condition such as diabetes, epilepsy, or allergies, consider wearing a medical identification product to alert EMS personnel of your condition in case you are unable to do so. There are also applications you can use to create digital identification tags in your mobile phone. These tags can be viewed even when your phone is locked, and so can provide important information in an emergency (such as your medical conditions, blood type, and emergency contact details).

In a life-threatening emergency, every second counts. By preparing for emergencies, you can help ensure that care begins as soon as possible—for yourself, a family member, a co-worker, or a member of your community.



Signs of an Emergency

UNUSUAL SOUNDS

- Screaming, moaning, shouting, or calls for help
- Sudden loud noises such as breaking glass, clashing metal, or screeching tires
- A change in the sound made by machinery or equipment
- An unusual silence

UNUSUAL ODOURS

- A foul or unusually strong chemical odour
- The smell of smoke
- The smell of gas
- An unrecognizable odour
- An inappropriate odour (e.g., a sickly-sweet odour on a person's breath)

UNUSUAL SIGHTS

- A stopped vehicle on the roadside or a car that has run off of the road
- Downed electrical wires
- Sparks, smoke, or fire
- A person who suddenly collapses or is lying motionless
- Signs or symptoms of illness or injury, such as profuse sweating for no apparent reason or an uncharacteristic skin colour

UNUSUAL BEHAVIOURS

- Confusion in a person who is normally alert
- Unusual drowsiness
- Personality or mood changes (e.g., agitation in a person who is normally calm)



Recognizing that an Emergency Exists

It will sometimes be obvious that an emergency exists. For example, a scream or cry for help, an unpleasant or unusual odour, or the sight of someone bleeding severely or lying motionless on the ground are all clear indications that immediate action is needed. But other times, the signs of an emergency may be more subtle, such as a slight change in a person's normal appearance or behaviour, or an unusual silence.

Willingness to Act

Sometimes people don't want to get involved in an emergency. The four most common reasons are:

- 1. The Bystander Effect:** If there are other people at the scene, it is easy to think that they can take care of the emergency without your help. However, you should never assume that someone has taken action and is providing first aid just because you see a lot of people. Remember that there are many important jobs that you can do. You can help control the crowd, direct the actions of bystanders, call EMS/9-1-1, get supplies, or provide care to the ill or injured person. If you are unsure of what to do, ask others at the scene how you can help.
- 2. Unpleasant injuries or illnesses:** Some people may feel faint, upset, or nauseated when they see blood, vomit, or visible injuries. If this happens to you, close your eyes or turn away for a moment and take a few deep breaths to calm yourself before you deal with the situation. If you are still unable to give care, you can volunteer to help in other ways, such as by calling EMS/9-1-1 and bringing necessary equipment and supplies to the scene.

3. Catching a disease: You might be concerned that performing first aid will put you at risk of infection, but there are many ways to reduce this risk. If you take simple precautions to limit contact with the ill or injured person—such as wearing gloves and using a CPR breathing barrier—you can limit the possibility of catching a disease. Remember that EMS personnel provide care for ill and injured people every day without incident.

4. Doing something wrong, or causing more harm: You might be afraid that you will be sued if you make a mistake. As long as you act reasonably, you don't need to worry. All provinces and territories have laws to protect bystanders who give emergency help. Getting trained in first aid can give you the confidence, knowledge, and skills you need to respond appropriately to an emergency. Use your good judgment and stay within the realm of the skills in which you were trained. Once you start giving first aid, keep providing help until EMS personnel arrive. If you are unsure of what to do, call EMS/9-1-1 and follow the EMS dispatcher's instructions. The most harmful thing you can do is to do nothing at all.

Thinking about these things now and mentally preparing yourself for an emergency will help you overcome your fears.

Legal Issues Around First Aid

Good Samaritan Laws

Good Samaritan laws, which protect First Aiders from financial liability, were developed to encourage people to help others in emergency situations. These laws assume a First Aider will do his or her best to save a life or prevent further injury. Good Samaritan laws require the First Aider to use common sense and a reasonable level of skill, as well as to give only the type of emergency care that is within his or her training. Good Samaritan laws usually protect First Aiders who act in the same manner as a "reasonable and prudent person" would in the same situation. For example, a reasonable and prudent person would:

- Move a person only if the person's life was in danger.
- Ask a responsive person (or the parent, guardian, or caregiver of a child or baby) for permission to help (consent) before giving care.
- Check a person for life-threatening conditions before giving further care.
- Call EMS/9-1-1.
- Continue to give care until more highly trained personnel take over.

If a First Aider's actions are grossly negligent or reckless, or if the First Aider abandons the person after starting care, Good Samaritan laws may not protect the First Aider.



You may be legally obligated to provide first aid as needed to any child or baby in your care.

Workplace First Aiders

First aid in the workplace can be governed by both national and provincial/territorial legislation. A workplace First Aider has additional responsibilities and may be legally required to provide first aid in the workplace if the need arises. He or she may also need to know other information, including:

- Where emergency equipment is located.
- How to properly complete documentation following a workplace incident.
- What the workplace-specific emergency procedures are.
- How to call for help in an emergency.

Refer to the legislation that governs your workplace for more information.



Getting Permission to Help

Once you decide to act, you need to get the ill or injured person's permission (also known as consent) to assist.

To get permission:

1. Tell the person who you are.
2. Tell the person that you are here to help.
3. Ask the person if that is okay.

If a baby or a child is ill or injured:

- Ask the parent, guardian, or caregiver for permission.
- If the child or baby is alone, you can assume you have permission to give first aid.



Special Situations

There are times when it is difficult to get permission to provide care for an ill or injured person or when the person denies the help of First Aiders or bystanders:

The Person Is Unresponsive Or Confused, Or Has a Mental Impairment

Someone who is unresponsive or confused, or who has a mental impairment, may not be able to grant permission. In these cases, the law assumes the person would give permission if he or she were able to do so. This is called implied consent. Implied consent also applies when a child or baby needs emergency medical assistance and his or her parent, guardian, or caregiver is not present.

The Person Refuses Care

An ill or injured person may refuse care, even if he or she desperately needs it. A parent or guardian also may refuse care for his or her child or baby. You must honour the person's wishes. Explain to the person why you believe care is necessary, but do not touch or give care to the person, and never attempt to give the person help by force. Remember, you should never put yourself in any danger. Stay nearby, if possible, in case the person later decides to accept your help or becomes unresponsive.

If you believe the person's condition is life-threatening, call EMS/9-1-1 and communicate that a person requires medical assistance but is refusing help. The EMS personnel who arrive will deal with the situation. If the person gives consent initially but then withdraws it, stop giving care and call EMS/9-1-1 if you have not already done so.

You and the Person Do Not Speak the Same Language

If you do not speak the same language as the injured or ill person, obtaining consent may be challenging. Find out if someone else at the scene can serve as a translator. If a translator is not available, do your best to communicate with the person by using gestures and facial expressions. When you call EMS/9-1-1, explain that you are having difficulty communicating with the person, and tell the dispatcher which language you believe the person speaks. The dispatcher may have someone available who can help with communication.

Duty to Report Child Abuse or Neglect

Every adult in Canada has a legal duty to report child abuse or neglect, even if it is not confirmed. Information around the specific how-to-report details can be found in your jurisdiction's Child Protection Act, but the duty to report is uniform in all acts. If you are responding to a first aid emergency and you think a child is being harmed, then there needs to be a report to child protection and/or police. Even if you are unsure, child protection needs to be informed and needs to guide the next steps. Also share your concerns with the EMS personnel who respond to the situation.

Responding to Disclosures of Violence

A person revealing experiences of abuse—past or present—can be challenging and upsetting. This is even more true if the individual receiving the disclosure is close to the person and/or knows the perpetrator. Your response to the disclosure is critical. Studies show that the manner in which a disclosure of interpersonal violence is handled is a significant factor in determining the psychological impact on the victim. Indifference and blame are damaging responses that can have long-lasting consequences.

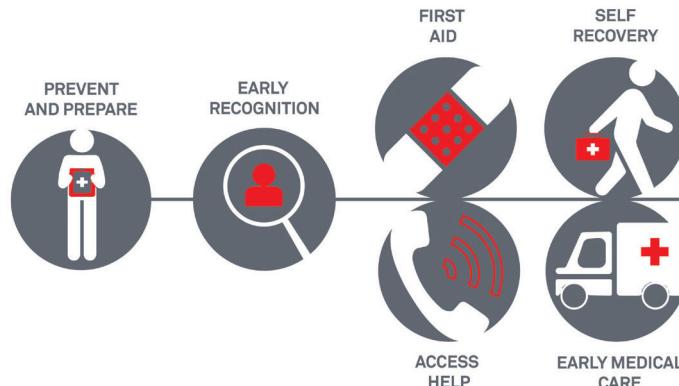
If you receive a complaint of abuse, neglect, harassment, or bullying, you must know what steps need to be taken, when they need to occur, and how they need to be carried out. The complaint cannot be diminished or ignored. There must always be a response. Both verbal and non-verbal disclosures need to be handled sensitively while following specific procedures. If the disclosure is from a young person, your jurisdiction's Child Protection Act may govern how you respond.

The Emergency Medical Services System

The emergency medical services (EMS) system is a network of community resources and trained personnel, organized to give emergency care in cases of injury or sudden illness. The system begins when someone sees an emergency and decides to take action by calling EMS/9-1-1. This action allows the EMS dispatcher to take down information about the emergency and provide it to the trained EMS personnel who will respond to the scene. Many EMS dispatchers are also trained to provide first aid and CPR instructions over the phone to assist the caller until EMS arrives.

Chain of Survival Behaviours

The Chain of Survival Behaviours is a series of steps that help ensure a positive outcome for an ill or injured person. As a First Aider, your role is to prepare, recognize emergencies, provide first aid and/or access help.



Understanding Your Role as a First Aider

First aid is the immediate care that is given to an ill or injured person until more advanced care can be obtained.



Your role as a First Aider includes four basic steps:

1. Recognize the emergency.
2. Protect yourself, the ill or injured person, and bystanders.
3. Access help (e.g., call EMS/9-1-1).
4. Act according to your skills, knowledge, and comfort level.

One of the simplest and most important ways of providing first aid is to call for help (EMS/9-1-1). By making this call, you ensure that the ill or injured person receives care from highly trained medical professionals.

Responding to the scene of an emergency involves providing emotional support as well as caring for injuries. When providing care, you should:

- Speak in a calm and reassuring manner. Ask for the ill or injured person's name and use it often.
- Communicate both verbally and nonverbally to reassure the person.
- Position yourself at eye level when you talk to the ill or injured person. Avoid unnecessary physical contact and any body language that could appear threatening.
- Actively listen to the ill or injured person. This involves four behaviours:
 1. Making every effort to fully understand what the person is trying to say.
 2. Repeating back to the person, in your own words, what the person said.
 3. Avoiding criticism, anger, or rejection of the person's statements.
 4. Using open-ended questions (i.e., avoid questions that can be answered with "Yes" or "No").

Understanding Your Role in the EMS System

The emergency medical services (EMS) system is a network of professionals linked together to provide the best care for people in all types of emergencies. As a member of the community, you play a major role in helping the EMS system to work effectively. Your role in the EMS system includes four basic steps:

1. Recognizing that an emergency exists
2. Deciding to help/take action
3. Activating the EMS system
4. Giving care until EMS personnel take over



Who Is Coming to Help

Emergency medical services (EMS) personnel have advanced training that allows them to provide medical care outside of the hospital setting. Depending on their level of training, EMS personnel have different roles and responsibilities. There are different kinds of trained personnel who may respond when a call is placed to EMS/9-1-1.

First Responders: These include police, firefighters, and job-specific personnel such as athletic trainers and workplace first aid response teams. They are trained in time-sensitive lifesaving measures. Unlike lay responders (First Aiders), first responders have a legal obligation to act in an emergency when they are on duty.

Paramedics: These are highly specialized emergency personnel whose skills include both basic and advanced life support. Once on the scene, these professionals will take over the care of the person, including transportation to a hospital or other facility if necessary.



Activating EMS

In a life-threatening emergency, it is critical that someone activate EMS by calling EMS/9-1-1. Activating EMS will send emergency medical help on its way as quickly as possible. The sooner EMS personnel arrive, the higher the chances of a positive outcome.

EMS varies from community to community. Most people in Canada call 9-1-1 for help in emergencies, but in some areas of Canada and in many workplaces you may need to dial a different designated emergency number instead. If you live or work in an area where 9-1-1 is *not* the number to call in an emergency, make sure you know the designated emergency number to call.

Phone carriers are required to connect any 9-1-1 call made from a mobile phone, even if the phone does not have an active service plan. In most areas, you cannot text 9-1-1. Unless you have confirmed that the 9-1-1 call centre in your area supports texting, you should always call.



When to Call EMS/9-1-1

At times, you may be unsure whether EMS personnel are needed. To make the decision, use your best judgment based on the situation, your assessment of the ill or injured person, and information gained from this course and other training you may have received. Trust your instincts. When in doubt, make the call. If you think that an emergency exists, it probably does; you should call EMS/9-1-1 for professional help immediately.

Call EMS/9-1-1 if there is a danger to you or others, or if the ill or injured person has any of the following conditions:

- Unresponsiveness or an altered mental state (e.g., confusion)
- Difficulty breathing or no signs of breathing
- Persistent chest pain or pressure
- Life-threatening or uncontrollable bleeding
- Seizures
- Severe headaches
- Abnormal speech
- Injuries to the head, neck, or back
- Blood in the vomit or urine
- An apparent mental health crisis
- Imminent childbirth

You should also call EMS/9-1-1 if the ill or injured person is not easily accessible, or if the situation involves any of the following:

- Fire
- An explosion
- A motor vehicle collision
- Hazardous materials
- Downed electrical wires
- Swift-moving water

Poison Control Centres

If none of the conditions above apply and you suspect that poisoning is the cause of the person's condition, call poison control instead of EMS/9-1-1. If any of the above conditions are true (for example, a person who may have swallowed poison is having difficulty breathing), or you are unsure of whether to call EMS/9-1-1 or poison control, call EMS/9-1-1.

Calling EMS/9-1-1 for a Child in Your Care

If you are a professional caregiver, you may have additional considerations when calling EMS/9-1-1 for a child in your care.

Once you have activated EMS, call another caregiver to come and stay with any other children while you attend to the ill or injured child. If the child is being taken to the hospital, call his or her parent or guardian and ask the parent or guardian to meet you there. If you are travelling in an ambulance, tell them you will call again when you know the name and location of the hospital and that you may not know this information until after you arrive. If you cannot go with the child in the ambulance, be sure to give the paramedics the child's medical information and your contact information.

After an Emergency

Being involved in an emergency and providing first aid can be stressful. After the emergency is resolved, you may have lingering feelings such as uneasiness, doubt, anxiety, and fear. After dealing with an emergency, it is often helpful to talk to somebody about the situation.

Everyone reacts to stressful situations differently. It is very difficult to predict who will or will not be affected by abnormal events. Some individuals may feel better in the few days after the event. Others may find that it takes longer for their stress to go away, and that it begins to impact their relationships.

Consider seeking professional help if you experience any of the following for more than two weeks after the emergency:

- Crying fits or uncontrollable anger
- Trouble eating
- Trouble sleeping
- Loss of engagement with former interests
- Unusual or unexplained pain (e.g., headaches or stomach aches)

- Fatigue
- Feelings of guilt, helplessness, or hopelessness
- Staying away from family and friends
- Ignoring daily tasks, such as going to work

For help dealing with ongoing stress symptoms, contact your local crisis intervention line. You may also speak to your family doctor or a mental health professional.

Documentation

If an incident occurs in a workplace (including a marine environment), it must be documented properly. The documentation may be paper and/or electronic. The reports you create are official legal documents: paper versions should be filled out in pen (not pencil), with any changes or corrections crossed out and initialed.

Good documentation is:

- Complete and accurate
- Legible
- Objective
- Completed as soon as possible (while your memory of the incident is fresh)

Lowering the Risk of Infection

Giving first aid care is a hands-on activity that can put you in close contact with another person's bodily fluids (such as saliva, mucus, vomit, and blood), which may contain harmful pathogens (microorganisms that can cause disease or infection). Some pathogens pose a particular risk because of their long-term effects on the health of the infected person.

Pathogens spread from person to person through four modes of disease transmission. Some pathogens spread through only one of these routes, while others spread through several.

MODE OF TRANSMISSION		
	Definition	Example
Direct Contact	 Occurs when bodily fluids from an infected person enter another person's body	A cut on your hand comes into contact with an infected person's blood. Examples: HIV/AIDS, Hepatitis, Herpes
Indirect Contact	 Occurs when germs from an infected object or surface enter another person's body	You are not wearing gloves and you pick up a tissue that has been used by an infected person, and then you rub your eye. Examples: Meningitis, Influenza
Airborne Transmission	 Occurs when a person breathes in germs from the air	You are not wearing a face mask while providing first aid to an infected person. The infected person sneezes, sending germs into the air, and then you breathe them in. Examples: Measles, Tuberculosis
Vector-Borne Transmission	 Occurs when germs are introduced directly into the body	An infected mosquito bites you, injecting pathogens into your blood. Examples: Lyme Disease, Malaria

How to Prevent Diseases from Spreading

Personal Precautions

Personal precautions are the actions that individuals can take to reduce the risk of disease transmission. Examples include washing your hands frequently, treating all blood and other bodily fluids as infectious materials, covering your mouth and nose when sneezing, eating well, and getting enough exercise and sleep.

One way to significantly reduce your risk of infection is to inspect your hands regularly and cover even small cuts with adhesive bandages. This reduces the number of points where germs can enter your body.

Handwashing

Proper handwashing is an important precaution for preventing the spread of germs that cause many infectious diseases. Frequent handwashing is important as part of a daily routine, for example, before eating or drinking and after using the washroom.

Wearing gloves helps to protect you from infection, but it does not eliminate the need for proper hygiene. First Aiders should always wash their hands thoroughly when they have finished giving care, even if they wore gloves the entire time.

Use the following guidelines when washing your hands:

1. Always use warm running water and a mild soap.



2. Create a lather by rubbing your hands together with the soap—friction with the soap suds is what actually removes the germs from hands. Rub your hands together vigorously for at least 30 seconds.



3. Wash all parts of each hand. Be sure to scrub your palms and wrists, between your fingers, under your fingernails, and around the backs your hands.



4. Dry your hands with a clean paper towel.



5. Turn the faucet off using the towel as a barrier between your hands and the faucet handle. Use the towel as a barrier for the door handle as well.



When to Wash Your Hands

Wash your hands after touching anything that is likely to carry germs (e.g., after wiping your nose, changing a diaper, or touching a pet), and before touching anything that could carry germs into the body (e.g., before handling food or touching an open cut). It is also a good habit to wash your hands frequently, for example when returning home from a public place.

In a first aid emergency, remember to wash your hands:

- Before and after contact with an ill or injured person.
- After handling dirty articles, instruments, or dressings.
- Before or after treating wounds.
- After removing gloves.

Hand Sanitizers

Hand sanitizers are not a substitute for hand washing, and are not suitable for cleaning visibly soiled hands. They should be used only as a temporary measure in situations where you are unable to wash your hands immediately. If you can see dirt on your hands, you should wash them with soap and water before using hand sanitizer.

When using an alcohol-based hand sanitizer to help decontaminate your hands, use the amount of product recommended by the manufacturer. Rub it thoroughly over all the surfaces of your hands, including your nails and in between your fingers, until the product dries.

Immunization

Most Canadians have been immunized against common diseases such as measles and tetanus. Some vaccine-preventable diseases are serious, and can lead to disability or death. Immunizations protect not only you, but also your family, friends, and co-workers.

Immunization introduces a substance into the body that builds up its resistance to germs that cause a specific disease. Some vaccinations may wear away with time. As a result, it's possible that your immunity to a particular disease could decline. It is important to keep up with your immunization needs since protection against diseases through immunization is a lifelong process.

Some vaccines require more than one injection and a certain period of time between injections. If you are planning a trip outside the country, find out well before you leave which immunizations are recommended and required in order to safely go to the countries you will be visiting.

Because the risk of disease varies from place to place, this information cannot cover all the hazards that you might face. For specific guidelines on your particular situation, talk to your doctor or your community public health centre.

Equipment Precautions

Personal protective equipment (PPE) is the general term for items that protect you from contact with pathogens and contaminated objects. Examples include barrier devices such as safety glasses, goggles, face masks, CPR breathing barriers, and gloves. You should always use some type of barrier device between yourself and any material that could pose the risk of infection.

Any disposable equipment that you have used (e.g. gloves, breathing barriers) should be immediately disposed of in a labelled leak-proof container with a biohazard symbol.



Gloves

Wearing gloves is an important way to protect yourself while giving first aid. Most gloves found in first aid kits are disposable and latex-free, as some people are allergic to latex. Disposable gloves are meant to be worn once and then discarded; never wash or reuse disposable gloves. Gloves should fit properly. You should throw out any gloves that are discoloured, torn, or punctured.

Wear gloves when:

- You are providing care, especially if there is a possibility that you will come into contact with another person's blood or other potentially infectious material.
- You must handle items or surfaces soiled with blood or other potentially infectious materials.

When you are wearing gloves, try to limit how much you touch other surfaces. Avoid touching anything while wearing soiled gloves as pathogens can easily transfer from that surface to another person. If possible, remove soiled gloves and replace them with a clean pair before touching other surfaces or equipment in your first aid kit.

Consider asking people to begin helping themselves while you retrieve and/or put on your gloves. For example, a bleeding person can use his or her own hand to apply pressure to the wound. This can also be effective in situations where gloves are not available.

When you are finished providing care, remove your gloves using the proper technique to reduce the risk of contaminating your skin. Dispose of the gloves properly and wash your hands. When multiple people are in need of care, remove your gloves, wash your hands, and put on a clean pair before assisting the next person.

Proper Technique for Removing Gloves

To remove soiled gloves without contaminating your skin:

1. With one hand, pinch the glove at the wrist of your second hand, being careful to touch only the glove's outer surface.
2. Pull the glove down and off your hand.
3. Form the glove into a ball and hold it in the palm of your gloved hand.



4. Insert your gloveless thumb under the glove of your other hand at the inner wrist.
5. Pull the glove downward off the hand, turning it inside out and trapping the other balled glove inside.



6. Discard gloves appropriately.
7. Wash your hands thoroughly with soap and water for at least 30 seconds, using the proper handwashing technique.





CPR Breathing Barriers

CPR breathing barriers are used to reduce the risk of infection when giving rescue breaths by eliminating the need for mouth-to-mouth contact, protecting you from bodily fluids such as saliva and blood.

The most basic and portable type of breathing barrier is a face shield—a flat piece of thin plastic that is placed over a person's face, with an opening or valve that allows you to breathe into the person's mouth.

A pocket mask is a transparent, flexible device that creates a tight seal over the person's nose and mouth. The opening contains a filter or a valve that protects you from coming into contact with the person's bodily fluids and exhaled air.

Breathing barriers sized specifically for children and babies are available. If possible, select equipment that is appropriately sized for the injured or ill person.

Environmental Precautions

Environmental precautions refer to the systems that are implemented in an area to reduce exposure to germs. Examples include making sure there is proper ventilation in the workplace, that people don't use the same sink for hygiene and food preparation, and that any contaminated materials are immediately disposed of in a dedicated biohazard garbage.

Designate a container for sharps (potentially infected sharp objects such as used needles and lancets). It should be puncture-resistant, leak-proof, and labelled with warning signs such as the biohazard symbol. To avoid infection, put all needles and similar sharp objects into this container immediately after they are used. It should not be used for other purposes.



Many environmental precautions are the responsibility of the employer, but you can make suggestions if you notice something that could be improved.



Cleaning and Disinfecting Surfaces and Equipment

Reusable equipment and surfaces that have been contaminated by blood or other potentially infectious materials need to be properly cleaned and disinfected before the equipment is put back into service or the area is reopened. Clean and disinfect surfaces and equipment as soon as possible after the incident occurs. Remember to wear appropriate personal protective equipment (PPE).

If blood or other potentially infectious materials have spilled onto the floor or another surface, take steps to prevent unnecessary people from accessing the area. If the spill contains sharp objects (e.g., shards of broken glass), do not pick them up with your hands. Instead, use tongs, a disposable scoop and scraper, or two pieces of cardboard to remove and dispose of them. Carefully wipe up the spill using absorbent towels, and/or use a solidifier (a fluid-absorbing powder).

After cleaning up the spill, flood the area with a freshly mixed disinfectant solution of approximately 1 part bleach to 9 parts water (a 10% solution). Always ensure that there is good ventilation, and wear gloves and eye protection when using bleach. Let the solution stand on the surface for at least 10 minutes, then use clean absorbent materials (such as paper towels) to wipe up the liquid and dry the area. Dispose of all materials used to clean up the spill in a labelled biohazard container. If a biohazard container is not available, place the soiled materials in a sealable plastic bag or a plastic container with a lid, seal the container, and dispose of it properly.

Soft materials such as clothes and linens that have been contaminated should be washed with soap and the hottest water available, at least 70°C (158°F). Hard-surfaced materials, such as dustpans, should be cleaned with a disinfectant solution. There is no need to dispose of soft materials or instruments as long as they are washed properly.



Handling an Exposure Incident

An exposure incident occurs when one person's bodily fluids risk infecting another person through contact with the eyes, mucous membranes (e.g., in the mouth or nose), or an opening in the skin (e.g., a cut). Being pricked by a used syringe is also an example of an exposure incident.

In the event of an exposure incident, follow these steps immediately:

- Decontaminate the exposed area, if possible:
 - If your skin was exposed, wash the contaminated area with soap and water.
 - For infectious splashes into your mouth or nose, flush the area with water.
 - For infectious splashes into your eyes, irrigate the eyes with water, saline, or a sterile irrigant for 15 to 20 minutes.
- Report the exposure incident to EMS personnel or your healthcare provider.

If the exposure incident occurred in a workplace setting, notify your supervisor and follow your company's exposure control plan for reporting the incident and receiving post-exposure follow-up care. Some workplaces have additional requirements dictated by regulations and legislation: ensure that you are aware of any local, provincial/territorial, or organizational laws and regulations that apply to you.



3 Check, Call, Care

If you encounter an ill or injured person, there are three simple steps that you must take:



Check

Once you recognize an emergency you must first check the scene, then check the person.

Check the Scene

Before rushing to help an ill or injured person, stop and take a good look at the scene. This will form an initial impression. Try to answer these questions:

Is the scene safe for you, the ill or injured person, and any bystanders?

Enter a scene only if it is safe to do so. Look for hazards such as spilled chemicals, hostile bystanders, or oncoming traffic. Listen for things such as ringing alarms or leaking gas. Smell for things such as gas or smoke. Avoid entering confined areas with poor ventilation and places where there is a risk of explosion (e.g., from leaking propane or natural gas). Do not enter the scene if the person is hostile or threatening suicide.

If hazards are present, stay at a safe distance and call EMS/9-1-1. Leave dangerous situations for EMS personnel. Once EMS personnel arrive and make the scene safe, you can offer your assistance as appropriate. Remember that conditions at the scene may change, so a safe area could quickly become dangerous. It is important to continuously monitor your surroundings even if your initial assessment revealed a low level of risk.

What happened? How did it happen?

Take note of anything that might reveal the cause of the emergency. If the person is unresponsive and there are no witnesses, your check of the scene may offer the only clues as to what happened. Use your senses to detect anything out of the ordinary, such as broken glass, a spilled bottle of medication, or an unusual smell or sound. Keep in mind that

the ill or injured person may not be exactly where he or she was when the emergency occurred—someone may have moved the person, or the person may have moved in an attempt to get help.

How many ill or injured people are there?

Look carefully for more than one ill or injured person. A person who is moving or making noise, or who has very visible injuries, will likely attract your attention right away, but there may be a person who is silent and not moving or a person obscured by debris or wreckage who you do not notice at first. It is also easy to overlook a small child or a baby.

Is there someone to help?

Take note of bystanders who can be of assistance. A bystander who was there when the emergency occurred or who knows the person may be able to provide valuable information. Bystanders can also assist in other ways, such as by calling EMS/9-1-1, waiting for EMS personnel and leading them to the site of the emergency, getting needed items (such as an AED and first aid kit), controlling crowds, and reassuring the injured or ill person.

What is your initial impression of the ill or injured person?

Before you reach the person, try to form an initial impression about the person's condition and what is wrong. For example, does the person seem alert, confused, or sleepy? Look at the person's skin—does it appear to be its normal colour, or does it seem pale, ashen (grey), or flushed? Is the person moving or motionless? Does the person have any immediately identifiable injuries? Look for signs of a life-threatening illness or injury, such as unresponsiveness, trouble breathing, or life-threatening bleeding.



Check the Person (Primary Assessment)

If it is safe to do so, quickly check the person to determine his or her initial condition and whether there are any life-threatening concerns. This is called the primary assessment.

1. Check the person to see if he or she is responsive:
 - Does the person respond when you talk to him or her (e.g., does the person open his or her eyes, move, moan, or talk to you)?
 - Does the person respond when tapped on the shoulder?A person who does not respond at all is considered to be unresponsive.
2. Check the person's ABCs: Airway, Breathing, and Circulation



Checking the ABCs is a rapid assessment and should be done as quickly as possible.

A = Check the Airway

Your first job is to make sure the person has an open airway. The airway is the pathway that connects the mouth and nose to the lungs. If it is closed or blocked, air cannot get in. The airway is most commonly blocked by the tongue. If the person is speaking, moaning, or crying, the person's airway is open.

If the person is unresponsive, perform a head-tilt/chin-lift. The head-tilt moves the back of the tongue away from the airway, and the chin-lift opens the epiglottis.



Performing the Head-Tilt/Chin-Lift

To perform a head-tilt/chin-lift, place one hand on the person's forehead and 2 or 3 fingers under the chin. Gently tilt the head back until the chin is pointing upward.

B = Check Breathing

Next, check for breathing. Someone who can speak or cry is breathing. Check for normal breathing for 5 to 10 seconds. To assess breathing, put your cheek close to the person's face so that you can hear and feel air coming out of the person's nose and mouth while you watch the chest rising and falling. A person is breathing normally if air is moving in and out of the lungs and the chest is rising and falling in a normal, regular pattern.

Agonal Respiration

A person who is not breathing normally may be occasionally gasping for air: this is a reflex action called "agonal respiration" and unlike normal breathing, it is irregular and sporadic. Because agonal respiration does not oxygenate the blood, it is not considered normal breathing. A person who is experiencing agonal respiration is in cardiac arrest and requires immediate assistance.



Agonal respirations originate from lower brainstem neurons as higher centres become increasingly hypoxic (oxygen-deprived) during cardiac arrest. With agonal respiration, the diaphragm is still receiving intermittent residual impulses from the brain, resulting in sporadic gasping breaths. Agonal respiration is sometimes referred to as "air hunger" and it can appear as snorting, gurgling, moaning or gasping, a gaping mouth, or laboured breathing. The duration differs from person to person, lasting from a few minutes to hours.

C = Check Circulation

If the person is breathing normally (more than an occasional gasp), his or her heart is beating. Checking circulation means quickly looking at the person from head to toe for signs of life-threatening external bleeding. Life-threatening bleeding must be controlled as soon as possible.



Unresponsiveness, trouble breathing, and life-threatening bleeding are all signs of a life-threatening emergency. If your initial check of the person reveals any of these conditions, you must provide care for that condition immediately. Make sure that someone calls EMS/9-1-1 right away, and obtain an AED and first aid kit if these items are available.

Obvious Signs of Death

Obvious signs of death include:

- Torso transection (torso cut into two pieces)
- Decapitation (detached head)
- Decomposition

If you encounter a person with one or more of these signs, call EMS/9-1-1 and follow the dispatcher's instructions. Leave the body and scene exactly as they were found, as the area could be considered a crime scene.

Rolling a Person from a Face-Down to a Face-Up Position

A person can collapse in a variety of positions. If a person is lying face down, is unresponsive, and not breathing, or if the face-down position makes it impossible to check the person's ABCs, then the person must be rolled into a face-up position without delay.

Move an ill or injured person only if:

- The person's position stops you from giving care for a life-threatening injury or illness.
- The person is blocking access to someone with a more serious injury or illness.
- The scene is becoming unsafe.

To roll a person from a face-down to a face-up position:

1. Support the head while rolling the person.
2. Try to roll the person as one unit (head, back, and legs at one time).
3. Open the airway with a head-tilt/chin-lift once the person is facing upward.
4. Check the person's ABCs.



Call

If you identify an unresponsive individual or an individual with a life-threatening condition in your initial check, you must always activate EMS.

Whenever possible, use a mobile phone or ask a bystander to call EMS/9-1-1. Having someone else call is better than doing it yourself; this way, you can stay with the ill or injured person and continue to give first aid. If you are alone with the person and you do not have a mobile phone, call out loudly for help. If no one comes, get to a phone as quickly as you can and call EMS/9-1-1. As soon as you hang up, return to the person.

If someone else has to leave to make the call for you, ask that person to come back and tell you what the EMS/9-1-1 dispatcher said. If using a mobile phone, the person can stay with you while placing the call and speaking to the dispatcher.



Any time you activate EMS, you should also obtain a first aid kit and an AED if they are available.

If You Are Alone: Call First or Care First?

If you are alone without a phone and there is no one to send to call EMS/9-1-1, you may need to decide whether to call first or give care first. Unless the situation specifically requires you to provide care before calling EMS/9-1-1, you should always activate EMS first so that help will arrive as soon as possible.

You should provide care first in the following situations:

The person is choking or is experiencing anaphylaxis and carrying epinephrine.

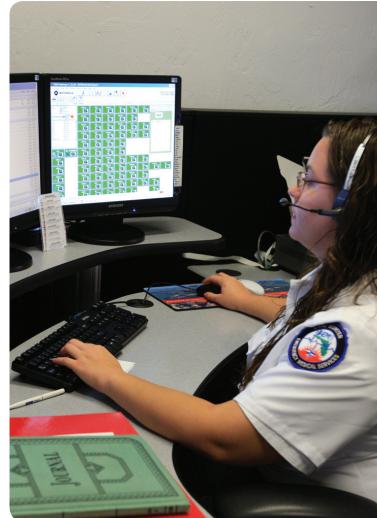
In these cases, the person could die before EMS arrives, so providing immediate care is your highest priority. Moreover, these situations can be corrected by First Aiders, so immediate care may actually improve the person's condition. If a person experiencing anaphylaxis is *not* carrying epinephrine, there is little that you can do as a First Aider, so you should call EMS/9-1-1 first before providing care.

The person has life-threatening bleeding

Life-threatening bleeding quickly reduces the body's blood volume, which can be fatal. Apply direct pressure immediately, then call EMS/9-1-1 as soon as possible. In many cases, the person will be able to apply pressure to his or her own injury while you (or a bystander) call EMS/9-1-1.

The person is an unresponsive child or baby who is not breathing.

Children's organs require high levels of oxygen in the blood to function efficiently and can rapidly shut down when oxygen levels are lowered. For this reason, cardiac arrest in children is more likely to be caused by low oxygen levels than by a problem with the heart itself. If you find a non-breathing child or baby who is unresponsive, you must introduce oxygen into his or her system as soon as possible. Immediately do 2 minutes of CPR (5 cycles of 30 compressions and 2 breaths) to increase the oxygen level, then quickly call EMS/9-1-1 before returning to provide more care.



When You Call EMS/9-1-1

When you call, the EMS dispatcher who answers will likely ask:

- Where is the emergency (e.g., the address, nearby intersections, or landmarks)?
- What is the nature of the emergency (i.e., is police, fire, or medical assistance needed)?
- What telephone number are you calling from?
- What is your name?
- What has happened?
- How many people are involved and what is their condition?

Don't hang up until the dispatcher tells you to. The dispatcher may need more information. Many dispatchers are also trained to give first aid and CPR instructions over the phone, which can be helpful if you are unsure of what to do or need to be reminded of the proper care steps.

Radio Medical Advice in a Marine Environment

In a marine environment, it may not be possible for EMS personnel to come to your assistance in an emergency. You may need to contact a doctor and request advice on providing care, even if it is outside of your training. Document the doctor's orders carefully.

Medical advice can be accessed by:

- Mobile phone.
- Radiotelephone contact with a shore radio station.
- Radiotelephone contact with a nearby port or ship with a doctor on board.

You should prepare the following information and present it to the doctor:

- Routine information about the ship
- Routine information about the person
- Details of the illness/injury
- Findings from your secondary assessment
- Care rendered and the person's response to that care

Transport Canada provides a reference regarding radiotelephone procedures (TP 9878E: Safety and Distress Radiotelephone Procedures), which should be displayed next to your vessel's radiotelephone. The procedures in this reference advise that safety and distress radio messages should be made on Channel 16 (156.8 MHz) or on frequency 2,182 kHz, MF.



Care

Care for any life-threatening conditions first. Give the care that is needed, within the scope of your knowledge and training, and follow these general guidelines:

- Monitor the person's breathing and level of responsiveness.
- Help the person rest in the most comfortable position. If necessary, roll the person into the recovery position.
- Keep the person from getting chilled or overheated.
- Reassure the person by repeating that you are there to help and that EMS personnel have been called (if this is true).
- Continue to watch for changes in the person's condition.

Recovery Position

A person who is unresponsive or has an altered level of responsiveness should not be left in a face-up position, as the airway can become blocked by the person's tongue or the person's saliva or other bodily fluids. You can help protect the airway by rolling the person onto his or her side and into the recovery position.



It is usually safest for any ill or injured person to be in the recovery position, so long as this doesn't interfere with providing care. However, the recovery position is unnecessary if the person is fully responsive and able to protect his or her own airway.

You should avoid rolling a person if doing so could worsen his or her condition (e.g., if the person's leg appears to be broken). As always, you should move the person only if it is safe to do so.

To roll a person safely into the recovery position:

1. Raise the person's arm that is closest to you.
2. Place the arm farther from you across the person's chest with the palm against the cheek.
3. Raise the knee of the leg farther from you.
4. Roll the person toward you as one unit by pulling the raised knee and supporting the head and neck with your other hand
5. Position the person on his or her side, and slide the bent knee into a position that prevents the person from rolling onto his or her face.
6. Move the person's other arm into a position of comfort in front of the body.
7. Reassess the person's ABCs.

The steps above are recommended, but there are other effective methods of moving a person into the recovery position. Regardless of how you do it, the important things to remember are as follows:

- Support and protect the head while rolling the person.
- Try to roll the person as one unit (head, back, and legs at the same time).
- Roll the person into a position where the body will stay safely on its side
- Position the head so that it keeps the airway open
- Check the ABCs after you complete the roll.

When to Stop Giving Care

Once you begin providing care to an injured or ill person, you must continue to give the appropriate care until:

- Another trained First Aider or EMS personnel takes over.
- You are too exhausted to continue.
- The scene becomes unsafe.

When More Than One Person Is Ill or Injured

If you are in a situation where there are several ill or injured people, the general principle is to provide care to the people who need it the most urgently. This involves deciding whose illness or injuries pose the greatest risks, as well as deciding who you are most able to help given your level of training. The process of sorting and providing care for multiple ill or injured people according to the severity of their conditions is called triage.

As an example, if one person has minor bleeding and another person has life-threatening bleeding, you should help the person with life-threatening bleeding first. EMS personnel will arrive before the minor bleeding becomes serious.

Guidelines for Helping an Ill or Injured Person with Medication

You should only help a person take his or her medication if:

- It is safe to do so.
- The person is responsive and has in some way expressed a need for help with finding, preparing, and/or taking the medication.

When helping someone with his or her medication, check the label to ensure that it is the correct medication and, if it is a prescription medication, that it was prescribed for the person who will be taking it. You should also carefully read over any instructions or warnings (e.g.,

how much the person should take and when it should be taken). You should read the label at least twice: once when you find the medication, and again before you give it to the person.

If there is no name on the label, confirm with the person that it is the medication he or she wants to take. You must also ask if the person has any allergies or is taking anything that could interfere with or react negatively with the medication. Quickly review these details with the ill or injured person and obtain his or her permission before helping.



Write down what medication was taken, how much of it was taken, and when it was taken. This information will be useful to EMS personnel.

Finding the Medication

When helping a responsive ill or injured person find his or her medication, listen to instructions from the person on where to find it. If the person cannot speak, look in places where people typically keep their medication (e.g., backpack, purse, or pocket), or look for physical cues from the person (e.g., the person pointing at a bag). If the person cannot speak and you are helping with prescription medication, ask the person to confirm the name on the label by using physical signals (shaking or nodding the head, blinking once or twice, etc.). If the person is unable to do this, you may be able to confirm the person's identity by asking bystanders, looking for a piece of photo ID, or checking for a medical identification product.

Preparing the Medication

Preparing the person's medication varies depending on the type of the medication and its instructions. For example, preparing oral medication may simply involve handing the person the correct number of tablets. In

the case of an inhaler or auto-injector, you may have to remove the cover and follow the preparation instructions provided on the package before handing it to the person for self-administration.

Guiding the Person in Taking the Medication

Guiding the person in taking his or her medication also varies depending on the type of medication. For example, with tablets, this may involve telling the person to chew them or place them under the tongue. With an inhaler, this may involve instructing the person to shake the inhaler and exhale before dispensing the medication, or helping the person hold the inhaler to his or her mouth. When simply guiding the person, you do not press on the inhaler's plunger yourself. With an auto-injector, you may guide the person by showing where on the outer thigh the epinephrine should be injected.

Giving Lifesaving Medication

Giving lifesaving medication involves helping an ill or injured person who has in some way expressed a need for help in taking his or her salbutamol (Ventolin) inhaler or using an epinephrine auto-injector. With an inhaler, you would dispense the correct number of sprays (from a metered-dose inhaler) either into a spacer or directly into the person's mouth as he or she inhales. With an auto-injector, you would inject the epinephrine directly into the person's outer thigh.

Giving Ingested Medications

Helping with ingested medications should be limited to finding the medication, preparing the medication, and guiding the person in taking the medication. In cases where the person is physically unable to get the medication into his or her mouth (e.g., the person has injured his or her hands), First Aiders may assist by placing the correct number of pills into the mouth or holding a liquid dispenser up to the person's mouth, if the person has explicitly asked the First Aider to do so. Otherwise, you should never put anything into a person's mouth, as this can be a choking hazard.



Secondary Assessment

After you have identified and cared for any life-threatening conditions found in the primary assessment, you must check the person for other injuries and conditions that may require care. This is called the secondary assessment.

If the person's ABCs seem normal, do a secondary assessment to look for injuries or conditions that were not identified in your primary assessment. The secondary assessment consists of three steps:

1. Asking questions
2. Checking the quality of the person's vital signs
3. Doing an injury check



If possible, record the findings from the secondary assessment or have someone else record them to help you remember. When EMS personnel arrive, tell them what you found.

Ask Questions

Interview the ill or injured person (if he or she is responsive) and any bystanders at the scene to get more information. Asking the following SAMPLE questions can provide useful information about the person's situation:

- S** **SIGNS AND SYMPTOMS** — Do you have any cuts or bruises? How do you feel? Do you feel any pain? Does anything feel different?
- A** **ALLERGIES** — Are you allergic to anything?
- M** **MEDICATIONS** — Do you take any medicine? What is it for?
- P** **PAST MEDICAL HISTORY** — Do you have any medical conditions such as heart disease or other illnesses? Has this happened before?
- L** **LAST ORAL INTAKE** — When did you last eat or drink? What did you have?
- E** **EVENTS LEADING UP TO THE EMERGENCY** — What happened?

Check the Vital Signs

Check the quality of the person's vital signs by evaluating his or her level of responsiveness, breathing, and skin.

Level of Responsiveness: Is the person alert or sleepy? Does the person seem confused? Is the person's awareness increasing, decreasing, or staying the same?

Breathing: Listen for sounds. Is the breathing fast or slow? Effective or adequate? Shallow or deep? Is breathing painful for the person?

Skin: Is it dry or wet? Is it an unusual colour or temperature?

A person's respiratory rate directly impacts the amount of oxygen that enters his or her bloodstream. Slower breathing brings less air into the lungs in a given period, and therefore decreases the amount of oxygen that crosses into the bloodstream. Breathing that is either too fast or too slow can also throw off the balance of oxygen and carbon dioxide in a person's blood. In a first aid emergency, a person's breathing rate can be affected by injury, blood loss, shock, pain, and anxiety. Providing continual care can help restore the person's breathing rate to normal.

An ill or injured person's skin may lose its underlying red tones, becoming more grey or white than usual. In people with darker skin, these changes may be harder to identify: skin may appear ashen-grey, yellow-brown or grayish-green. Changes may be most easily visible on the inside of the lips, the nail beds, or the skin around the mouth, which may be paler or have a dark blue tone due to the blueish tint of deoxygenated blood. The important thing is to note any changes from the person's normal skin tone, if possible.

Injury Check

The goal of an injury check is to look carefully for injuries that were not identified during the primary assessment. An injury check may involve a focused examination or a hands-on check, depending on the comfort level of the person and whether the person is responsive.

Focused Examination

If the person is responsive and able to answer questions, do a focused examination. Keep watching the person's vital signs. If the person's condition deteriorates, stop the examination and give first aid immediately.

To do a focused examination:

1. Explain that the purpose of the examination is to identify injuries.
2. Ask the person if anything hurts or feels uncomfortable.

3. If the person indicates an area of pain, discomfort, or concern, look at the area for signs of injury including discolouration (bruises) or deformities (odd shapes). For privacy reasons, do not remove any of the person's clothing unless it makes providing first aid difficult.
4. If there are no signs of any injury, ask focused questions about how the person feels. The symptoms the person describes might help to determine whether EMS/9-1-1 needs to be called and what kinds of care should be provided.
5. If you find a medical identification product, be sure to read it carefully. It may indicate what is wrong, who to call for help, and what care to give.
6. If the person doesn't complain of any pain or tenderness, and there are no signs of injuries, ask the person to rest for a few minutes in a comfortable position. Check the quality of the person's vital signs and ensure the ABCs are still unaffected. If there is no visible problem, help the person to stand up slowly when he or she is ready.
7. Based on your findings, decide whether you need to call EMS/9-1-1, and provide first aid care as needed.





Hands-On Check

If a person is breathing but unresponsive, or is otherwise unable to communicate what is wrong, you may need to do a hands-on check to assess whether further first aid is required.

Conducting a hands-on check involves systematically checking the person from head to toe for signs of injury. Look and feel for any abnormalities such as bumps, soft spots, deformity, bruising, and bleeding. You should also look at the ground around the person for signs of blood or other body fluids. Continue to watch the person's ABCs and vital signs as you perform this check. If the person's condition deteriorates, stop the hands-on check and give first aid immediately.

! If the person is responsive, you will usually be able to get the information you need from a focused exam and sample questions alone, but there may be situations where touching the person is necessary to assess an injury. If so, you may need to do a portion of the hands-on check, focusing on the injured area.



Begin by checking the head, then work downward, focusing on the chest, abdomen, and legs before checking the arms. This prioritizes the areas that are more prone to life-threatening bleeding and organ damage.

When checking the chest, feel the ribs for signs of deformity. If the person is unresponsive, watch the rib cage as the person breathes. Both sides should expand at the same time. If the person is responsive, ask him or her to take a deep breath (if it doesn't cause any pain) to make it easier to check the expansion of the rib cage.

When checking the abdomen, press on it gently. It should be soft to the touch. If it feels hard or gentle pressure is painful, check carefully for bruising (some of the person's clothes may need to be moved or removed at this point).

Pushing on a person's injured pelvis can cause serious injury or worsen an existing condition, so this area should not be touched during the hands-on check.

! Be careful not to reach underneath someone during a hands-on check because there could be glass or other objects that could hurt you.

Continual Care

A person's condition can change while you are waiting for EMS personnel to arrive. Do the following to provide continual care:

1. Have the person rest.
2. Help the person maintain a normal body temperature.
3. Monitor the person's condition and ABCs.
4. Move the person into the recovery position, if necessary.
5. Give comfort and reassurance to the person.

Helping the person stay calm has physiological benefits, such as decreasing the heart rate, reducing pain, slowing and deepening breathing, stabilizing blood pressure, and relaxing the body's muscles.

To help a person calm down and control his or her breathing:

1. Encourage the person to maintain eye contact with you.
2. Have the person breathe in through his or her nose while you raise your arm and count to five. Breathe with the person.
3. Have the person breathe out through his or her mouth, making an audible sound, while you slowly lower your arm and count to ten.
4. Repeat 3 to 5 times, providing encouragement in a calm voice.

Should You Transport an Ill or Injured Person to the Hospital?

You may decide to take the ill or injured person to a hospital, urgent care clinic, doctor's office, or community first aid station if:

- The person is a friend or family member.
- The person's injuries are minor and non-life-threatening.
- There is no risk of the person's condition getting worse.
- There is no risk of the person experiencing an altered level of responsiveness.

If you decide it is safe to transport the person yourself, take someone else with you, if possible, to help keep the ill or injured person comfortable and to watch for any changes in his or her condition. This will let you focus on driving safely. Remember to obey traffic laws. No one will benefit if you are involved in a motor vehicle collision or get a speeding ticket on your way to the medical facility.

Never let an ill or injured person drive a motor vehicle for any reason. Driving is a high-risk activity that requires concentration, so getting behind the wheel while ill or injured is extremely dangerous. Even a person whose condition is mild could get worse while he or she is driving, and his or her ability to safely operate the vehicle could easily be compromised. Remember that it is not only the health and safety of the driver that is at stake, but that of everyone else on and near the road.



Shock

A person who is ill or injured may go into shock. Shock happens when the vital organs do not get enough oxygen-rich blood. Shock is a life-threatening condition.

Common Causes

Be on the lookout for shock when providing care for any injury or sudden illness, or when someone has been involved in a serious incident (even if he or she is not badly injured). Shock is often caused by significant fluid loss, for example, diarrhea and vomiting. This is especially true in children, who can become dehydrated more easily.

Other causes of shock include the following:

- Significant blood loss
- Heart damage
- Extensive burns
- Infection
- Anaphylaxis
- Severe infection (e.g., septicemia)

What to Look For

The following are signs and symptoms of shock:

- Anxiety
- Cool, clammy skin
- Skin that is paler than normal
- Weakness
- Confusion
- Excessive thirst
- Rapid breathing
- Drowsiness or loss of responsiveness
- Nausea and vomiting

What to Do

The best thing you can do when a person is in shock is to call EMS/9-1-1. While you are waiting for EMS personnel to arrive, provide care by:

1. Caring for the cause of the shock.
2. Having the person rest.
3. Keeping the person warm.
4. Monitoring the person's ABCs.
5. Providing comfort and reassurance.

Providing First Aid for Someone with a Disability

It is not uncommon to feel intimidated when providing first aid to a person who has different abilities, because there is often uncertainty about how to care for the person. Remember that people are more similar than they are different, both physiologically and psychologically, and most aspects of first aid care do not vary from person to person.

Remember that a person's particular needs may not be visible, and that the person (or the person's direct caregiver) is the best source of information about his or her unique situation. If you are unsure, ask what you can do to help. The person is likely to appreciate your consideration.

General Tips for Providing First Aid to a Person with a Disability

Remember the following tips when providing care for a person with any type of disability:

- As with all first aid, you need permission to help and should explain what you intend to do. These basic principles do not change because the person has different abilities.
- Avoid stereotypes and make no assumptions about what abilities the person has or does not have. Remember that not all disabilities are visible.
- Be confident and reassuring.
- If you cannot understand what the person is saying, politely ask him or her to repeat it.
- Don't touch or speak to service animals. They are working and have to pay attention at all times.
- Get permission before touching assistive devices, including wheelchairs.

Providing First Aid for Someone with Vision Loss

Examples of vision loss include tunnel vision (where a person cannot see objects to the side), lack of central vision, and total blindness, in which the person receives no visual information from the world around them. Most people with vision loss still have some degree of sight.

Keep the following in mind when providing first aid to an individual with vision loss:

- If you need to leave the person, let him or her know that you are leaving and will be back.
- Narrate your actions so that the person can follow what you are doing.
- If you're unsure about how to provide directions, simply ask the person how he or she would like you to do so.

Providing First Aid for Someone with Hearing Loss

Keep the following points in mind when providing first aid to an individual with any type of hearing loss:

- Get the person's attention before speaking. The best way to do this is usually by lightly touching the person's shoulder or gently waving your hand.
- Ask the person how you can help. Don't shout.
- If communication is difficult, ask if the person prefers to communicate in another way, such as using a pen and paper.
- Be patient if you are using a pen and paper to communicate. American Sign Language may be the person's first language and it has its own grammatical rules and sentence structure.
- If the person uses a hearing aid and you are having trouble communicating, minimize background noise or move to a quieter area, if possible.

Providing First Aid for Someone Who Is Deafblind

"Deafblind" describes people who have some degree of both vision and hearing loss. Many people who are deafblind are accompanied by an intervenor (a professional who helps with communication). If an intervenor is accompanying the person, tell him or her who you are, but then speak directly to the ill or injured person. Don't touch the person abruptly and don't touch the person without permission.

Providing First Aid for Someone with a Physical Disability

There are many different types of physical disability, and not all of them are visible. The important thing is not to diagnose the person: what matters is determining whether the conditions you encounter are pre-existing or whether they are signs of the injury or illness you are providing care for.

Keep the following tips in mind when providing first aid to an individual with a physical disability:

- Speak naturally to the person (physical and mental disabilities are not the same thing).
- Adjust your position if necessary so that you can make eye contact with the person while providing care.

Providing First Aid for Someone with an Intellectual or a Developmental Disability

It may not be apparent that a person has an intellectual or developmental disability unless this fact is communicated to you.

Keep the following points in mind when providing first aid to an individual with an intellectual or a developmental disability:

- As much as possible, interact with the person as you would with anyone else in the same situation.
- Use straightforward language when communicating.
- Give one piece of information at a time.

Providing First Aid for Someone with a Speech or Language Impairment

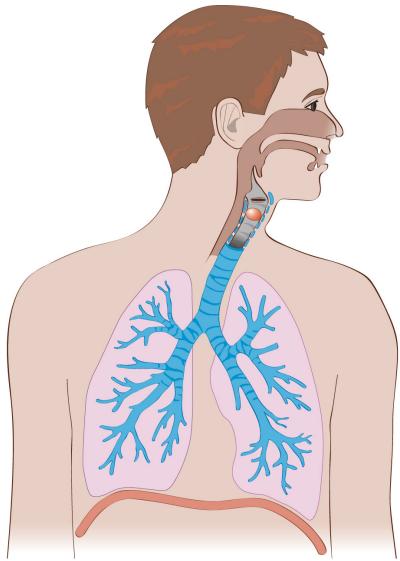
Speech and language impairments may affect a person's ability to communicate verbally, with written language or both. Assistive devices such as communication boards are often used by individuals with severe speech or language impairments.

Keep the following tips in mind when providing first aid to an individual with a speech or language impairment:

- If possible, ask questions that can be answered with "Yes" or "No."
- Give the person time to communicate and answer your questions.
- Wait for the person to finish speaking and do not try to finish his or her sentences.

4 Choking





The airway is the passage that connects the nose and mouth with the lungs. Choking occurs when the airway becomes partially or completely blocked by a foreign object (e.g., a piece of food or a small toy), by swelling in the mouth or throat, or by fluids, such as vomit or blood. If the airway is blocked by the person's tongue or by swelling, this is called an anatomical obstruction. If it is blocked by a physical object, this is called a mechanical obstruction.

Children younger than 5 years old have a particularly high risk of choking because their airways are about the size of their little fingers, but a person of any age can choke.

Anatomy and Physiology

The respiratory system consists of the airway and the lungs. When breathing in, air moves from the outside world into the lungs through the airway. The respiratory system constantly supplies the body with the oxygen it needs and removes carbon dioxide. The process is largely involuntary and is controlled by the brain.

Partial Choking

Partial choking happens when the airway is partially blocked. Coughing is the body's way of clearing the airway, and so it may indicate a partial airway obstruction. A person who is coughing is still able to breathe. Since forceful coughing usually eliminates the obstruction, encourage the person to keep coughing. Stand by and monitor the person in case further help becomes necessary. Note that the care for complete choking will be ineffective for partial choking, because it depends on creating

pressure behind the blockage (which is impossible unless the blockage is complete).

If the person is or becomes too weak to cough, his or her condition will quickly deteriorate into complete choking. If a choking person is unable to cough forcefully for any reason, call EMS/9-1-1 immediately and monitor the person's condition closely.

Complete Choking

Complete choking happens when the airway is completely blocked. When a person is experiencing complete choking, he or she is unable to breathe and is in a life-threatening situation. Immediate first aid (and possibly medical intervention) is required to remove whatever is blocking the airway.

Common Causes

Any medical condition that affects a person's ability to chew and/or swallow increases his or her risk of choking. So can dental problems or poorly fitting dentures that affect a person's ability to chew food properly.

Common causes of choking include the following:

- Trying to swallow large pieces of food
- Eating while talking, laughing, walking, or running
- Eating too quickly

Choking Hazards

FOODS

- Nuts and seeds
- Hot dogs and sausages
- Chunks of meat or cheese
- Chunks of fruit (e.g., apples)
- Small fruits (e.g., whole grapes and cherries)
- Hard raw vegetables (e.g., carrots and celery)
- Popcorn
- Peanut butter
- Hard, gooey, or sticky candy (e.g., peppermints, marshmallows, and gummy bears)
- Foods that break easily into small pieces (e.g., teething biscuits and cookies)

HOUSEHOLD OBJECTS AND TOYS

- Plastic bags, broken or uninflated balloons (the thin material can block the airway)
- Coins
- Buttons
- Small "button" batteries (e.g., those found inside watches, car key fobs, and hearing aids)
- Magnets
- Marbles
- Small rocks, beads, or decorative stones
- Pen and marker caps
- Jewellery
- Pills and vitamins
- Items from the garbage or recycling (e.g., corners of milk bags and pull tabs from cans)
- Toys meant for older children, which may be small or have small parts

Prevention

The following may reduce the risk of choking in adults:

- Chewing food well before swallowing
- Eating slowly and calmly
- Avoiding talking, laughing, walking, and other kinds of physical activity while chewing

The following may reduce the risk of choking in children and babies:

- When babies start eating solid food, begin with purées as opposed to solid pieces.
- Always supervise children and babies when they are eating.
- Teach children to eat calmly, chew properly, and not to speak with a mouthful of food.
- Encourage children to sit while eating.
- Make sure that babies and young children cannot reach objects small enough for them to swallow.
- Remember that children can choke on soft plastic (e.g., the cut-off corners of milk bags) and rubber (e.g., burst balloons) as well as hard objects, so keep these items out of reach.



Toys smaller than 4 cm (1.5 in.) in diameter are choking hazards for babies and toddlers. Use the following guideline: if an object can fit through a toilet paper tube, it is not safe for children younger than 4 years old.



Partial Choking

What To Look For



Typical signs of partial choking include the following:

- A look of panic, with wide eyes
- Forceful or weak coughing
- One or both hands clutching the throat

What To Do

Call

It is not usually necessary to call for help for partial choking, though you may need to do so if the obstruction does not clear or the person's condition worsens.

Care

1. If the person is coughing or can speak, encourage him or her to cough forcefully, and do not interfere. Forceful coughing may be enough to clear the obstruction on its own.
2. Encourage or assist the person to sit upright, if possible, as this will make coughing easier and more effective.
3. Continue to monitor the person's condition until either the obstruction clears itself or the person's condition worsens.

Complete Choking

What To Look For



The signs and symptoms of complete choking include the following:

- An inability to speak, cough, or breathe
- High-pitched squeaking noises
- Flushed (red) skin that becomes bluish or paler than normal
- A look of panic with wide eyes
- One or both hands clutching the throat

What To Do

Responsive Adult or Child Over 12 Months



Call

- If possible, send someone to call EMS/9-1-1 and get an AED while you care for the person.
- If you are alone, immediately begin providing care for complete choking. Shout for help to try to attract the attention of a bystander, but do not delay care by calling EMS/9-1-1 yourself.



Care

1. Try to dislodge the object by combining any two of the following three options: back blows, abdominal thrusts, and chest thrusts. Continue alternating between the two methods until the object comes out, the person begins to breathe, or the person becomes unresponsive.

You may need to adapt which combination of the methods you use depending on the specific circumstances. For example, if the person is pregnant, or you cannot fully reach around the person, you will not be able to provide abdominal thrusts and will therefore have to do a combination of back blows and chest thrusts.

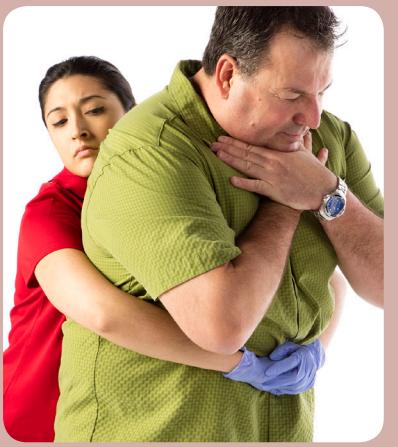
Back Blows

1. Stand behind the person (or kneel, if you are significantly taller) and wrap one arm diagonally across the person's chest.
2. Bend the person forward at the waist until the upper airway is at least parallel to the ground.
3. With the heel of your free hand, deliver up to 5 firm back blows between the shoulder blades.



Abdominal Thrusts

1. Stand behind the person and ensure that your stance is stable. If the person is much shorter than you are, it may be more effective to kneel.
2. Wrap your arms around the person's waist, make a fist, and place it just above the belly button.
3. Cover your fist with your other hand and give up to 5 quick, inward and upward thrusts into the person's abdomen.



Chest Thrusts

1. Stand behind the person (or kneel, if you are significantly taller) and wrap both of your arms around the person's chest, just under the armpits.
2. Make a fist and place it in the middle of the person's chest, with your thumb facing inward, and place your other hand over your fist.
3. Give up to 5 chest thrusts by pulling straight back toward you. If you find your thrusts are not effective, pull more sharply and deeply.



Special Choking Circumstances

Larger or Pregnant Responsive, Choking Adult



1. If you cannot reach far enough around a person to perform abdominal thrusts, or if you are aiding a woman who is obviously pregnant, alternate between 5 firm back blows and 5 chest thrusts.
2. Continue until the object comes out, the person begins to breathe or cough, or the person becomes unresponsive.

If You Are By Yourself and Choking



1. Dial EMS/9-1-1 and leave the phone off the hook. This will tell the dispatcher to send help.
2. If there are people nearby, move to a place where you can be noticed.
3. Attempt to dislodge the object by performing an abdominal thrust against a safe object with no sharp edges or corners, such as the back of a chair or the edge of a table.

Responsive, Choking Toddler

1. If the child is short enough, kneel on the floor with one knee raised.
2. Perform 5 back blows with the child leaning across your raised leg, alternating with either 5 chest thrusts or 5 abdominal thrusts.
3. Continue until the object comes out, the child begins to breathe or cough, or the child becomes unresponsive.



Calling EMS/9-1-1 does not always tell the dispatcher your location. Enhanced 9-1-1 services may be able to triangulate your position from a mobile phone call, but it is accurate only to within several hundred metres. If you are using a VOIP system, the location of the call is dependent upon how the system is set up. Additionally, if you call from a landline phone, your exact position within the building will not be pinpointed. While the phone call is important, it is equally important that you move to a public area or a place where you are likely to be seen.

Choking Baby (Less Than 12 Months)



Call

- Shout for help.
- If the baby is making high-pitched noises, is wheezing, can no longer make a sound, or becomes too weak to cough, have someone call EMS/9-1-1 and get an AED while you care for the baby.
- If you are alone, immediately begin care for complete choking. Shout for help to try to attract the attention of a bystander.



Care

1. Sit or kneel holding the baby.
2. Position the baby face down along your forearm, holding his or her jaw in your hand.
3. Rest your forearm on your leg so that the baby's head is lower than his or her body.
4. Deliver 5 firm back blows between the shoulder blades with the heel of your free hand.



5. If the object has not been dislodged, turn the baby face-up, ensuring you support the head.



6. Place 2 fingers on the middle of the chest just below the nipple line and quickly deliver 5 firm chest compressions, pushing down 1/3 of the chest's depth.
7. Repeat the 5 firm back blows and 5 chest compressions until the object is coughed up, the baby starts to cry, breathe, or cough, or the baby becomes unresponsive.



After the Object Comes Out

An object lodged in the airway can cause damage to the sensitive tissues in the trachea and the back of the throat. This can cause bleeding and swelling.

Any person who has suffered complete choking should always seek medical attention, even if the object comes out. If you have done back blows, abdominal thrusts, or chest thrusts, those procedures may have caused damage (in addition to the damage caused by the choking itself), so any person given this care should be assessed in a hospital.

A person who has experienced partial choking should seek medical attention if he or she experiences any kind of respiratory distress after the incident. The person should be monitored for several hours after the incident to ensure that there is no damage: if there is no sign of injury in the first few hours, the person is probably fine.

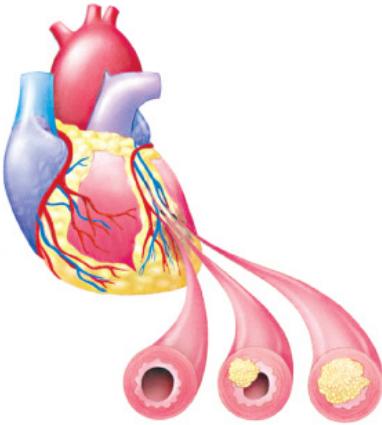
Unresponsive Choking

If the choking person becomes unresponsive, lower him or her to the ground as safely as possible and immediately begin CPR, starting with chest compressions.



5 Circulation Emergencies

Circulation emergencies are sudden illnesses or injuries involving the heart or the blood vessels. Because every minute counts when a person is experiencing a circulation emergency, the person's survival often depends on First Aiders acting quickly and giving appropriate care until EMS personnel arrive and take over.



Cardiovascular Disease

Cardiovascular disease is an abnormal condition that affects the heart and blood vessels. It is one of the leading causes of death in Canadians, and it is the underlying cause of many circulation emergencies.

Although a circulation emergency such as angina, a heart attack, or a stroke can occur suddenly, the underlying cardiovascular disease often develops over a long period of time. In fact, it can begin as early as the teenage years.

Cardiovascular disease occurs when the arteries become hardened and narrowed—a process called atherosclerosis. This damage occurs gradually, as cholesterol and fatty deposits called plaque build up on the inner artery walls. As this buildup worsens, the arteries become narrower, reducing the amount of blood that can flow through them. The narrowing of arteries increases the risk of artery blockages, which can cause angina, heart attacks, transient ischemic attacks (TIAs), and strokes.

Prevention

Cardiovascular disease has both controllable and uncontrollable factors. Uncontrollable factors include age, sex, family history, and ethnicity.

Fortunately, many risk factors of cardiovascular disease are the result of lifestyle choices and are therefore within a person's control.

Smoking

Smoking is a major risk factor for developing cardiovascular disease, but it is also one of the most controllable factors. Smokers have a risk of sudden death that is 2 to 4 times greater than that of non-smokers. Second-hand and smokeless tobacco also increase the risk of cardiovascular disease.

Fortunately, the risk starts to drop as soon as a person stops smoking. Compared to a smoker, the risk of cardiovascular disease decreases by half within 1 year of quitting smoking. Within 15 years, the risk is close to that of a non-smoker. Many effective community programs are available for individuals who wish to quit smoking permanently.

Cholesterol

Cholesterol is produced naturally in the body, and is necessary for cellular function. However, not all cholesterol is good for you: low density lipoproteins (LDL, or "bad cholesterol") can build up in the bloodstream and stick to the blood vessel walls, narrowing the blood vessels and reducing blood flow.

It is easy to measure cholesterol with a blood test. Cholesterol can be controlled with a proper diet and exercise, along with medication if necessary.

Blood Pressure

High blood pressure can stress and weaken blood vessels throughout the body, and it can contribute to the narrowing of blood vessels. High blood pressure can be hard to detect, so testing for it should be a routine examination. High blood pressure can be controlled with exercise, diet control, stress reduction, and medication.

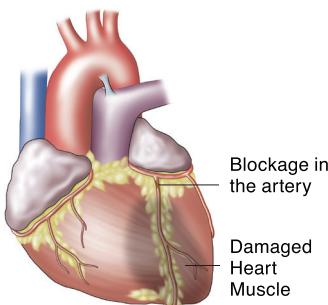
Weight

Obesity directly contributes to heart disease. Middle-aged people who are significantly overweight have 3 times the risk of a fatal heart attack when compared to people who are at a healthy weight. Obesity also increases the risk of high blood pressure and blood cholesterol levels. Maintaining a healthy weight requires exercise and a balanced diet.

Stress

Stress is a normal part of life. Learning to cope with it well helps you to stay healthy and reduces your risk of developing cardiovascular disease, among other illnesses.

Stress can be reduced by developing rewarding hobbies and exercising regularly. It can also be helpful to set realistic goals, practice relaxation exercises, and avoid caffeine, which can reduce your ability to handle stress.



Heart Attack

A heart attack occurs when the heart muscle cannot get enough oxygen because of a blockage in one of the arteries that feeds it.

What to Look For



The signs and symptoms of a heart attack vary from person to person, and can be different in women and men. Even a person who has had a heart attack before may not experience the same signs and symptoms if he or she has a second heart attack.

A person who is having a heart attack may experience chest pain, which can range from mild to unbearable. The person may complain of pressure, squeezing, tightness, aching, or heaviness in the chest. The pain or discomfort is persistent, lasting longer than 3 to 5 minutes. It is not relieved by resting, changing position, or taking medication. It may be difficult to distinguish the pain of a heart attack from the pain of indigestion, heartburn, or a muscle spasm.

Other signs and symptoms of a heart attack include the following:

- Discomfort or pain that spreads to one or both arms, the jaw, the shoulder, the neck, or (more commonly in women) the back or the upper part of the stomach
- Problems breathing (e.g., noisy breathing, shortness of breath, or breathing that is faster than normal)
- Cold, sweaty skin
- Skin, lips, and fingers that are bluish, ashen (grey), or paler than normal
- Feelings of anxiety, denial, or impending doom

"Soft Signs" of a Heart Attack

During a heart attack, many females, elderly people, and people with diabetes tend to experience "soft signs," which are milder or more generalized than the "classic" signs and symptoms of a heart attack. These "soft signs" may be experienced for hours, days, or even weeks prior to the heart attack and are often dismissed as nothing out of the ordinary.

"Soft signs" include:

- Mild, unfocused chest discomfort that:
 - Comes and goes
 - Does not necessarily feel painful
 - Gets better with rest and worse with activity, or gets progressively worse
- Extreme fatigue (tiredness)
- Gastric discomfort, nausea, or vomiting
- Flu-like symptoms
- Dizziness or light-headedness



Not everyone experiences chest pain during a heart attack.

What to Do



Call

If you suspect a person is having a heart attack, call EMS/9-1-1 and get an AED immediately.



Care

1. Have the person rest comfortably.
2. If acetylsalicylic acid (ASA) is available, encourage the person to chew 160 to 325 mg (either 1 adult-dose or 2 low-dose ASA tablets), unless the person has an allergy or a contraindication to ASA, such as a bleeding disorder. Ensure that the person thoroughly chews and swallows the ASA. Do not repeat the dosage.
3. If the person takes a prescribed medication to relieve chest pain (e.g., nitroglycerin), offer to locate the medication and help the person to take it.
 - If the person has nitroglycerin in a spray or pill form, ensure that the person sprays or places the nitroglycerin under his or her tongue.
4. Reassure the person. Anxiety may increase the person's discomfort.





Other painkilling medications such as acetaminophen (e.g., Tylenol®) or ibuprofen (e.g., Advil®) do not have the same effect as ASA in reducing damage due to heart attacks. Do not substitute ASA with acetaminophen or ibuprofen.

If given in conjunction with nitroglycerin, erectile dysfunction drugs can cause blood pressure to lower to a life-threatening level. If the person has recently taken an erectile dysfunction drug (in the previous 24 to 48 hours), advise the person not to take nitroglycerin.

Angina

Angina occurs when the heart requires more oxygen than it is receiving. This occurs when two factors are combined: 1) the arteries are narrowed by cardiovascular disease, reducing blood flow; and 2) the heart's oxygen needs are elevated (e.g., during times of physical activity or emotional stress). Angina causes a painful squeezing, suffocating, or burning feeling in the chest.

Uncontrolled high blood pressure, anemia, and certain heart disorders can all contribute to a person's risk of angina.

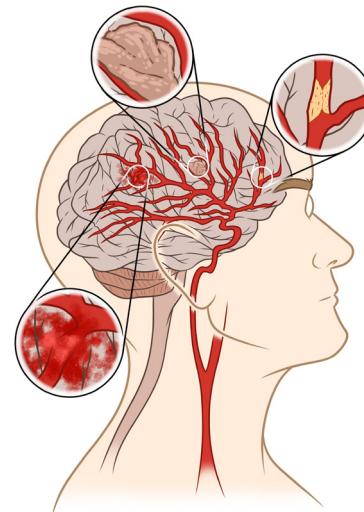
The signs and symptoms of angina are similar to the signs and symptoms of a heart attack, but the pain is usually triggered by physical activity or stress, goes away if the person rests, and is often relieved by medication (e.g., nitroglycerin). Because it is not possible for First Aiders to distinguish between angina and a heart attack, you should treat a person with angina as you would treat a person having a heart attack.

Myth-Information

Myth: You should delay calling EMS/9-1-1 for a person if you suspect that he or she is experiencing angina and not a full heart attack.

You should always call EMS/9-1-1 if you have any reason to suspect that a person might be having a heart attack. It is better to have EMS personnel arrive at a scene and not be needed than to have a person who is having a heart attack not receive medical attention.

Many people who are having a heart attack delay seeking care because they hope they are experiencing signs and symptoms of a more minor condition that will go away with time, such as indigestion, heartburn, a muscle strain, or the flu. People often worry about calling EMS/9-1-1 for a "false alarm." Without immediate medical intervention, heart attacks are often fatal, so the risk of not seeking care outweighs any inconvenience.



Stroke

A stroke happens when the blood flow to part of the brain is interrupted, resulting in the death of brain cells. Strokes can cause permanent brain damage, but with quick action, the damage can sometimes be stopped or reversed. Although strokes are most common in older adults, a person of any age, even a child, can have a stroke.

Causes of Stroke

Ruptured Aneurysm

A hemorrhagic stroke occurs when a brain aneurysm ruptures. A brain aneurysm is a swollen, fragile section in the wall of an artery that carries blood to the brain. When it ruptures, it causes bleeding in the surrounding brain tissues, killing the nearby brain cells and causing a stroke.

As an intact brain aneurysm usually has no signs or symptoms, it can go undetected. However, an unruptured brain aneurysm may press against areas in the brain and, depending on the severity of the aneurysm and its location, it can cause signs and symptoms such as neck pain, acute headaches, blurred vision, and changes in speech.

Blood Clot

An ischemic stroke occurs when a clot becomes lodged in an artery of the brain, usually because the artery has been narrowed by cardiovascular disease. The blockage prevents blood from reaching the brain cells it usually supplies.

Brain Tumour

A stroke can also occur when a tumour in the brain presses on an artery. The tumour has a similar effect to a blood clot, resulting in decreased blood flow or a complete blockage of blood flow to part of the brain.

Prevention

Because the risk factors for stroke are similar to those for heart disease, the risk of a stroke can be reduced by following the same lifestyle changes discussed for preventing cardiovascular disease.

What to Look For



The signs and symptoms of strokes can vary from person to person. A person who is having a stroke may suddenly develop one or more of the following signs and symptoms:

- A sudden, severe headache
- Dizziness or confusion
- Unresponsiveness or temporary loss of responsiveness
- Sudden loss of bladder or bowel control

FAST

When trying to determine if a person is having a stroke, remember the acronym FAST:

- F** FACE — Facial numbness or weakness, especially on one side.
- A** ARM — Arm numbness or weakness, especially on one side.
- S** SPEECH — Abnormal speech, difficulty speaking or understanding others, or a loss of speech.
- T** TIME — Time is important; call EMS/9-1-1 immediately.

What to Do



Call

Call EMS/9-1-1 and get an AED.



Care

1. Have the person rest in a comfortable position. If the person prefers to lie down, or is unresponsive, drooling, or having trouble swallowing, place the person in the recovery position.



2. Note when the signs and symptoms first started (or, if you do not know when the signs and symptoms started, note the last time the person was known to be well).
3. Monitor the person's condition and provide reassurance until EMS personnel arrive; a stroke can be an extremely frightening experience.



Some of the medications used to treat strokes can only be administered within a short window of time after the onset of signs and symptoms. It is crucial to note when the person first began to experience the signs and symptoms, or the last time the person was known to be well.

Transient Ischemic Attack (TIA)

A transient ischemic attack (TIA) is also referred to as a "mini-stroke" and is caused by a temporary drop in blood flow to part of the brain. A TIA may be caused by a tumour or a clot in an artery in the brain. The signs and symptoms of a TIA are the same as the signs and symptoms of a stroke, but they disappear within a few minutes or hours.

A person who has had a TIA is at a very high risk of having a stroke in the near future. In fact, more than 10% of people who have a TIA will have a stroke within 3 months, with half of these strokes happening within 48 hours of the TIA.

Myth-Information

Myth: A person with a suspected stroke does not need medical attention if his or her signs and symptoms dissipate.

TIA signs and symptoms will disappear within a few hours, but the person still needs to be checked by a medical professional. TIAs are warning signs and are often quickly followed by strokes. Always call EMS/9-1-1 if the person has demonstrated signs and symptoms of a TIA or stroke, even if the signs and symptoms have lessened in severity or disappeared completely.

Life-Threatening Bleeding

Life-threatening bleeding refers to a situation where large amounts of blood loss occur either externally (outside the body) or internally (within the body). Life-threatening bleeding can occur whenever one or more of the body's blood vessels are broken. It must be controlled immediately.

Bleeding from arteries (arterial bleeding) is often rapid and profuse, and it is always life-threatening. This is because arterial blood is under direct pressure from the heart, so it usually spurts from the wound, making it difficult for clots to form. As a result, arterial bleeding is harder to control than bleeding from veins and capillaries.

Veins are damaged more often than arteries because they are closer to the skin's surface. Bleeding from veins (venous bleeding) is easier to control than arterial bleeding. Venous blood is under less pressure than arterial blood and flows from the wound at a steady rate without spurting. Only damage to veins deep in the body, such as those in the torso or thigh, produces profuse bleeding that is hard to control.

Prevention

The following precautions may reduce the likelihood of an injury that causes life-threatening bleeding:

- Be familiar with your surroundings.
- Keep all sharp objects, such as knives, in a safe place.
- Get proper training on machinery in the workplace.
- Always follow the outlined safety procedures when operating equipment.
- Wear and use appropriate safety equipment at work and at home.
- Only use equipment for its intended purpose.
- Stay alert when operating equipment.

Life-Threatening External Bleeding

What to Look For



The signs and symptoms of life-threatening external bleeding include:

- Blood spurting or flowing freely from a wound
- Blood that fails to clot after you have taken all measures to control bleeding
- Large amounts of blood loss

What to Do

Call

Call EMS/9-1-1 and get an AED.

Care

1. Expose the wound.
2. Apply firm and direct pressure to the wound.



3. While maintaining direct pressure, apply a dressing and bandage, and then secure them in place.



4. Reassess the wound to see if the pressure has stopped the bleeding. If not, consider using a tourniquet if the wound is on a limb.





Using a Tourniquet

A tourniquet is a tight band placed around an extremity (e.g., an arm or leg). It constricts blood vessels to stop life-threatening bleeding in circumstances where normal bleeding control is impossible or ineffective.

Tourniquets are commercially made, but they can also be improvised with any wide strip of material (e.g., a triangular bandage). If you find yourself in a situation where you need to apply a tourniquet, a commercially manufactured tourniquet is preferred over an improvised device. Follow the manufacturer's instructions for applying the tourniquet. Although tourniquets may have slightly different designs, all are applied in generally the same way. Once a tourniquet is in place, you should not remove it for any reason.

When to Apply a Tourniquet

Using a tourniquet involves a level of risk, which must be balanced against the potential benefits. You should only apply a tourniquet in the following situations:

- The person has life-threatening external bleeding that cannot be controlled using direct pressure.
- The person is in a physical location that makes it impossible to apply direct pressure (e.g., the person or the person's injured limb is trapped in a confined space).
- You must move the person and are unable to maintain direct pressure while doing so.

Applying a Tourniquet

1. Apply the tourniquet 5 to 10 cm (2 to 4 in.) above the injury. If there is a joint in this range, apply the tourniquet above it, at least 2.5 cm (1 in.) away from the joint.



2. Tighten the tourniquet until the bleeding stops.



3. Secure the tourniquet in place.



4. Document the time the tourniquet was tightened.





Using Hemostatic Dressings

A hemostatic dressing is a dressing treated with a substance that speeds clot formation. As is the case with tourniquets, hemostatic dressings are used in cases of life-threatening bleeding where standard first aid procedures fail or are not practical. Typically, hemostatic dressings are used on parts of the body where a tourniquet cannot be applied, such as the neck or torso. A hemostatic dressing can also be used to control bleeding from an open wound on an arm or a leg if a tourniquet is ineffective. The hemostatic dressing is applied at the site of the bleeding (possibly inside the wound) and is used along with direct pressure.

Life-Threatening Internal Bleeding

Internal bleeding is the escape of blood from arteries, veins, or capillaries into spaces in the body. Life-threatening internal bleeding usually occurs in injuries caused by a violent blunt force, such as when someone falls from a height. You should suspect internal bleeding after any injury that involved a forceful blow to the body. Internal bleeding may also occur when a sharp object, such as a knife, penetrates the skin and damages internal structures.

What to Look For



Signs and symptoms of life-threatening internal bleeding include the following:

- Bruising in the injured area
- Soft tissues (e.g., the abdomen) that are tender, swollen, or hard
- Blood in saliva or vomit
- Pain
- Severe thirst, nausea, and vomiting
- Anxiety

What to Do



Call

Call EMS/9-1-1 and get an AED. You cannot provide first aid for life-threatening internal bleeding as a First Aider. Life-threatening internal bleeding, especially if it results from damage to an organ, requires in-hospital medical intervention. Help the injured person rest in the most comfortable position and provide continual care while waiting for EMS personnel.



A person with life-threatening internal bleeding may be very thirsty, but giving anything by mouth (even water) can cause serious complications.

6 CPR & AED

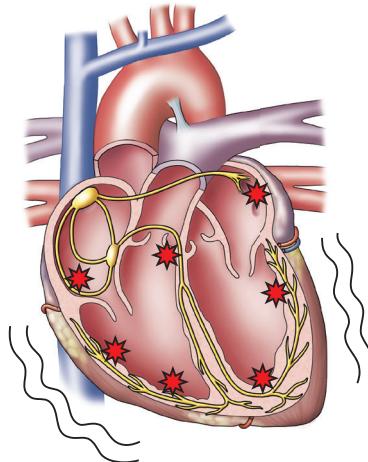




CPR, or cardiopulmonary resuscitation, is a skill that is used when a person is in cardiac arrest. CPR involves giving sets of 30 chest compressions followed by sets of 2 rescue breaths; it keeps oxygenated blood moving to the brain and other vital organs until advanced medical help arrives. Because we breathe in 21% oxygen and breathe out 16%, even exhaled breath has more than enough to sustain life.

Cardiac Arrest

Cardiac arrest occurs when the heart stops beating or beats too ineffectively to circulate blood to the brain and other vital organs. Under normal circumstances, a network of special cells in the heart muscle conducts electrical impulses that coordinate contractions, causing the heart to beat rhythmically. In cardiac arrest, the electrical impulses become abnormal and chaotic. This causes the heart to lose the ability to beat rhythmically, or to stop beating altogether.



The respiratory and circulatory systems are very closely linked. After breathing stops, it is not long before the heart stops. This is especially true in children: pediatric cardiac arrests are often the result of airway or breathing emergencies.



Sudden Cardiac Arrest

Cardiac arrest can happen suddenly and without any warning signs; this is called sudden cardiac arrest. People who have a history of cardiovascular disease or a congenital heart disorder are at higher risk for sudden cardiac arrest. However, sudden cardiac arrest can happen in people who appear healthy and have no known heart disease or other risk factors for the condition. A person who experiences sudden cardiac arrest is unlikely to survive without immediate care.



Clinical and Biological Death

Clinical death occurs when breathing stops and the heart stops beating. A person without a heartbeat is clinically dead. Because permanent brain damage does not begin for 4 to 6 minutes, clinical death is reversible with immediate care and intervention.

Biological death occurs when the brain becomes irreversibly damaged, which occurs after about 8 to 10 minutes without oxygen. This is also called "brain death."

Common Causes

Cardiovascular disease is the most common cause of cardiac arrest. Other common causes include the following:

- Drowning
- Severe blood loss
- Suffocation or complete choking
- Electrocution
- Drug overdose
- Severe chest injuries
- Commotio cordis
- Other heart diseases and abnormalities

Cardiovascular disease and certain congenital heart conditions (i.e., conditions that a person is born with) can increase the risk of cardiac arrest. Breathing emergencies can also lead to cardiac arrest. For example, choking or drowning can interrupt the body's supply of oxygen, causing the heart to stop beating. Every organ in the body needs a steady supply of oxygen in order to work properly, and the heart is no exception. Severe trauma, electrical shocks, and drug overdoses are other potential causes of cardiac arrest. Although cardiac arrest is more common in adults, it does occur in young people as well. The most common causes of cardiac arrest in children and babies are breathing emergencies, congenital heart disorders, and trauma.

Cardiac arrest is a life-threatening condition, so starting CPR is the top priority. A person in cardiac arrest may have other conditions as well, such as a possible head, neck, or spinal injury, but caring for other injuries is lower priority than starting CPR and getting an AED.

What to Look For

When a person experiences cardiac arrest, signs and symptoms may include the following:

- The person suddenly collapses.
- The person is unresponsive and not breathing, or is unresponsive with agonal breaths.



For each minute that CPR and use of an AED are delayed, the person's chance of survival is reduced by about 10%.

Cardiac Arrest, Adult (After the Onset of Puberty)

What to Do



Call

Have someone call EMS/9-1-1 and get an AED. If you are alone with an adult, call EMS/9-1-1 yourself, get an AED, and then return to care for the person.



Care

1. Place both of your hands on the centre of the person's chest.
2. Do 30 compressions:
 - Push down at least 5 cm (about 2 in.), pushing deeply and steadily.
 - Allow the chest to fully recoil after each compression (do not lean on the chest).
 - The chest compression rate should be between 100 and 120 beats per minute (30 compressions in 15 to 18 seconds).
3. Give 2 rescue breaths:
 - Open the airway by doing a head-tilt/chin-lift.
 - Place your barrier device over the person's mouth and nose.
 - If using a plastic face shield, seal your lips tightly over the person's mouth and pinch the nose. If using a face mask, ensure it is fitted tightly over the mouth and nose.



- Give 2 rescue breaths. Each breath should last 1 second, with just enough volume to make the chest start to rise.
4. If both breaths go in, repeat the cycle of 30 compressions and 2 breaths.



If there are two First Aiders present, they should alternate every 5 cycles (about every 2 minutes).

Cardiac Arrest, Child (1 Year to the Onset of Puberty) What to Do



Call

Have someone call EMS/9-1-1 and get an AED. If you are alone with the child and are not in close proximity to a phone, do 5 cycles (2 minutes) of CPR before calling EMS/9-1-1. Take the child with you to call EMS/9-1-1 and get an AED, and then continue to provide care.



Care

1. Do 30 compressions:

- Put 2 hands on the centre of the child's chest.
- Push down at least 1/3 of the chest's depth, pushing deeply and steadily.
- The chest compression rate should be between 100 and 120 beats per minute (30 compressions in 15 to 18 seconds).
- Allow the chest to fully recoil after each compression (do not lean on the chest).

2. Give 2 breaths:

- Open the airway by doing a head-tilt/chin-lift.
- Place your barrier device over the child's mouth and nose.
- If using a plastic face shield, seal your lips tightly over the child's mouth and pinch the nose. If using a face mask, ensure it is fitted tightly over the mouth and nose.
- Give 2 breaths. Each breath should last 1 second, with just enough volume to make the chest start to rise.



3. If both breaths go in, repeat the cycle of 30 compressions and 2 breaths.

Cardiac Arrest, Baby (Less Than 12 Months)

What to Do



Call

Have someone call EMS/9-1-1 and get an AED. If you are alone with the baby and are not in close proximity to a phone, do 5 cycles (2 minutes) of CPR before calling EMS/9-1-1. Take the baby with you to call EMS/9-1-1 and get an AED, and then continue to provide care.

 Care

1. Do 30 compressions:

- Put 2 fingers on the middle of the baby's chest, just below the nipple line.
- Push down at least 1/3 of the chest's depth, pushing deep and pushing steady.
- The chest compression rate should be between 100 and 120 beats per minute (30 compressions in 15 to 18 seconds).
- Allow the chest to fully recoil after each compression (do not lean on the chest).



2. Give 2 breaths:

- Open the airway by doing a head-tilt/chin-lift.
- Place your barrier device over the baby's mouth and nose.



- If using a plastic face shield, seal your lips tightly over the baby's mouth and nose. If using a face mask, ensure it is fitted tightly over the mouth and nose.
- Give 2 breaths. Each breath should last 1 second, with just enough volume to make the chest start to rise.

3. If both breaths go in, repeat the cycle of 30 compressions and 2 breaths.

**Continue CPR Until...**

Once you begin CPR, continue giving sets of 30 chest compressions and 2 rescue breaths until:

- EMS personnel take over.
- An AED is available and there is no one else who can apply the pads to the person's chest.
- Another trained First Aider is available and can take over compressions.
- You have performed approximately 2 minutes of CPR for a child or baby (5 sets of 30 chest compressions and 2 rescue breaths) and you need to call EMS/9-1-1.
- You are alone and too tired to continue.
- The scene becomes unsafe.
- You notice an obvious sign of life, such as movement. If the person shows an obvious sign of life, stop CPR and check the person's ABCs. If the person is breathing, place him or her in the recovery position, and continue to monitor the person's condition until EMS personnel take over.

What to Do If the Rescue Breaths Don't Go In

If the chest does not rise after the first breath:

1. Reposition the head to adjust the airway, and attempt to give another breath.
2. If the second breath does not go in, begin the CPR sequence again (30 chest compressions).

3. After the 30 chest compressions, look in the person's mouth. If you see an object, carefully remove it:
 - With one hand, grasp the lower jaw and tongue (if possible) while opening the mouth.
 - Place one finger from your other hand into the side of the person's mouth, then sweep behind the object to lift it out.



4. After looking in the mouth (even if nothing is visible) open the airway and attempt to give a breath:
 - If the breath goes in, give a second breath.
 - If the breath does not go in, resume the CPR sequence (starting with 30 chest compressions).

5. Continue to give CPR. After each set of compressions and before attempting to give rescue breaths, look for an object in the person's mouth and remove it if possible.



Compression-Only CPR

Compression-only CPR uses chest compressions (without rescue breaths) to pump the heart and circulate oxygen that is already in the person's body. If you are unwilling or unable to give rescue breaths for any reason (e.g., you do not have a barrier device or the ill or injured person has facial trauma), compression-only CPR is acceptable. As a minimum, you should always perform compression-only CPR for any person in cardiac arrest. You are encouraged to perform traditional CPR (compressions with rescue breaths) whenever possible.

Compression-only CPR is always better than no care, and can be effective. However, if you are caring for a child, a baby, or any person who entered cardiac arrest because of a respiratory problem (e.g., choking, drowning, anaphylaxis, asphyxiation), the person may not have much oxygen remaining in his or her blood, and circulating deoxygenated blood is not very useful. In these circumstances, traditional CPR with rescue breaths is the recommended method of care.

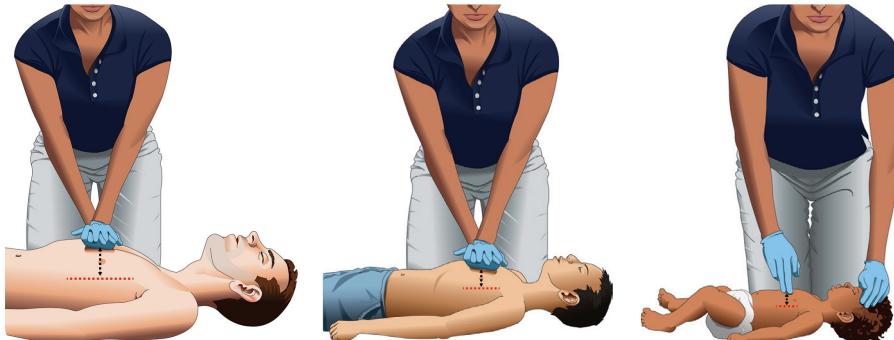
CPR Compression Depth for an Adult

When providing CPR to an adult, you should perform compressions in the middle of the chest on the lower half of the sternum. Push deeply and push steadily, ensuring a compression depth of at least 5 cm (about 2 in.), while avoiding excessive depths greater than 6 cm (about 2.5 in.). While there is a risk of injury with compression depths greater than 6 cm, these injuries tend to be non-life-threatening. It is more important to push deeply and push steadily than to worry about pushing too deeply.

CPR Compression Depth for a Child or a Baby

Because of the variation in size among children or babies, compression depth for this age group is measured as a fraction of the total chest depth, not in centimetres. When providing CPR to a child or baby (i.e., a person who has not yet reached puberty), you should perform chest compressions on the lower half of the sternum and depress the chest to at least 1/3 of its depth. Ideally, chest compressions should be at the upper limit of 1/2 of the front-to-back (anteroposterior) depth.

CPR compression depths may be impacted by items such as heavy clothing (e.g., a winter coat or motorcycle jacket) or sports equipment. You should not delay starting CPR to remove them, but you may have to push harder to ensure that the minimum chest compression depth is reached.

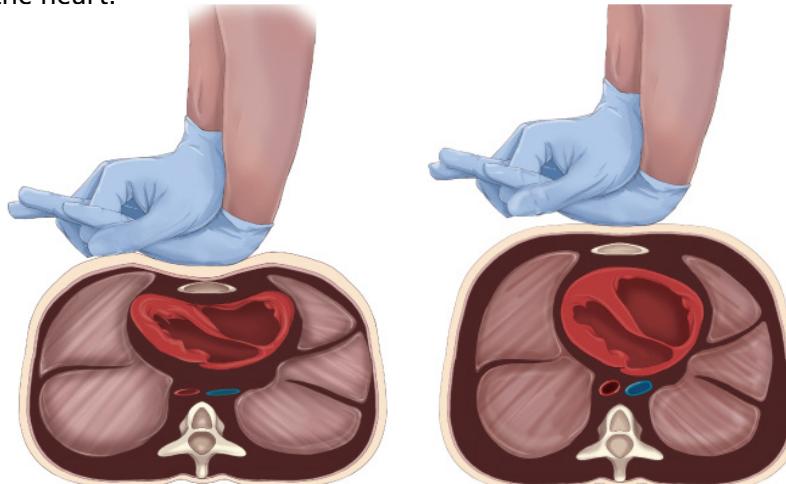


Chest Compression Rates

First Aiders should perform chest compressions at a rate of 100 to 120 beats per minute. Counting out loud as you give compressions can help you to keep a steady, even rhythm that allows time for adequate chest recoil. For compressions one through 12, say "one and two and three and four and five and..." up to 12. When you get to 13, say the numbers without saying "and" in between: "13, 14, 15, 16..." and so on. Push down as you say the number and come up as you say "and" or the second syllable of the number.

Chest Recoil

You should avoid leaning on the person's chest wall in between compressions. Instead, ensure that the chest recoils fully. It is during recoil that the coronary arteries of the heart are filled with blood and the heart muscle gets oxygen. If you are leaning on the person's chest between compressions, the coronary arteries will not get sufficient blood flow and heart death can occur. Remember: Compression is for the brain, recoil is for the heart.



Myth-Information: Upper-Body Strength Required for CPR

Myth: Performing CPR compressions requires significant upper-body strength.

If you are performing compressions properly, the power comes from the weight of your upper body, not from your arm muscles. Incorrect technique or body position can cause your arms and shoulders to tire quickly when you are giving compressions. Avoid rocking back and forth, because this makes your compressions less effective and wastes your energy.

Decreasing Compression Fraction (Off-Chest Time)

During CPR, you should minimize interruptions to chest compressions. Any interruption decreases the total number of compressions given, and therefore the amount of blood that is circulated. Compressions also build up pressure in the person's arteries: when compressions are interrupted, the arterial pressure drops, which means that the first compressions you give after the interruption are rebuilding the pressure and not yet circulating blood effectively.

Interruptions should be limited to critical interventions, such as applying AED pads to the person, allowing the AED to analyze or administer a shock, and clearing the airway. Pause to reassess the person's ABCs only if there has been an obvious change in the person's condition. Lengthy ventilation steps (opening airway, excessive breathing) should be avoided. There is no need for you to reposition your hands after every compression—the hand is placed on the middle of chest.



Special Considerations

CPR for a Pregnant Woman

When performing CPR for a pregnant woman, raising her right hip 7.5 to 10 cm (3 to 4 in.) will help blood return to the heart. If a bystander is available (or an appropriate object is within easy reach), ask the person to find a soft object that you can place under the woman's hip, but do not interrupt or delay starting CPR to find an object yourself.

Air in the Stomach

When giving rescue breaths, it is important to keep the person's head tilted back and breathe with just enough force to cause the chest to rise. Failing to tilt the head back, giving too much air in one breath, or blowing too forcefully can push air into the person's stomach instead of into his or her lungs.

Air in the stomach can make someone vomit. When an unresponsive person vomits, the stomach contents may get into the lungs—this is called aspiration. Aspiration makes giving rescue breaths more difficult and reduces the person's chance of successful resuscitation. To prevent aspiration, remember to give breaths only until the chest starts to rise.

Vomiting

In some situations a person may vomit while you are giving CPR. If this happens:

1. Turn the person onto his or her side, facing you.
2. Quickly wipe the person's mouth clean.
3. Reposition the person on his or her back and continue with CPR.

CPR SUMMARY

	Hand Position	Compress	Breathe	Cycle	Compression Rate
Adult	Two hands on the middle of the chest	At least 5 cm (about 2 in.)	Just enough volume to make the chest start to rise (1 second per breath)	30 compressions and 2 breaths	Rate of 100–120 per minute: 30 compressions in about 15–18 seconds.
Child	Two hands on the middle of the chest	At least 1/3 of the chest's depth	Just enough volume to make the chest start to rise (1 second per breath)	30 compressions and 2 breaths	Rate of 100–120 per minute: 30 compressions in about 15–18 seconds.
Baby	Two fingers on the middle of the chest (just below the nipple line)	At least 1/3 of the chest's depth	Gently, with just enough volume to make the chest start to rise (1 second per breath)	30 compressions and 2 breaths	Rate of 100–120 per minute: 30 compressions in about 15–18 seconds.



Mouth-to-Nose Breathing

Sometimes you cannot seal your mouth over the person's mouth to give rescue breaths because:

- The person's jaw or mouth is injured.
- The person's jaw or mouth is shut too tightly to open.
- Your mouth is too small to cover the person's mouth.
- The person has blood coming out of his or her mouth.

If this happens, tilt the person's head as usual using a head-tilt/chin-lift and breathe into the person's nose. Block or close the mouth with your hand to stop air from escaping.

Mouth-to-Stoma Breathing

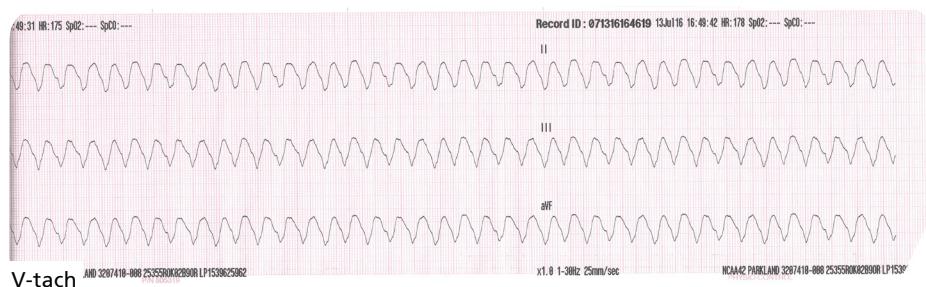
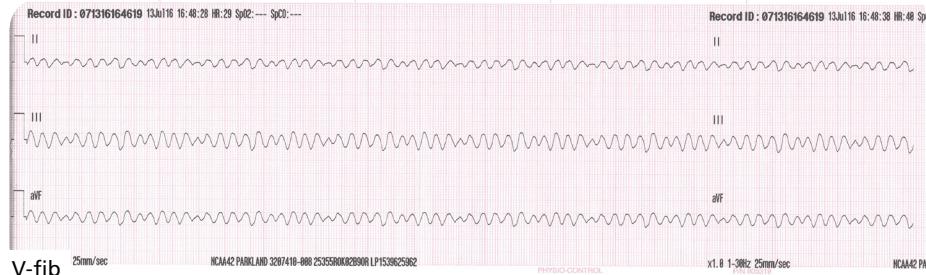
Some people have had an operation to remove part of the trachea. They breathe through an opening called a stoma in the front of the neck. Because air passes directly into the trachea through the stoma instead of through the mouth and nose, you should give rescue breaths into the stoma. Block the person's mouth and nose with your hand to stop air from escaping.

Automated External Defibrillation

While CPR can help prevent brain damage and death by keeping oxygenated blood moving throughout the body, an automated external defibrillator (AED) can correct the underlying problem for some people who go into sudden cardiac arrest.

Two abnormal heart rhythms in particular, ventricular fibrillation (V-fib) and ventricular tachycardia (V-tach), can

lead to sudden cardiac arrest. In V-fib, the heart muscle quivers weakly ("fibrillates") instead of contracting strongly. In V-tach, the heart muscle contracts too rapidly ("tachy-" means "fast"). Both of these rhythms impair the heart's ability to pump and circulate blood throughout the body and both are life-threatening.



In many cases, an electrical shock delivered by an AED can correct V-fib and V-tach rhythms. The shock disrupts the heart's electrical activity long enough for it to spontaneously develop an effective rhythm on its own. Using an AED as soon as possible (along with starting CPR immediately) gives the person the best chance of surviving cardiac arrest.

Different types of AEDs are available, but all are similar to operate and guide you using visual displays, voice prompts, or both. If your place of employment has an AED on site, know where it is located, how to operate it, and what the procedures around it are (e.g., for reporting its use or replacing its batteries). Also take note of the location of AEDs in public places that you frequent, such as shopping centres, airports, recreation centres, and sports arenas.

In more than 80% of all sudden cardiac deaths, the person's heart rhythm is "shockable" (ventricular tachycardia or ventricular fibrillation). In other words, defibrillation could have helped. If the person's heart has no electrical activity (asystole or flatline), defibrillation won't help. For each minute that the person has to wait for defibrillation, the chance of survival drops between 7 and 10%.

Using an AED

1. Open and turn on the AED.
2. Prepare to apply the AED pads:
 - Remove or cut away clothing and undergarments to expose the person's chest, and move or remove any objects (including jewellery) that could come into contact with the pads.
 - If the person's chest is wet, dry it using a towel or gauze pad. Dry skin helps the AED pads to stick properly.
 - Small amounts of chest hair will not interfere with pad adhesion. If the person has thick chest hair, shave the areas where the pads will be placed using the razor included with the AED prep kit.



3. Check if the person has an implanted pacemaker:

- Look on the chest for a small scar and a lump about the size of a matchbox.
- Apply the AED pads approximately 2.5 cm (1 in.) away from the pacemaker.



4. Apply the AED pads:

- Use the appropriate size of pads—adult, child, or baby.
- A child is considered to be between 1 and 8 years old. If child AED pads are unavailable, use adult pads.



- A baby is considered to be 1 year old or less. If baby AED pads are unavailable, use child or adult pads.
- Follow the diagrams on the pads to position them correctly on the person.
- Pads must be placed at least 2.5 cm (1 in.) apart. If there is not enough space on the chest to leave 2.5 cm (1 in.) between the pads, place one pad on the person's chest (anterior) and one on the person's back (posterior).



5. Follow the AED's prompts to "Analyze Heart Rhythm:"
 - Most AEDs will begin to analyze the heart rhythm automatically, but some may require you to push an "analyze" button to start this process.
 - No one should touch the person while the AED is analyzing the heart rhythm because this could result in a faulty reading.



6. If the AED prompts you to do so, deliver the shock:
 - Stand clear and say "I'm clear, you're clear, everybody's clear."
 - Ensure that no one is touching the person (as they can be shocked too), then press the "shock" button.



7. After a shock is delivered (or if the AED determines that no shock is necessary), immediately resume CPR, starting with compressions.
8. Continue to follow the AED's automated prompts.



The AED will continue to check the heart rhythm every 2 minutes. Listen for prompts from the AED and continue giving CPR and using the AED until you notice an obvious sign of life or EMS personnel arrive. If you notice an obvious sign of life, stop CPR, but leave the AED turned on and the pads in place on the person's chest. Continue to follow the AED's prompts.

Considerations for Safe and Effective AED Use

Environmental Considerations

Flammable or combustible materials: Do not use an AED around flammable or combustible materials, such as gasoline or free-flowing oxygen.

Metal surfaces: It is safe to use an AED when the person is lying on a metal surface, as long as the AED pads do not touch the metal.

Water: If the person is in water, remove him or her from the water before using the AED. Remember that many liquids conduct electricity: if the person is lying in a puddle when the shock is delivered, anyone who is touching the same puddle is at risk of being shocked as well. It is safe to use an AED on ice or snow.

Inclement weather: It is safe to use AEDs in all weather conditions, including rain and snow, but their effectiveness can be reduced if the pads are wet. Provide a dry environment if possible (for example, shelter the person with umbrellas), but do not delay defibrillation to do so. An AED is designed to function in a range of weather conditions, but it is still a battery-operated electronic device, and excessive cold, heat, moisture, etc., can result in maintenance errors or prevent the pads from adhering properly. If this happens, move the person into a different environment, if possible, before attempting defibrillation again.

Person-Specific Considerations

Pregnancy: It is safe to use an AED on a woman who is pregnant.

Pacemakers and implantable cardioverter-defibrillators (ICDs): A person who has a known arrhythmia (irregular heartbeat) may have a pacemaker or an ICD. These small devices are surgically implanted under the skin to automatically prevent or correct an irregular heartbeat. You may be able to see or feel the outline of the pacemaker or ICD in the area below the person's collarbone, or the person may wear a medical identification product indicating that he or she has a pacemaker or ICD. If the person has a pacemaker or ICD, adjust the pad placement to avoid placing the AED pads directly over the device, as this can interfere with the delivery of the shock. If you are not sure whether the person has an implanted device, place the pads as you normally would.

Transdermal medication patches: Some types of medications, including nitroglycerin and smoking cessation medications, are delivered through patches applied to the skin. Remove any medication patches that you see before applying AED pads. Wear gloves to prevent absorption of the drug through your own skin.

Chest hair: Time is critical in a cardiac arrest situation and sparse chest hair rarely interferes with pad adhesion. In most cases, you should proceed as you normally would—attach the AED pads, pressing firmly

to ensure adhesion. However, if the person has a great deal of thick chest hair and it seems like it could interfere with pad-to-skin contact, quickly shave the areas where the pads will be placed and then attach the pads.

Jewellery and body piercings: You do not need to remove the person's jewellery or body piercings before using an AED. However, if possible, avoid placing the AED pads directly over any metallic jewellery or piercings. If making a small adjustment to pad placement allows you to avoid the jewellery then do so, but if you must move the pads significantly it is better to place the pads directly over the jewellery.

Using an AED on a Child or Baby

The procedure for using an AED on a child or baby is the same as the procedure for using an AED on an adult. Some AEDs come with pediatric AED pads that are smaller and designed to deliver a less powerful shock. These pads should be used on children up to 8 years of age or weighing less than 55 pounds. Other AEDs have a key or switch that configures the AED for use on a child. If pediatric AED pads are not available or the AED does not have a pediatric setting, it is safe to use the adult pads and setting on a child or baby.

Medical Direction and AEDs

In some professions, defibrillation is designated as a controlled medical act. If you are providing care under the authority of a medical director, he or she may choose to adopt different protocols than those of the Canadian Red Cross. The specific protocols will be written in a standing order. You should always follow the instructions of your medical director. The Canadian Red Cross accepts no responsibility for any modifications made to the AED protocol set out in this text.

AED Maintenance

AEDs require minimal maintenance, but it is important to check them regularly according to the manufacturer's instructions or your employer's policy. This ensures that they remain in good working order and are ready for use whenever they are needed.

To ensure that your AED is ready to use:

- Familiarize yourself with the owner's manual and follow the manufacturer's instructions for maintenance.
- Familiarize yourself with the method the AED uses to indicate the status of the device. Many AEDs have a status indicator that displays a symbol or illuminates to indicate that the AED is in proper working order and ready to respond. The status indicator may also display symbols indicating that routine maintenance is needed (e.g., a battery change) or that a problem with the device has been detected. Some AEDs have a warning indicator that will illuminate or beep if the AED is not in proper working order or requires maintenance.
- Check regularly to make sure that the battery is properly installed and has not reached its expiration date.
- Make sure AED pads are adequately stocked, stored in a sealed package, and within their expiration date.
- After using the AED, make sure that all supplies are restocked and that the device is in proper working order.
- If at any time the AED fails to work properly or warning indicators appear, take the AED out of service and contact the manufacturer or the appropriate person at your place of employment (according to your employer's policy). You may need to return the AED to the manufacturer for service. If the AED stops working during an emergency, continue giving CPR until EMS personnel take over.



Working as a Team

Remember: when you are giving CPR, you want to give high-quality compressions at the appropriate depth and rate and to minimize interruptions to compressions. If you are the only trained First Aider at the scene, you will begin to tire as you give CPR, and the quality of your compressions will diminish. You will also need to stop CPR to ready the AED for use when it arrives, which means that during that time there will be no oxygenated blood moving through the person's body.

Working as a team can increase the chance of survival for the person in cardiac arrest. First Aiders can share the responsibility for giving compressions, switching off every 2 minutes. This reduces fatigue and leads to higher-quality compressions.

Having two or more First Aiders at the scene also minimizes interruptions to chest compressions when the AED arrives. One First Aider should begin CPR while the second calls EMS/9-1-1, obtains the AED, and readies it for use by turning the device on, applying the pads to the person's chest, and plugging in the connector cable, if necessary. The First Aider performing CPR should not pause CPR until the AED is ready to analyze the person's heart rhythm and the second First Aider tells everyone to stand clear. While the AED is analyzing, the First Aiders should switch roles. The First Aider who is taking over compressions should hover with his or her hands positioned just above the person's chest so that he or she can immediately start compressions as soon as the AED prompts that a shock was delivered or that no shock was advised. The First Aiders then switch roles every time the AED analyzes the person's heart rhythm, which occurs every 2 minutes.

7

Breathing Emergencies





A person who is having difficulty breathing is in respiratory distress. A person who is not breathing is in respiratory arrest. Both respiratory distress and respiratory arrest are breathing emergencies. Respiratory distress is especially dangerous in children, as it can quickly lead to cardiac arrest. Any child showing signs of respiratory distress is in a potentially life-threatening situation and must receive immediate care.

When a person is experiencing a breathing emergency, the oxygen supply to the person's body is either greatly reduced or cut off entirely, so it is important to act at once. If breathing stops or is restricted long enough, the person will become unresponsive, the heart will stop beating, and body systems will quickly fail. Brain cells begin to die after 4 to 6 minutes without oxygen.

A breathing problem can be identified by watching and listening to the person's breathing and by asking the person how he or she feels. If a person is having trouble breathing, do not wait to see if his or her condition improves without intervention, but begin providing care immediately.

Respiratory Distress

Common Causes

Respiratory distress may be caused by any of the following:

- Hyperventilation
- Asthma or chronic obstructive pulmonary disease (COPD)
- Pneumonia or bronchitis
- An allergic reaction
- Anaphylaxis
- A heart attack or heart failure
- Chest trauma
- Poisoning
- A drug overdose
- Electrocution
- Certain mental health conditions (e.g., panic disorders)

What to Look For

The following are signs and symptoms of respiratory distress:

- Shortness of breath or gasping for breath
- Trouble speaking in complete sentences (due to difficulty breathing)
- Wheezing, gurgling, or high-pitched noises
- Breathing abnormally quickly or slowly
- Unusually deep or shallow breathing
- Cool, moist skin
- Bluish or ashen (grey) skin
- Flushed or pale skin
- Feelings of fear
- Dizziness or light-headedness

What to Do



Call

Call EMS/9-1-1.



Care

1. If the person carries medication for respiratory distress, offer to help the person take his or her medication.
2. Encourage the person to sit down in a comfortable position (leaning forward may help make breathing easier).
3. Provide reassurance, as this can help reduce anxiety and help the person control his or her breathing.
4. Monitor the person's condition and provide continual care until EMS personnel arrive.

Hyperventilation

Hyperventilation is a condition in which a person is breathing much more quickly than usual. This upsets the body's balance of oxygen and carbon dioxide.

Common Causes

The following are common causes of hyperventilation:

- Strong emotions such as excitement, fear, or anxiety
- Asthma
- Injuries, especially injuries to the head
- Exercise
- Life-threatening bleeding

Prevention

If you tend to hyperventilate due to anxiety, panic, or stress, relaxation techniques such as breathing exercises may help. If you hyperventilate due to a diagnosed medical condition, speaking to your doctor will help you learn how to treat or control it.

What to Look For

The following are signs and symptoms of hyperventilation:

- Rapid, shallow breathing
- A feeling of suffocating or not getting enough air
- Fear, anxiety, or confusion
- A feeling of dizziness
- Numbness or tingling of the fingers and toes
- Muscle contractions, usually in the hands, feet, arms, and legs

What to Do



Call

It is not always necessary to call EMS/9-1-1 for a person who is hyperventilating. You should call EMS/9-1-1 and get an AED if the hyperventilation does not stop after a few minutes, the person becomes unresponsive, or you suspect that the person is hyperventilating because of an injury or illness.



Care

1. Encourage the person to take controlled breaths by breathing in slowly, holding his or her breath for a few seconds, and then gradually exhaling.

Myth-Information

Myth: If a person is hyperventilating, you should have him or her breathe into a paper bag.

This practice is unsafe and not recommended as a way to care for a hyperventilating person. The best way to treat hyperventilation is to encourage the person to take slow, controlled breaths.



Asthma

Many people have asthma—a chronic illness in which certain substances or conditions (i.e., triggers) cause inflammation and swelling of the bronchioles (i.e., the small tubes at the base of the lungs), making it harder for air to move in and out of the lungs. Asthma is more common in children. People who have asthma usually know what can trigger an attack and take measures to avoid these triggers. Asthma is usually controlled with medication.

Common Causes

Asthma can be triggered by:

- Air pollution or poor air quality (e.g., cigarette smoke)
- Allergies (e.g., to pollen, food, drugs, insect stings, or animals)
- Temperature fluctuations, extreme humidity, or extreme dryness
- Strong odours (e.g., perfume, cologne, scented cleaning products)
- Colds and flus
- Physical activity
- Respiratory infections
- Stress or anxiety

Prevention

If you have asthma, the following precautions may help to prevent attacks:

- Know what triggers your attacks and avoid them if possible.
- Ensure that prescribed medication is always easily accessible in case of an attack.

If a child has asthma:

- Make sure that anyone who supervises the child knows about the asthma and how to help give medication if necessary.

Asthma Medications

There are two main types of medication used by people with asthma: Long-term control medication and quick-relief (rescue) medication. A person with asthma may take one, both, or neither of them. Both long-term control medications and quick-relief (rescue) medications may be given through an inhaler, through a nebulizer, or orally.



Long-term control medications, sometimes called "preventers," are taken regularly, whether or not signs and symptoms of asthma are present. These medications help prevent asthma attacks by reducing inflammation and swelling and by making the bronchioles less sensitive to triggers.

Quick-relief (rescue) medications are taken when a person is experiencing an acute asthma attack. These medications are sometimes called "bronchodilators," because they work quickly to relax the muscles that tighten around the bronchioles, opening (dilating) them immediately so that the person can breathe more easily.

What to Look For



Even when a person takes steps to manage his or her asthma by avoiding triggers and taking prescribed long-term control medications, he or she may still occasionally experience asthma attacks. The signs and symptoms of an asthma attack include the following:

- Wheezing or coughing, especially when exhaling
- Gasping for air
- Shortness of breath (feeling unable to get enough air into the lungs)
- Rapid, shallow breathing (or trouble breathing)
- Anxiety and fear
- Tightness in the chest
- Tingling in the hands and feet
- Sweating
- Inability to say more than a few words without pausing to breathe

What to Do

Call

Call EMS/9-1-1 and get an AED if the person is struggling to breathe, the person's breathing does not improve after taking his or her medication, or the person becomes unresponsive.

Care

1. Eliminate any asthma triggers, if possible. If something in the environment is causing the attack, move the person away from the area if it is safe to do so.
2. Help the person get into a comfortable position and provide reassurance.
3. Help the person to take any prescribed quick-relief asthma medication that he or she has available.



Providing Care for an Asthma Attack: Using an Asthma Action Plan

An individual who is at risk for ongoing asthma attacks may have a written plan that outlines the assessment and treatment steps, and clarifies when to call EMS/9-1-1. This is most common for children in child care situations. If you are a caregiver for a person who has an asthma action plan, familiarize yourself with it and be sure you understand what to do if the person has an attack.

Using an Inhaler

1. Rapidly shake the inhaler 3 or 4 times.



3. Breathe out as much air as possible, away from the inhaler.
4. Bring the inhaler to the mouth.
5. Press the top of the inhaler while taking one slow, full breath.



2. Remove the cap from the inhaler.



6. Hold the breath for as long as is comfortable (up to 10 seconds), and then breathe out.

Using an Inhaler with a Spacer

1. Rapidly shake the inhaler 3 or 4 times.
2. Remove the cap from the inhaler.
3. Remove the spacer's cap (if it has one), and put the inhaler into the spacer.
4. Bring the spacer to the mouth.
5. Press the top of the inhaler once to dispense the medication into the spacer.
6. Take slow, deep breaths, holding each breath for a several seconds (if possible).



Allergic Reactions

Normally, our immune systems help to keep us healthy by fighting off harmful pathogens that can cause disease. In a person with an allergy, however, the immune system can react to normally harmless substances to produce allergic reactions.

An allergic reaction occurs in two stages. First, the immune system mistakes a normally harmless substance for a dangerous invader and produces antibodies that remain on alert for that particular allergen. When the body is exposed to the allergen again, these antibodies release a number of immune system chemicals, such as histamine, that cause allergy symptoms.

While certain substances are more common as allergens (e.g., peanuts and pollen), almost anything can produce an allergic reaction. The severity of an allergic reaction depends on the person. It can be as

minor as a slight irritation or as serious as a life-threatening emergency (anaphylaxis). The signs and symptoms of an allergic reaction depend on the trigger, but they typically involve the airways, skin, sinuses, nasal passages, cardiovascular system, and digestive systems.

Preventing Allergic Reactions in a Child You Are Caring For

Discuss the allergy with the parent or guardian before you begin caring for the child, and ask at least the following questions:

- What is your child allergic to?
- What signs will tell us that your child is having an allergic reaction?
- What should we do if your child has a reaction?
- Has the doctor prescribed any allergy medication? For instance, should you give us your child's epinephrine auto-injector?

Make a list of the allergies of each child under your care, and keep it in a location where you can refer to it easily, especially in cooking and food service areas. Be sure to read all the ingredients on all food package labels when preparing and cooking food. Before serving a food that is a common allergen (e.g., eggs, shellfish, milk, nuts), ensure that the parent or guardian has given it to the child at home without causing a reaction.

What to Look For



What to Do



Call

Call EMS/9-1-1 and get an AED if the reaction is severe, the person is struggling to breathe, or the person loses responsiveness.



Care

1. Calm and reassure the person.
2. Try to identify the allergen and have the person avoid further contact with it.
3. Watch the person for signs of increasing distress.
4. If the person uses a medication to control allergic reactions (such as antihistamines), help him or her to take it.

Signs and symptoms of an allergic reaction can range from mild to very severe and include the following:

- Runny, itchy, or stuffy nose
- Sneezing
- Watery, itchy, red, or swollen eyes
- Nausea, vomiting, or diarrhea
- A rash or hives (raised, itchy areas of skin)
- Tingling of the mouth
- Swelling of the lips, tongue, face, or throat
- Coughing, chest tightness, wheezing, or shortness of breath
- Weakness, dizziness, or confusion

Antihistamines

An antihistamine is a medication that counteracts the effects of histamine (a chemical released by the body during an allergic reaction). Antihistamines are supplied as pills, capsules, or liquids and are taken by mouth. The person should take the antihistamine according to the medication label and his or her healthcare provider's instructions.



Anaphylaxis

Anaphylaxis is a severe allergic reaction. While mild allergic reactions are localized, anaphylaxis is a body-wide reaction and it can cause system-wide inflammation and swelling. In some cases, the air passages swell, making it difficult to breathe. It is important to act quickly when a person is experiencing anaphylaxis, as it can lead to death if it is not cared for immediately.

Common Causes

Anything that causes other allergic reactions can also cause anaphylaxis, and the causes vary from one person to another. The most common allergens that trigger anaphylaxis include:

- Insect stings
- Food
- Medications

Prevention

The following steps may help to prevent an anaphylactic incident:

- Avoid the substances, foods, or insects that cause reactions.
- Wear a medical identification product and carry the appropriate medication at all times.

What to Look For



from two or more of these categories—especially after contact with an allergen—you should provide care for anaphylaxis:

- Skin (e.g., swelling of the lips, face, neck, ears, and/or hands, a raised, itchy, blotchy rash, flushing, or hives)
- Breathing (e.g., a feeling of tightness in the chest or throat, coughing, wheezing, or high-pitched noises)
- Alertness (e.g., weakness, dizziness, or unresponsiveness)
- Stomach (e.g., stomach cramps, nausea, vomiting, or diarrhea)

What to Do



Call

Call EMS/9-1-1 and get an AED.

The signs and symptoms of anaphylaxis may be similar to the signs and symptoms of a mild allergic reaction, but they are more pronounced. A person experiencing an anaphylactic emergency may develop one or more signs and symptoms within seconds or minutes of coming into contact with the allergen.

Anaphylaxis can affect a variety of body systems and can present in various ways. If a person exhibits signs and symptoms

from two or more of these categories—especially after contact with an allergen—you should provide care for anaphylaxis:

- Skin (e.g., swelling of the lips, face, neck, ears, and/or hands, a raised, itchy, blotchy rash, flushing, or hives)
- Breathing (e.g., a feeling of tightness in the chest or throat, coughing, wheezing, or high-pitched noises)
- Alertness (e.g., weakness, dizziness, or unresponsiveness)
- Stomach (e.g., stomach cramps, nausea, vomiting, or diarrhea)



Care

1. If the person has an epinephrine auto-injector, help him or her to use it.
2. Provide reassurance and encourage the person to breathe normally.
3. Help the person get into a comfortable position.



If the person's condition does not improve 5 minutes after the initial dose of epinephrine and EMS personnel have not yet arrived, help the person take a second dose, if available. The second dose should be given in the leg that you did not use for the first dose.

If responsive, the person may want to take additional medication such as an antihistamine.

Using an Epinephrine Auto-Injector

1. Remove the safety cap.



2. Place the injection tip against the middle third of the outer thigh and push the epinephrine auto-injector firmly against the thigh with a quick motion. A click should be heard.
3. Hold in place as directed, usually for 5 to 10 seconds.

4. Remove the epinephrine auto-injector. Use caution if the needle tip is exposed.



5. Rub the injection site for 30 seconds to help with medication absorption.



6. Make sure the used epinephrine auto-injector is placed in a rigid container and goes with the person to the hospital.
7. Have the person rest quietly until EMS personnel arrive.



Epinephrine

Epinephrine is a drug that slows or stops the effects of anaphylaxis. If a person has a risk of experiencing anaphylaxis, he or she may carry an epinephrine auto-injector (a syringe system that contains a single dose of epinephrine). Different brands of epinephrine auto-injectors may be available, but all work in a similar fashion. Some have audio prompts to guide the user.

Different auto-injectors contain different doses based on the weight of the person (0.15 mg for children weighing between up to 30 kg (66 lb.), and 0.3 mg for children and adults weighing more than 30 kg (66 lb.)).

Many healthcare providers advise that people with a known history of anaphylaxis carry at least two doses of epinephrine (two auto-injectors) with them at all times. This is because more than one dose may be needed to stop an anaphylactic reaction. The second dose should be administered if the person is still having signs and symptoms of anaphylaxis 5 minutes after the first dose.

8 Wound Care



Stages of Wound Healing

Wounds go through several phases during the healing process. The first stage is the body's natural response to injury. It is at this stage that the characteristic signs of inflammation can be seen: heat, swelling, and pain. Infection is most prominent during the first stage of healing, but can occur at any time.

The second stage is where tissue is rebuilt by the body. The area will slowly heal with tissue that is sensitive and pink or red. This new skin tissue will slowly toughen and thicken during the final stage of healing.



Wounds such as bruises, scrapes, and small cuts are very common injuries, and are caused in a variety of ways.

Prevention

The following general tips will help you to avoid both serious and minor wounds:

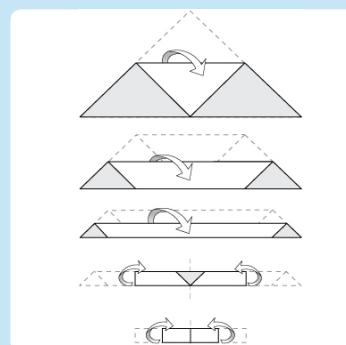
- Develop safe habits, such as never running with sharp objects.
- Use proper safety equipment when playing sports or engaging in recreational activities.
- Wear proper safety equipment in the workplace, and request training before using any potentially dangerous tools or equipment.
- Stay alert and focused when engaged in any potentially risky activity.

Bandaging Guidelines

- Use clean, preferably sterile, dressings.
- Check circulation below the injury before and after applying a bandage. If circulation is reduced, loosen the bandage.
- If blood soaks through the bandage, place more dressings and another bandage on top. The dressing that is in contact with the wound should remain in place and not be removed.
- Dressings and bandages should be kept clean and dry to decrease the risk of infection. Once bleeding is under control and the wound has begun to heal, dressings that become wet should be replaced with dry dressings.



Folding a Triangular Bandage Into a Broad or Narrow Bandage



1. Fold the tip of the triangle down to touch the base.
2. Fold the bandage in half lengthwise to make a broad bandage.
3. Fold it in half again to make a narrow bandage.

Cuts and Scrapes

A cut is a wound where the skin has been split open. The edges of the cut can be jagged or smooth. Scrapes are wounds where the skin has been rubbed or scraped away. Signs and symptoms of a cut or scrape may include pain and bleeding.

What to Do



Call

Call EMS/9-1-1 if you suspect that there may be more serious injuries.



Care

1. There is usually minimal bleeding with cuts and scrapes, but if the wound is bleeding significantly, apply direct pressure until it stops.
2. If possible, rinse the wound for 5 minutes with clean, running tap water.



3. If an antibiotic ointment or cream is available, ask the person if he or she has a sensitivity to any antibiotics, such as penicillin. If not, suggest the person apply it to the wound.



4. Cover the wound with a sterile non-stick dressing and/or bandage.
5. Ensure that the person knows to watch for signs of infection over the next few days.



Puncture Wounds

A puncture wound occurs when a hole in the skin is created by a pointed object, such as nails, pieces of glass, and animal teeth.

Common Causes

Puncture wounds may be caused by:

- Injuries from pointed objects such as nails or pieces of glass
- Animal bites

Prevention

The following may help you to avoid injuries that cause puncture wounds:

- Stay away from unfamiliar animals.
- Wear shoes when walking outside.
- Clean up sharp objects, like glass, right away. Dispose of sharp objects safely (e.g., do not put broken glass directly into a garbage bag, and, if possible, remove nails from objects before putting the objects into a garbage bag).

What to Look For

These signs may indicate an injury caused by a puncture wound:

- Bleeding
- Bruising
- A hole where the object went through the skin

What to Do



Call

Call EMS/9-1-1 and get an AED if the wound is deep or large.



Care

1. If the wound is bleeding, apply direct pressure until the bleeding stops.
2. Once the bleeding is controlled, wash the wound thoroughly with water. If possible, rinse the wound for 5 minutes with clean, running tap water.
3. Cover the wound with a sterile dressing and/or bandage.
4. Ensure that the person knows to watch for signs of infection over the next few days.

Scalp Injury

What to Do



When performing a secondary assessment of a person with a suspected scalp injury, check the scalp thoroughly to ensure that you have uncovered the full extent of the injury.



Because the scalp contains many blood vessels, even small scalp wounds can have significant bleeding.

 **Call**

Call EMS/9-1-1 and get an AED if you are not sure how serious the scalp injury is or if you feel a dip, a soft area, or pieces of bone.

 **Care**

1. Put dressings on the wound and have the person hold them in place to control the bleeding.



2. Secure the dressings with a bandage.



3. If you feel a dip, a soft area, or pieces of bone:
 - Treat the injury as a head injury.
 - Put direct pressure on the wound only if the bleeding is life-threatening. Otherwise, try to control the bleeding with pressure on the area around the wound.
4. Provide continual care until EMS personnel arrive.

**Infection**

An infection occurs when dirt, foreign bodies, or other materials carrying germs get into a wound. Infections can be localized (e.g., in a cut) or systemic (throughout the body). Infections accompanied by nausea, fever, or general malaise are typically systemic, and can be life-threatening.

Prevention

The following general tips help to minimize the risk of infection:

- Always wash your hands before and after giving first aid.
- Wear gloves whenever possible if you will be coming into contact with someone's bodily fluids.
- Keep your immunizations up to date. If you have been wounded and do not know when your last tetanus shot was, seek medical attention.
- Keep any wound clean and wash it regularly. Change the dressing and bandages if they become dirty or wet.
- Use sterile dressings whenever possible. If sterile dressings are unavailable, use the cleanest option possible.

What to Look For

Any of the following signs around an injury may indicate an infection:

- Redness
- Red streaks moving away from the wound
- Pus
- Heat or warmth
- Swelling
- Tenderness
- Excessive itchiness



Chemical Burns

The following precautions will help prevent chemical burns:

- Store chemicals in their original containers.
- Wear protective gear when handling chemicals.
- Wash your hands after touching chemicals.
- Get trained in a hazardous materials training program, such as the Workplace Hazardous Materials Information System (WHMIS)/Globally Harmonized System (GHS) of Classification and Labelling of Chemicals.
- Read the label before using a product.
- Be aware of caustic plants in your area.

Burns

Burns are soft-tissue injuries caused by chemicals, electricity, heat, or radiation.

Prevention

There are different methods of prevention for different types of burns.

Electrical Burns

The following tips will help prevent electrical burns:

- Keep electrical appliances away from water.
- If an electrical cord is frayed, fix it or dispose of it.
- If there are young children in the building, cover electrical outlets.
- Before approaching a person with a suspected electrical burn, make sure that trained personnel turn off the electrical current.

Burns from Lightning Strikes

The following precautions will help prevent burns from lightning strikes:

- As soon as a storm is seen or heard, stop swimming or boating and get away from the water, because water conducts electricity.
- Stay indoors during thunderstorms. A picnic shelter or car (with the windows rolled up) will also provide some protection.
- If caught outside, stay away from telephone poles and tall trees. Stay off hilltops and try to crouch down in a ravine or valley if shelters are not available nearby.
- Stay away from things that conduct electricity, such as farm equipment, small metal vehicles (e.g., motorcycles, bicycles, and golf carts), wire fences, clotheslines, metal pipes, and railings.

Thermal Burns

The following precautions will help prevent thermal burns:

- When cooking on the stove, turn the pot handles in and use only the back burners when possible.
- Keep the hot water tank temperature at or below 49°C (120°F).
- Keep children away from heat sources and appliances such as ovens, barbecues, space heaters, woodstoves, candles, and fireplaces.
- Keep hot drinks out of children's reach.

Sunburns

The following precautions will help prevent sunburns:

- Limit exposure to the sun between 10:00 A.M. and 3:00 P.M., if possible.
- Wear light coloured clothing that covers as much of the body as possible.
- Use a broad-spectrum sunscreen with a sun protection factor (SPF) of at least 30 and apply it 15 to 30 minutes before going outdoors. Reapply sunscreen at least every 2 hours, as well as after being in the water and after sweating.

What to Do



Call

Call EMS/9-1-1 and get an AED immediately if:

- The burns make it difficult for the person to breathe.
- The person is in a great deal of pain or becomes unresponsive.
- The burns were caused by chemicals, explosions, or electricity.
- The burns involve a large amount of blistering or broken skin, or the burns cover the face, neck, hands, genitals, or a larger surface area.

If at least one of the above conditions is true and you are alone, call EMS/9-1-1 yourself, get an AED, and then return to care for the person. If it a superficial burn, you should not need to call EMS/9-1-1, unless the person is in a great deal of pain or becomes unresponsive. Always call EMS/9-1-1 for a full thickness burn, regardless of size.



Care

1. While the care for all burns is similar, specific care steps can vary depending on the cause of the burn. Care should be taken to monitor for hypothermia when cooling large burns. This is particularly important in children. Cover the person with a blanket if the person complains of feeling cold.

Thermal Burns

Thermal burns are caused by heat, hot liquid, steam, or open flames. The care that is required varies by the thickness of the burn, so you should determine the burn's seriousness before beginning to provide care.

Superficial Burns

What to Look For



- Redness
- Pain
- Possible swelling

What to Do



Care

1. Cool the affected area with clean running or standing water for at least 10 minutes. A clean cool or cold (but not freezing) compress can be used as a substitute.



Partial Thickness Burns

What to Look For



- Redness
- Pain
- Possible swelling
- Blisters

What to Do



Care

1. Cool the affected area with clean running or standing water for at least 10 minutes. A clean cool or cold (but not freezing) compress can be used as a substitute.
2. Remove jewellery and clothing from the burn site, but do not attempt to move anything that is stuck to the skin.
3. Once it is cool, cover the burn loosely with a dry, sterile dressing, preferably non-stick gauze.
4. Encourage the person to seek medical attention even if it is not necessary to call EMS/9-1-1.



Full Thickness Burns

What to Look For



- Redness
- Pain (may not be present in the most severely burned areas due to nerve damage)
- Possible swelling
- Blisters
- Charred or waxy, white flesh

What to Do



Care

1. Stop the burn from worsening by cooling the affected area with clean running or standing water for at least 10 minutes. A clean, cool or cold (but not freezing) compress can be used as a substitute.
2. Remove jewellery and clothing from the burn site, but do not attempt to move anything that is stuck to the skin.
3. Once it is cool, cover the burn loosely with a dry, sterile dressing, preferably non-stick gauze.
4. Have the person lie down until EMS personnel arrive.



Chemical Burns

Chemical burns can be caused by a wet or dry caustic chemical. Use caution with dry caustic chemicals, as they may spread or react if they become wet.

What to Do



Care

1. Wear protective equipment to avoid being burned yourself.
2. If there are dry chemicals present, brush them off the person's skin before flushing with water.
3. Flush the affected areas with large amounts of cool running water for at least 15 minutes, or until EMS personnel arrive. Flush the chemicals away from areas of the body that have not been contaminated.
4. Remove any clothing that is wet or that has been contaminated by the chemical.
5. Refer to the appropriate Material Safety Data Sheet (MSDS) for additional first aid measures, if it is available.

Electrical Burns

Electrical burns are caused by powerful electrical currents. They are typically caused by a person either touching a live electrical circuit or being struck by lightning. Because electricity and lightning can affect the heart, it is important to monitor the person's ABCs closely.

What to Do



Care

1. Treat the person as if he or she has a head and/or spinal injury.
2. Look for two burns (the entry and exit points) and care for them as you would care for thermal burns.

Radiation Burns

The most common type of radiation burn is a sunburn, but they can also be caused by exposure to radioactive substances.

What to Do



Care

1. If the burn results from exposure to a radioactive substance, consult the appropriate workplace safety system (e.g., WHMIS) for specific first aid steps.
2. Care for radiation burns as you would care for thermal burns.

Special Considerations When Caring for Burns

Remember the following special considerations when providing care for burns:

- Don't use ointments on partial or full thickness burns.
- Blisters are a natural cooling system. Leave them in place.
- Touch a burn only with sterile or clean dressings.
- Do not use absorbent cotton or pull clothes over any burned area.

Pay close attention to the person's airway. Look for signs of burn injuries around the face. If you suspect that the airway or the lungs may be burned, monitor the person's breathing closely.



Bruises

A bruise is a discoloured area of the skin that is created when blood and other fluids seep into nearby tissues.

What to Look For

The following are signs and symptoms of bruising:

- Discoloured skin (red, purple, black, or blue areas)
- Swelling
- Pain

What to Do



Call

If the person is in severe pain or cannot move a body part without pain, or you think the force that caused the injury was great enough to cause serious damage or life-threatening bleeding, call EMS/9-1-1 and get an AED immediately. You may be dealing with internal bleeding, head and/or spinal injuries, or a bone, muscle, or joint injury. Care for the injury accordingly.

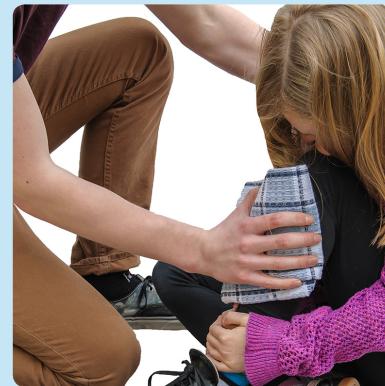


Care

1. Using ice or another cold source, cool the injured area to help reduce pain and swelling. Place some sort of cloth, towel, or pad between the cold source and the skin to reduce the risk of freezing.



2. Apply the cold source for 20 minutes and then take it off for 20 to 30 minutes. Continue to do this for as long as the person keeps feeling pain.



Splinters

A splinter (or "sliver") is a sharp, thin piece of material that is stuck in the surface of the skin. If the splinter is completely below the skin, encourage the person to seek medical attention rather than attempting to remove it yourself.

What to Do



Care

1. Gently grab the exposed end of the splinter with tweezers and carefully pull it out.
2. Wash the area with water and apply a bandage.





Nosebleeds

Common Causes

Nosebleeds may be caused by the following:

- Forceful nose blowing
- High blood pressure
- Dry weather conditions
- Trauma to the nose or head
- Bleeding disorders

If you know that the bleeding is caused by an object in the nose, refer to the care for foreign objects in the nose.

Prevention

To prevent nosebleeds:

- Use a humidifier if the air indoors is dry.
- Wear protective athletic equipment when participating in sports that could cause injuries to the nose.
- Practice gentle nose blowing.
- Teach children not to pick their noses.

What to Do



Call

Call EMS/9-1-1 if the bleeding continues for more than 15 minutes, the bleeding is the result of a head injury, or the person is losing a large amount of blood.



Care

1. Have the person sit with the head slightly forward, pinching the nostrils, for 10 to 15 minutes. If the nosebleed was caused by a severe head injury, do not pinch the nose.
2. Once you have controlled the bleeding, tell the person to avoid rubbing, blowing, or picking his or her nose because this could start the bleeding again.
3. If the person loses responsiveness, place him or her in the recovery position to allow blood to drain from the nose.



Foreign Objects in the Nose

What to Look For

An object in the nose may be visible, and may also cause the following signs and symptoms:

- Unusual noises when the person breathes through his or her nose
- Bleeding
- Nose deformity

What to Do



Care

1. If you can easily see and grasp the object, remove it.
2. If the object cannot be dislodged easily, leave it in place for a medical professional to remove.
3. Prevent the person from attempting to remove the object and from blowing his or her nose.



Knocked-Out Teeth

Common Causes

A tooth can be knocked out by any kind of blow that involves the mouth.

Prevention

The following tips may avoid an injury that results in knocked-out teeth:

- Wear appropriate equipment when playing sports, such as a mouth guard or face mask.
- Always wear a seat belt while in the car and do not eat or drink in a moving car.

What to Look For

Aside from a tooth that is visibly missing, signs and symptoms of knocked-out teeth include the following:

- Bleeding (although this is often very minimal)
- Pain in the mouth

What to Do



Call

Call EMS/9-1-1 and get an AED if the knocked-out tooth was caused by a forceful blow to the head, especially if the person is unresponsive, or you suspect that there may be other more serious injuries.



Care

1. Control any bleeding by having the person bite down on a clean dressing.



2. Carefully pick up the tooth by the crown (the whiter part), not the root.



4. Get the person to a dentist as soon as possible. The greatest chance for repair is during the first hour after the tooth is knocked out.



An injury that knocks out a tooth can also be powerful enough to cause jaw, head, or spinal injuries.

3. Put the tooth in propolis, egg white, coconut water, whole milk, or saline, if available, and keep it with the person. If none of these are available, wrap the tooth in gauze (or a clean cloth) with some of the person's own saliva. Seal the container and label it with the name of the person, the date, and the time.



Eye Injuries

Eye injuries can have long-term consequences for a person's vision, so they must always be treated with extreme care. The eye is an extremely sensitive organ: Avoid touching the eye or putting pressure on or around it, as this can cause further damage. Wounds involving the eyelids or eye sockets should also be treated as eye injuries.

Common Causes

An eye injury may be caused by the following:

- Foreign objects or particles in the eye
- An impact to the eye
- Radiation or burns
- Chemicals or other caustic materials

Prevention

The following may help to prevent an eye injury:

- Wearing appropriate equipment in the workplace (e.g., safety glasses)
- Wearing appropriate equipment when playing sports (e.g., wearing a helmet with a visor or face protector when playing hockey)

What to Look For

An eye injury may include the following signs or symptoms:

- Pain and irritation in the eye
- Redness of the eye
- Difficulty opening the eye
- Problems with vision
- Watering of the eye
- Deformities of the eye

What to Do



Call

Call EMS/9-1-1 if there is an impaled object in or near the eye, the eye is out of the socket, or the eye has been exposed to a chemical or caustic substance.



Care

If an object is impaled in or around the eye:

1. Have the person lie on his or her back and keep as still as possible.
2. Stabilize the object with bulky dressings.
3. Cover both eyes with gauze or another light material.
4. Provide comfort and reassurance until EMS personnel arrive.

If there is a foreign object in the eye but it is not impaled:

1. Try to remove the foreign object by having the person blink several times. The eye will produce tears that may wash out the object. An object that is not touching the eye itself (e.g., in the corner of the eye) may be removed with a moist cotton-tipped applicator.
2. Clean away any dirt around the eye and then gently flush the eye with running water (letting the water run away from the unaffected eye).
3. If these steps do not remove the object, the person should seek medical attention.

If there is a chemical or other caustic substance in the eye:

1. Gently flush the eye with running water (away from the unaffected eye) for at least 15 minutes, or until EMS personnel arrive.



If the eyes were flash burned (e.g., while welding):

1. Cover the eyes with a cool, wet cloth.
2. Make sure the person gets medical attention.

Ear Injuries

Prevention

The following tips can help prevent ear injuries:

- Wear proper protection when using loud equipment such as lawn mowers and chainsaws.
- Wear a helmet and other recommended safety gear when participating in sports and physical activities.
- Cover the ears when there is a risk of foreign objects or substances entering the ear (e.g., wear a swim cap when participating in water activities).

Common Causes

An ear injury may be caused by the following:

- An impact to the head
- Cuts or tears to the ear(s)
- Loud noises
- Blast injuries
- Foreign objects or substances in the ear

What to Look For

Signs and symptoms of an ear injury include the following:

- Blood or other fluid coming from within the ear
- Hearing problems
- Sudden or intense pain in the ear
- Swelling or deformity of the ear

What to Do



Call

Call EMS/9-1-1 and get an AED if there is blood or other fluid draining from the ear, or if the ear injury is the result of an explosion or pressure (e.g., while scuba diving).



Care

1. If the injury is an external wound, treat it the same way you would treat a wound on any other part of the body.
2. If there is a foreign object in the ear but you don't suspect a head and/or spinal injury, and it looks as if the object can be easily removed:
 - Tilt the head to the affected side, then gently tap the ear to loosen the object.
 - Attempt to grasp the object and pull it out.





Impaled Objects

An impaled object is anything that has penetrated through the skin and is stuck in the tissues below.

Common Causes

An object can become impaled when any type of force causes it to penetrate the skin and underlying tissue.

What to Look For

An impaled object will be visibly protruding from the person's body, and may cause the following signs and symptoms:

- Shock
- Pain
- Bleeding

What to Do



Call

Call EMS/9-1-1.



Care

1. Keep the person still and leave the object in place.



2. Expose the object by carefully removing any clothing around it.
3. Check the circulation below the site of the injury.
4. Stabilize the object by using bulky dressings.



5. Use bandages to hold the dressings in place. Wrap the bandages snugly, but not so tightly as to cut off circulation.



6. Once the dressings are secure, recheck circulation below the site of the injury.
7. Make sure the person gets medical attention.



Amputations

An amputation is a complete or partial severing of a body part. Although this causes a lot of damage to the surrounding tissues, bleeding may or may not be severe.

Prevention

To reduce the risk of amputation:

- Keep hands clear of doors when they are closing.
- Use caution near train tracks: only cross at designated crossings, and never walk along the tracks.
- Be extremely careful when on or around any farm machinery, even when it is turned off or not operating.

What to Do

If the body part is still partially connected to the body, put it back into place as best you can and treat the injury as an open wound or fracture.



Call

Call EMS/9-1-1.



Care

1. Try to control the bleeding with direct pressure. If you are not successful, or you are unable to apply direct pressure, apply a tourniquet.



2. Even if the body part has been fully amputated, there is still the possibility that it could be reattached as long as it is cared for properly. Remember to "protect it, bag it, cool it, tag it:"

PROTECT IT: Wrap the amputated part in gauze or a clean cloth.



COOL IT: Keep the amputated part cool by placing the bag on ice. Wrap the bag before cooling it so that the body part does not freeze.



BAG IT: Place the amputated part in a plastic bag.



TAG IT: Label the container with the person's name, the date, and the time.



3. Make sure the amputated part goes with the injured person to the hospital.



Crush Injuries

Common Causes

A crush injury occurs when there is a great deal of pressure on a part of the body, such as when a body part is squeezed between two heavy objects.

What to Look For

If the person is still trapped under the object(s) or between two objects, it is likely that a crush injury has occurred. Other signs and symptoms of a crush injury include the following:

- Internal bleeding
- Shock
- Deformity
- Pain

What to Do



Call

Call EMS/9-1-1 and get an AED.



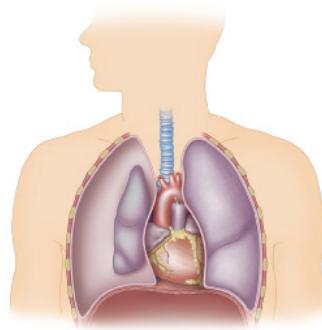
Care

1. If the object is restricting the person's breathing, or the object is crushing the person's head, neck, chest, or abdomen, remove the object if it can be safely removed. If it is crushing another body part, leave the object where it is until EMS personnel arrive.

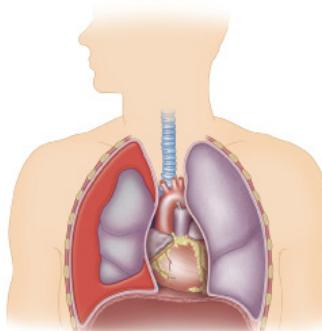
Chest Injuries

Chest injuries can impact the ribs and/or the organs they protect. They can involve open wounds or internal injuries. If ribs are broken, they can penetrate the skin or the lungs, causing additional injury.

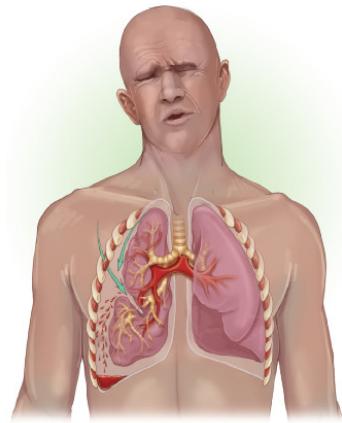
Injuries to the chest can result in conditions known as pneumothorax (air in the chest) or hemothorax (blood in the chest).



Pneumothorax is a condition in which air enters the chest cavity from the wound site but doesn't enter the lung. The air in the chest cavity presses against the lung, causing it to collapse.



Hemothorax is a condition in which blood accumulates in the chest cavity from the wound site but doesn't get into the lung. Because blood takes up space in the chest cavity, the lung can't expand effectively.



Penetrating Chest Injuries

Penetrating chest injuries cause varying degrees of internal and external bleeding. Additionally, if the object penetrates the ribcage, air can pass freely in and out of the chest cavity and the person can no longer breathe normally. This can result in a breathing emergency.

What to Look For

The following are signs and symptoms of a penetrating chest injury:

- Difficulty breathing
- Gasping
- Bleeding from an open chest wound that may bubble at the injury site
- A sucking sound coming from the wound with each breath
- Severe pain at the site of the injury
- Coughing up blood

What to Do



Call

Call EMS/9-1-1 and get an AED.

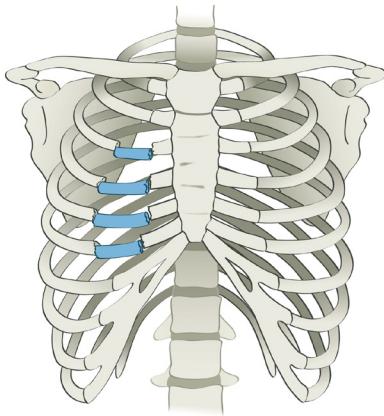


Care

1. Have the person rest in a comfortable position. If the person wants to lie down, help the person into the recovery position with the injured side toward the ground.
2. If the wound is bleeding profusely, applying pressure or gauze dressings may be necessary to stop the bleeding. If bleeding is minor, do not apply pressure or a dressing.



To avoid the build-up of air between the chest wall and the lung (tension pneumothorax), air must be able to exit an open chest wound. If you must apply a dressing, ensure that it does not become saturated with blood, as this will prevent air from escaping. If the dressing becomes saturated, it must be changed.



Blunt Chest Injuries

A blunt chest injury is caused by a crushing force that does not create a wound in the chest wall. The most common blunt chest injury is a broken rib. Incidents that may result in blunt chest injuries include motor vehicle collisions, falls, and sports injuries.

If multiple ribs break in multiple places, this can produce a loose section of the ribcage that does not move normally with the rest of the chest during

breathing. This is called flail chest. Normally, the loose section will move in the opposite direction to the rest of the chest. This is called paradoxical movement. Flail chest can also involve the sternum.

What to Look For

The signs and symptom of a blunt chest injury include the following:

- Pain
- Deformity or swelling
- Guarded, shallow breathing
- Bruising at the site

What to Do



Call

Call EMS/9-1-1.



Care

1. Keep the person as still as possible, as a blow to the chest may have caused head, neck, and/or spinal injuries.
2. Give the person something bulky (such as a towel) to hold against the chest, as this can make it easier to breathe.



Abdominal Wounds

The abdomen is the area immediately under the chest and above the pelvis. It is easily injured because it is not surrounded by bones. The abdomen contains important organs such as the liver, which can be easily damaged. Injuries to the abdomen are more likely to produce life-threatening internal bleeding.

What to Look For

The signs and symptoms of serious abdominal injuries include:

- Bruising
- Nausea and vomiting (sometimes vomit containing blood)
- Pain, tenderness, or a tight feeling in the abdomen
- Distension in the abdomen
- Organs possibly protruding from the abdomen

What to Do



Call

Call EMS/9-1-1 if you suspect life-threatening internal bleeding or if there are organs protruding from the abdomen.



Care

If organs are not protruding, care for any injuries as you would care for them on any other part of the body.

If there are organs protruding:

1. Do not apply direct pressure or attempt to push organs back into the abdomen.
2. Cover the protruding organs with moist, sterile dressings.
3. Loosely cover the dressings with plastic, if available.
4. Cover the person with a towel or blanket to keep him or her warm



Blast Injuries

Blast injuries occur when pressure waves generated by an explosion strike and pass through the body's surfaces. Blasts release large amounts of energy in the form of pressure and heat. Injuries can include loss of hearing, pneumothorax, internal bleeding, and organ damage. Thermal burns may also occur from exposure to heat. The extent of blast injuries may be difficult to identify because sometimes there

are no visible external injuries, and indicators of internal injuries may not be apparent. A person with suspected blast injuries should be monitored and reassessed frequently while waiting for EMS personnel to arrive.

There are four mechanisms of injury resulting from blasts:

1. Pressure or heat injuries from the blast itself.
2. Injuries from flying debris (shrapnel).
3. Trauma from being thrown by the blast.
4. Injuries or illnesses caused by hazardous material being dispersed by the blast.

What to Do



Call

Call EMS/9-1-1 and get an AED.



Care

1. Keep the person still.
2. Treat any obvious external injuries.
3. Constantly monitor the person's condition as it may change rapidly.



9

Head, Neck, and Spinal Injuries

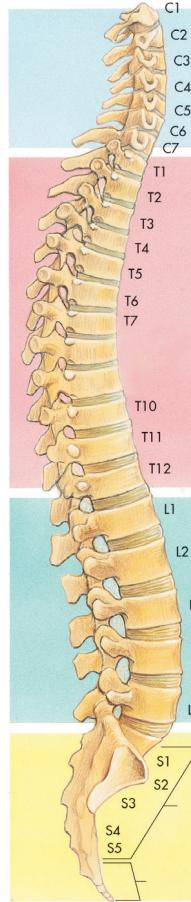


Traumatic events such as falling from a height, getting hit by a motor vehicle, or sustaining a powerful blow to the head can cause head, neck, or spinal injuries. Injuries to the head or spine can damage bones, such as the skull or vertebrae, and tissues, such as the brain and the spinal cord. Head injuries are often accompanied by spinal injuries, but a person with a superficial head wound may also have an underlying head injury.

Depending on the nature and severity of the injury, the person may be left with permanent damage (e.g., paralysis, speech impairment, memory problems, or behavioural conditions). Although injuries to the head and spine account for a small percentage of all injuries, they cause more than half of the fatalities.

The Neck and Spine

The spine is a strong, flexible column of small bones called vertebrae; it supports the head and the torso. The spine surrounds and protects the spinal cord, which is a bundle of nerves that runs between the brain and the lower back.



The spine is divided into four regions:

1. The cervical (neck) region, which consists of the C1 to C7 vertebrae.
2. The thoracic (chest) region, which consists of the T1 to T12 vertebrae.
3. The lumbar (lower back) region, which consists of the L1 to L5 vertebrae.
4. The sacrum (hip) and coccyx (tailbone) region, which consists of the S1 to S5 vertebrae and the four fused vertebrae that form the tailbone.

Severe injuries can move or break the vertebrae so that they squeeze or cut the spinal cord, causing temporary or permanent paralysis, or even death. Damage can also occur if the injury causes the soft tissue of the spinal cord to swell, compressing it against the hard bone that surrounds it.

Depending on the location and severity of the injury, the person may develop paralysis (the loss of movement, sensation or both) in body parts below the injury. Paraplegia is paralysis that affects both legs and the lower trunk. Quadriplegia is paralysis that affects both arms, the torso, and both legs. The higher up the spine the injury occurs, the more extensive the paralysis will be.

The Brain

The brain is the centre of the nervous system. It is the master organ that controls all body functions. The brain has the consistency of gelatin, but it is cushioned from everyday bumps and jolts by the cerebrospinal fluid inside the skull. Because the skull is hard, there is not much room for the brain to move or swell.

Brain injuries can occur as a result of a blow to the head, a penetrating injury to the head (such as a bullet wound), or exposure to acceleration-deceleration forces that cause the head to snap forward and then back. A blow to the head can lead to a concussion (a traumatic brain injury that alters the way it functions), a brain contusion (bruising of the brain tissue) or a brain hematoma (bleeding into the space between the brain and the skull, which increases the pressure inside the skull and damages brain tissue).

Common Causes

Many different situations can lead to head, neck, or spinal injuries:

- Motor vehicle collisions
- Recreation and sports injuries
- Falls
- Blow to the head or back
- Violent acts, such as assault

You should suspect a head, neck, and/or spinal injury in the following situations:

- A fall from any height greater than the height of the person
- Any diving injury (e.g., diving head-first into shallow water)
- A person found unresponsive for unknown reasons
- Any injury that involves a strong blow to the lower jaw, head, or torso (e.g., colliding with another participant while playing a sport)

- Any injury that causes a wound in the head or torso
- A motor vehicle collision or rollover
- Any injury in which a person's helmet is damaged
- A person has been struck by lightning
- A person has been electrocuted

It might be difficult to determine how much damage has taken place without advanced medical assessment and diagnosis, so always treat the injury as if it is serious. The size of a "goose egg" isn't necessarily an indication of the severity of a head injury. Watch for other signs of injury. You can put ice on a swollen area to reduce its size.



Prevention

The following tips help to prevent head, neck, and spinal injuries:

- Wear safety belts with shoulder restraints when in a vehicle.
- Children and babies should always ride in approved safety seats. Make sure the seat is designed for the child's age and weight and make sure it is properly installed.
- Wear all recommended protective equipment for the activity you are engaged in (e.g., approved bicycle helmets).

- Never join in a new sport without knowing the rules and risks involved.
- Prevent falls around the home and workplace with non-slip floors, non-slip treads on stairs, handrails on staircases, rugs secured with double-sided adhesive tape, and handrails by the bathtub and toilet if necessary.
- Make sure that there is good lighting in stairways and hallways.
- If there are small children present, put gates at the top and bottom of the stairways.
- Make sure that your workplace is clean and tidy. Keep floors and aisles uncluttered and make sure that there is nothing blocking stairways, work sites, or exits.
- Drink responsibly. Alcohol is often a factor in serious motor vehicle collisions and water injuries. Alcohol slows down your reflexes and gives you a false feeling of confidence.
- Prescription drugs and common drugstore medications can make driving or operating machinery dangerous, so follow the directions on the package carefully.
- Check equipment (such as warehouse forklifts, ladders, and scaffolding) regularly for worn or loose parts.
- Use ladders carefully and correctly.
- Always be very careful around water:
 - Before diving, make sure that the water is deep enough, and check for objects below the surface, such as logs or pilings. Pools at homes, motels, or hotels may not be safe for diving.
 - Enter unknown water feet first.
 - Enter above-ground pools feet first.
 - When bodysurfing, keep your arms out in front of you to protect your head and neck.

What to Look For

The signs and symptoms of a head, neck, or spinal injury depend on the nature and location of the injury. Bleeding inside the skull can happen slowly, so the signs may take time to appear. The severity of a head, neck, or spinal injury can only be determined through an evaluation by medical personnel: you should always assume that such an injury is serious.

The following signs and symptoms alone do not always indicate a serious head, neck, or spinal injury, but you should call EMS/9-1-1 if any of these are present:

- Changes in level of responsiveness, awareness, and behaviour
- Drowsiness, confusion, or disorientation
- Severe pain or pressure in the head, neck, or back
- Blood or other fluids in the ears or nose
- Heavy external bleeding from the head, neck, or back
- Unusual bumps, bruises, or depressions on the head, neck, or back
- Seizures
- Impaired breathing or vision
- Nausea or vomiting
- Unequal pupil size
- Persistent headache
- Partial or complete loss of movement of any body part without an obvious traumatic cause (e.g., inability to move a limb that does not appear to be injured)
- Back pain, weakness, tingling, or loss of sensation in the hands, fingers, feet, or toes
- Unusually positioned neck or back
- Dizziness and/or loss of balance
- Bruising of the head, especially around the eyes and behind the ears
- Loss of bladder or bowel control
- Behaviour similar to that of a person under the influence of alcohol or drugs (e.g., stumbling, memory loss, speech problems)

What to Do

It is imperative that a person with a head, neck, or spinal injury remain as still as possible, unless keeping him or her in the position found would actually put the person's life at risk (if the scene is becoming unsafe, for example, or if you must roll the person over to put pressure on life-threatening bleeding). As always, an unresponsive person should be rolled into the recovery position. The risk of further damage to the spine is less serious than the risk of the person's airway being obstructed. You should take steps to discourage the person from moving reflexively. For example, if the person is lying on the ground, approach from a direction that allows the person to see you without turning his or her head. You should also tell the person to respond verbally to your questions rather than nodding or shaking his or her head.

If the person is unresponsive, you must check his or her ABCs, but this can often be done without moving the person. If you can see chest movement or can hear the person moaning, crying, or coughing, that means the person is breathing. Do not attempt to remove a person's helmet or remove a child from a car seat unless it prevents you from checking the ABCs or providing care for a life-threatening condition.



Call

Call EMS/9-1-1 and get an AED.



Care

1. Restrict movement of the head, neck, and spine as much as you can until EMS personnel arrive:
 - If the person is responsive, instruct him or her to keep as still as possible. If the person is unable to do so, manually support the head in a position that limits movement.



2. Keep the person in the position he or she was found, unless the person is in immediate danger or has life-threatening conditions that need immediate attention.
3. If blood or other fluid is in the ear canal or draining from the ear:
 - Let the ear drain. Do not apply direct pressure. Do not move the person unless it is absolutely necessary.
 - Cover the ear loosely with a sterile dressing.

When to Move a Person with a Head, Neck, or Spinal Injury

You may need to move a person with a head, neck, and/or spinal injury in the following situations:

- The person's airway is blocked (for example, if the person vomits)
- The scene of the emergency becomes dangerous
- There is no organized EMS response in the region (for example, if the injury occurs in a very remote area)

When moving the person, try to keep the head, neck, and spine in the position you found them. Avoid unnecessary jostling and move the person only as much as is necessary.

Remember, it is more important to treat life-threatening conditions than it is to keep the person still. If the person has a potential spinal injury and is not breathing, opening the airway and starting CPR immediately are more important than protecting the spine from further damage.



Concussion

A concussion is a subset of traumatic brain injuries (TBI) that involve a temporary alteration in brain function. An impact to the head or upper body can create forces that cause the brain to "shake" inside the skull. This shaking can cause the brain to collide with the bony structures that make up the skull's inner shell (sometimes causing swelling and/or bleeding), or to rotate within the skull, which can shear or tear the brain nerve fibres and sometimes stretch and damage the brain cells.

A concussion can result from even a seemingly minor bump, blow, or jolt, and may be difficult to recognize because the signs and symptoms may not be immediately obvious. Concussions are evolving injuries, with the effects intensifying, dissipating, or changing unexpectedly in the days and weeks following the event of the injury. Depending on the severity of the concussion, signs and symptoms can last for days, weeks, or even months. The majority of concussions, however, resolve in a short period of time.

It is not fully known exactly what happens to brain cells in a concussion, but a change in the brain's chemical function seems to be involved in the process. As a result, concussions are rarely visible in neuroimaging scans. The exact duration of this altered function is not yet known, but during the recovery period the brain is more susceptible to further injury. A person who has had one concussion is at increased risk for future concussions. As a result, it is critical that as soon as someone is suspected of having a concussion, they are removed from activity and seek care from a qualified medical professional. A person does not need to become unresponsive to have incurred a concussion.

Common Causes

A concussion may be caused by:

- A blunt force to the head or jaw
- An explosion
- Whiplash
- A forceful blow to the body
- Shaking (in the case of a baby)

What to Look For**SIGNS AND SYMPTOMS OF A CONCUSSION**

Thinking and Remembering	Physical	Emotional	Sleep
<ul style="list-style-type: none">• Confusion• Clouded or foggy mindset• Seeming stunned or dazed• Temporary memory loss regarding the event of the injury• Difficulty concentrating• Difficulty remembering or recalling events• Slowed reaction times	<ul style="list-style-type: none">• Neck pain, headache, or pressure within the head• Fatigue, low energy, or feeling "foggy"• Short-term loss of responsiveness• Dizziness or loss of balance• Double or blurred vision, or "seeing stars"• Ringing in the ears• Nausea or vomiting• Mumbled or indistinct speech• Sensitivity to light and/or noise• Not feeling "right"• Seizure or convulsion	<ul style="list-style-type: none">• Irritability• Sadness or depression• Heightened emotions• Nervousness or anxiety• Personality changes	<ul style="list-style-type: none">• Drowsiness• Sleeping more or less than usual• Difficulty sleeping

Concussions are often left untreated because the symptoms are not always recognized by the person who has been injured, and the signs are not always obvious to others. There may also be personal or external pressures to continue participating in the activity at hand (e.g., workplace requirements, social events, or sporting activities), instead of avoiding such aggravating factors. Continued participation in activities that provoke symptoms during either the acute or the recovery stage can aggravate the condition due to raised levels of exertion. To avoid this, it is important that the person seek medical attention following a blow to the head, neck, or upper body with any concussion symptoms. Cessation of physical activity and the promotion of cognitive rest (reducing "screen time" and other activities that require concentration) are critical to the resolution of concussion injuries.

Concussion Signs and Symptoms in Children and Babies

Identifying signs and symptoms of a concussion in a child is more difficult than for an adult. It is particularly difficult for a child or baby, since the child or baby may not be able to speak to describe the symptoms. In addition to the standard signs of a concussion, the child or baby may exhibit the following signs, which are more specific to this age group:

- Disturbed sleeping and eating patterns
- Excessive crying
- Disinterest in activities or favourite toys

Children may also express simply "feeling off" or "not feeling right" following a physical impact. This is also a possible symptom of a concussion.

What to Do



Call

Call EMS/9-1-1 if the person has the following more severe signs and symptoms of a concussion:

- Repeated or projectile vomiting
- Loss of responsiveness of any duration
- Lack of physical coordination (e.g., stumbling and unusual clumsiness)
- Confusion, disorientation, or memory loss
- Changes to normal speech
- Seizures
- Vision and ocular changes (e.g., double vision, dilated pupils, or unequal pupil size)
- Persistent dizziness or loss of balance
- Weakness or tingling in the arms or legs
- Severe or increasing headache



Care

If you think a person has sustained a concussion, advise the person to stop the activity he or she was engaged in when the incident occurred. If the person sustains an injury that causes a jolt or blow to the head or body, and then displays any signs and symptoms of a concussion, you should assume that a concussion has occurred. The person should follow up with a qualified healthcare provider as soon as possible for a full evaluation. A healthcare provider is best able to evaluate the severity of the injury and make recommendations about when the person can return to normal activities. While rare, permanent brain damage and death are potential consequences of failing to identify and respond to a concussion in a timely manner. Prompt recognition of when a potential concussion injury has occurred, immediate removal from the activity, and appropriate follow-up care are key elements in preventing catastrophic consequences.

Anyone who exhibits more concerning signs and symptoms requires immediate medical evaluation. An injury that causes a concussion may also trigger bleeding in or around the brain, leading to symptoms like extended drowsiness and confusion. This type of bleeding can be life-threatening. The person must be monitored in the immediate hours after the injury to ensure that the symptoms do not progress or worsen, as this can indicate additional brain injuries that require emergency care.

Myth-Information

Myth: A person with a concussion who falls asleep could die.

It is generally considered safe for a person with a concussion to go to sleep. However, the person's healthcare provider may recommend that you wake the person periodically to make sure that his or her condition has not worsened.

Follow-Up Care for Concussions

It is important that the person seek medical advice from a doctor, ideally one who specializes in concussions, since signs and symptoms can escalate in the days or weeks following the injury. A person who has suffered a concussion should not participate in any physical activities until a doctor gives permission to do so. Activities that require concentration (e.g., reading) and visual stimulation, such as working on a computer, texting, etc. should also be reduced to allow the brain the opportunity to recover from cognitive stressors. When given permission from a doctor, it is important to resume all of these activities gradually and be monitored by a medical professional.

A person recovering from a concussion may not be able to effectively monitor his or her own symptoms, and may not make the best decisions about things like rest, sleep, and limiting visual stimulation. It is crucial that the person's family members, caregivers, friends, or colleagues note any changes in his or her sleep habits or physical, cognitive, or emotional behaviour, as any of these can indicate that the recovery phase has

been compromised. These people can also have a positive impact on concussion recovery by supporting the person and encouraging him or her to follow the concussion recovery plan outlined by the doctor.

Proper management of the person's signs and symptoms by a qualified healthcare provider will help to avoid future problems that may lead to permanent issues and a diminished quality of life. If treated improperly, concussions can cause a wide range of functional long-term changes affecting thinking, sensation, language, and/or emotions. Concussions can also cause long-term neurological conditions, such as seizure disorders, and, in the most severe cases, death.

Shaken Baby Syndrome

Shaken Baby Syndrome (SBS) refers to a variety of injuries that may result when a baby or a young child is violently shaken. This causes the brain to move within the skull, forcing blood vessels to stretch and tear. SBS is most associated with babies and toddlers, but can occur in children up to 5 years old.

SBS is the most common cause of mortality in babies. It is the most frequent cause of long-term disability in babies and young children, and it can cause permanent brain damage. SBS differs from other forms of physical abuse in that it is frequently a single event and there may be no obvious sign of injury.

Often there is no intent to harm the baby. Inconsolable crying is the most common trigger that leads a person to shake a baby. When trying to console a crying baby, never shake the baby, no matter what. Instead, place the baby face-up in a safe place and let the baby cry. Take a few deep breaths and then try again to soothe the baby. Other common triggers are feeding problems and difficulties with toilet training.

Feelings of anger and frustration can be overwhelming. However, shaking a child or baby is never appropriate. If you feel like you might lose control, stop! Take a break, never shake. Place the child in a safe

place and take a time-out for as long as it takes you to feel calm. Talk to someone you trust about your feelings. If you ever feel you may hurt a baby, call for help: a family member, neighbour, or local crisis line can provide emotional support and help you to find a solution.

What to Look For

While there may be no visible physical signs of injury, some signs of SBS include the following:

- Unexplained injuries (e.g., bruising or broken bones, especially skull, rib, and long-bone fractures)
- Bruising, usually in or around the eyes or mid-body area
- Bleeding or clear fluid coming from the ears and/or nose
- Minor neurological problems (e.g., irritability, lethargy, tremors, and vomiting)
- Major neurological problems (e.g., seizures, unresponsiveness, and death)

What to Do



Call

If you suspect a baby has SBS, call EMS/9-1-1.



Care

Treat any injuries you find. Avoid accusations and interrogation.



10 Bone, Muscle, and Joint Injuries

Bones are strong, hard, dense, tissues that come in many different sizes and shapes. More than 200 bones make up the skeleton, creating the framework for the body. Muscles are soft tissues that can contract and relax. Most muscles are skeletal muscles, which are attached to bones by tendons and move the body when they receive signals from the brain. A joint is formed where two or more bones are held together by ligaments that allow movement.

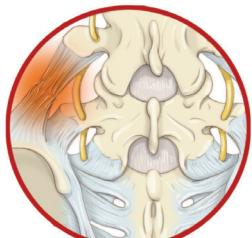
Bones, muscles, and joints have many jobs:

- Supporting the body
- Protecting internal organs
- Allowing movement
- Storing minerals
- Producing blood cells
- Producing heat through movement

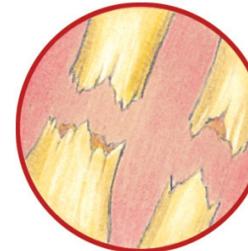
There are four basic types of bone, muscle, and joint injuries:



Sprain: Occurs when a ligament is stretched, torn, or damaged. Ligaments connect bones together at the joints. Sprains most commonly affect the ankle, knee, wrist, and finger joints.



Strain: Occurs when a tendon or muscle is stretched, torn, or damaged. Tendons connect muscles to bones. Strains are often caused by overworking a muscle (e.g., by lifting an overly heavy object or by repetitively performing the same action). They usually involve the muscles in the neck, back, thigh, or the back of the lower leg.



Dislocation: Occurs when the bones that meet at a joint move out of their normal position. This type of injury is usually caused by a violent force that tears the ligaments, allowing the bones to move out of place.

Fracture: A complete break, chip, or crack in a bone. Fractures can be open (if the end of the broken bone breaks through the skin) or closed (the broken bone does not break through the skin). Open fractures are also called "compound fractures."

Muscle Cramps

A muscle cramp is a painful condition that can be caused by heavy exercise or staying in the same position for too long. You can usually stop the pain by stretching and massaging the area with the cramp, resting, or changing position.

Common Causes

Bone, muscle, and joint injuries can occur in many ways. The causes include the following:

- Falls
- Awkward or sudden movements
- Direct blows to the body
- Repetitive actions or forces, such as jogging

Prevention

The following tips help prevent bone, muscle, and joint injuries:

- Always wear seat belts and shoulder restraints when in a vehicle, and ensure that all passengers do the same.
- Secure younger children in approved and properly installed child-restraint systems (e.g., car seats and booster seats).
- Wear all safety equipment that is required or recommended (e.g., helmets, goggles, and pads).
- Put non-slip adhesive strips or a mat in the bathtub and shower stall.
- Stretch before exercising.
- Avoid over-exertion and take breaks often. Children should learn their limits and rest when they are too tired or frustrated to continue safely.

Falls are the leading cause of injuries among the elderly. Reduce the risk with safety measures such as:

- Good lighting.
- Sturdy railings on staircases.
- Non-slip floors and rugs.

What to Look For



The signs and symptoms of bone, muscle, and joint injuries may include the following:

- Pain, deformity, swelling, or bruising
- Limited or no use of the injured body part
- A broken bone or bone fragments sticking out of the skin
- A sensation or sound of bones grating
- Possible muscle cramps
- The sound of a snap or a pop when the injury happened

What to Do

The person may be anxious and in a lot of pain. In most cases, the best thing that you can do is keep the person comfortable and prevent further injury until the person receives medical attention. To avoid damaging nerves, blood vessels, and tissues, do not perform traction or any other manipulation.

When caring for an open fracture, your first priority is to stop any bleeding. Provide care as you would for any other open wound.



Bone, muscle, and joint injuries range from very minor to life-threatening, so you must determine whether there is a need to call EMS/9-1-1. In general, if the injury seems severe or the person is in a significant amount of pain, you should call.

You should always call EMS/9-1-1 and get an AED if:

- There is a problem with the ABCs.
- The injury involves the head and/or spine.
- You suspect that there may be multiple injuries.
- There are injuries to the thigh bone or pelvis.
- The area below the injury is pale, blue, or cold to the touch.
- The area below the injury is numb.
- The person has an altered level of responsiveness.
- A broken bone is protruding through the skin.
- It is not possible to safely or comfortably move the person to a vehicle for transport to a healthcare facility.



Care

Treat the injury using the RICE method:

R REST — Have the person stop any current activities and rest without moving or straightening the injured body part.

I IMMOBILIZE — If you need to move the person or if EMS response will be delayed, immobilize the injured area in the position in which it was found by creating a splint. Otherwise keep the person still and do not splint the injury.

C COOL — If it does not cause the person any discomfort, cool the injured area for 20 minutes of every hour to reduce swelling and pain. The part should be cooled for 20 minutes of every hour for up to 48 hours. Do not rub the ice or cold pack on the injured area. If you use ice, put some sort of thin, dry cloth or pad between it and the person's bare skin to avoid freezing the skin.

E ELEVATE — Keep the injured area above the level of the heart, if possible. However, do not raise the injured area if moving it will cause pain.

Myth-Information

Myth: You should apply heat to a muscle, bone, or joint injury to speed healing.

Although heat is commonly used to relieve pain associated with chronic muscle, bone, and joint conditions such as arthritis, it is not the best treatment for an acute muscle, bone, or joint injury. Applying heat causes the blood vessels in the area to dilate (widen), bringing more blood to the area and increasing swelling. Cold, on the other hand, causes blood vessels to constrict (narrow), reducing blood flow to the area and helping to reduce swelling. In addition, applying cold slows the nerve impulses and helps to reduce pain.



Splinting Guidelines

Splinting involves securing an injured bone or joint to keep it from moving, which reduces the risk of further injury and helps reduce pain. However, you should apply a splint only if you must move a person to get medical help or if the EMS response will be delayed.



Common items such as rolled newspapers, scarves, belts, and pillows can be used to improvise slings and splints if commercial versions are not available. Medical tape and medical braces can also be used to support strains and sprains.

There are four types of splint:



Soft splints are soft, bulky objects (e.g., a folded blanket, towel, pillow, or bandage).



Rigid splints are hard, fixed objects (e.g., a board, a rolled newspaper, a tree branch).

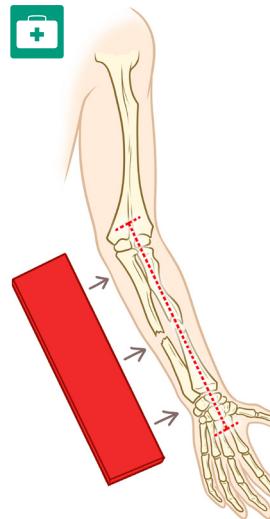


Anatomical splints use another body part for support (e.g., immobilize an injured leg by securing it to the uninjured leg).



Slings use cloth looped around the neck to support an upper extremity (e.g., the arm or wrist).

Applying a Splint



No matter what type of splint you use, follow these steps:

- Check the temperature and colour of the skin below the injured area before and after splinting. The area should be warm, indicating good circulation.
 - If the area is cold before splinting, call EMS/9-1-1 if you have not already done so.
 - If the area is warm before splinting and cold afterwards, the splint may be too tight. Loosen it gently, and reassess to see if circulation has been restored.
- When possible, splint the injured part in the position in which it was found. Do not try to straighten or move the body part.
- Make sure the splint is long enough to extend above and below the injured area:
 - For bone injuries, immobilize the joint above and below the site of the injury.
 - For joint injuries, immobilize the bones above and below the site of the injury.
 - If you are not sure what is injured, include both the bones and the joints above and below the injured area in the splint.
- Always pad a rigid or anatomical splint to make the person more comfortable.
- Remove any jewellery (especially rings) that the person is wearing below the site of the injury, as swelling is likely to occur.

Applying a Regular Sling for an Arm Injury

1. Check the person's circulation by comparing the warmth and colour of the fingers on the injured side with the other hand, and ask if the person has any numbness or tingling in the fingers.
2. Have the person support the injured arm, holding it across the body.



3. Slide the open triangular bandage between the injured arm and the body. The corner of the triangular bandage should extend past the elbow. The opposite side (the base of the triangle) should be running vertically, parallel to the edge of the body with the upper point over the shoulder.
4. Take the bottom end of the bandage and place it over the opposite shoulder.



5. Tie the bandage toward one side of the neck, not at the back, to reduce discomfort from the knot.
6. Secure the elbow by twisting, tying, or pinning the corner of the bandage.
7. Apply a binder (as described below).



8. Recheck circulation. Slings should fit tightly enough to restrict movement, but not be so tight that blood flow is affected. If fingers are bluish or cold or if the person feels numbness and tingling, loosen the bandages. If loosening the bandages does not improve circulation, call EMS/9-1-1 and get an AED immediately.

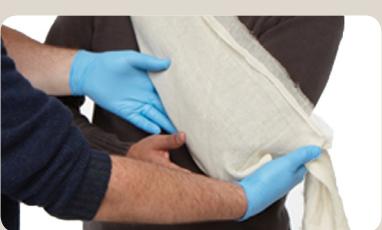


Applying a Tube Sling

1. Check the person's circulation by comparing the warmth and colour of the fingers on the injured side with the other hand, and ask if the person has any numbness or tingling in the fingers.
2. Have the person hold the arm of the injured side across the body with the fingers touching the opposite shoulder.



5. Twist the end of the bandage hanging below the elbow several times to secure the arm, then bring it around and up the back to meet the other end of the bandage near the person's neck.
6. Adjust the height of the sling to make sure it is supporting the arm.
7. Secure the sling by tying the two ends together in the hollow of the neck on the uninjured side.



3. Place the open triangular bandage over the forearm and hand with the base parallel to the body and the opposite point extending past the elbow.
4. Support the forearm and gently tuck the lower edge of the bandage under the arm, from the hand to the elbow.



8. Pad between the arm and the body, in the natural hollow, with soft, firm material.
9. Apply a binder (as described on the following page).
10. Recheck circulation. Slings should fit tightly enough to restrict movement, but not be so tight that blood flow is affected. If fingers are bluish or cold or if the person feels numbness and tingling, loosen the bandages. If loosening the bandages does not improve circulation, call EMS/9-1-1 and get an AED immediately.



Applying a Binder for an Arm Injury

A binder is used in addition to a sling and secures a slung upper extremity to the body. This provides additional support by creating anatomical support in addition to the sling.

1. Wrap a broad bandage around the injured arm and the body.
2. Tie the bandage snugly at the uninjured side.
3. Recheck circulation. The binder should fit tightly enough to restrict movement, but not be so tight that blood flow is affected. If fingers are bluish or cold or if the person feels numbness and tingling, loosen the bandages. If loosening the bandages does not improve circulation, call EMS/9-1-1 and get an AED immediately.

Osteoporosis

Osteoporosis is a degenerative bone disorder that occurs when the amount of calcium in the bones decreases, causing low bone mass and the deterioration of bone tissue. Normally, bones are hard, dense tissues that can endure tremendous stress. Bone-building cells constantly repair damage that occurs as a result of everyday wear and tear, keeping bones strong. When the calcium content of bones decreases, the bones become frail, less dense, and less able to repair themselves after incurring stress and damage.

The loss of density and strength leaves bones more susceptible to fractures (especially of the hips, vertebrae, and wrists). Instead of being caused by tremendous force, fractures may now occur spontaneously, with little or no aggravation, trauma, or force. For example, the person may be taking a walk or washing dishes when the fracture occurs. Some hip fractures thought to be caused by falls are actually spontaneous fractures that cause the person's fall. Repeated fractures are also a sign of osteoporosis. Osteoporosis is a leading cause of bone and joint injuries in older people. It is much more common in women, affecting one in four.

You can help prevent osteoporosis by:

- Building strong bones at an early age.
- Making sure to get enough calcium.
- Making sure to get enough vitamin D (the body needs vitamin D so that it can absorb calcium).
- Exercising regularly.

A photograph of a young woman with long dark hair, wearing a grey hoodie, sleeping peacefully with her head resting on a wooden table. A golden-brown croissant sits on a small white plate in front of her. In the background, other people are seated at tables in what appears to be a cafeteria or breakroom setting.

11 Sudden Medical Emergencies

An acute illness is one that strikes suddenly and usually only lasts for a short period of time. A chronic illness is an illness that a person lives with on an ongoing basis and that often requires continuous treatment to manage. When a person becomes suddenly ill, it may be the result of an acute illness, or it may be an acute flare-up of a chronic condition.

Signs and symptoms such as difficulty breathing, pain that is persistent or severe, problems seeing or speaking, problems with sensation or movement, seizures, or unresponsiveness require a call to EMS/9-1-1. If you are unsure about the severity of the illness, it is better to call for help early than to wait for the situation to progress.

Fortunately, you do not need to know exactly what is wrong to provide appropriate first aid care in a sudden medical emergency. If your initial check of the person reveals any life-threatening conditions, make sure that someone calls EMS/9-1-1 right away, and then provide care according to the signs and symptoms that you find and your level of training. Follow the same general guidelines you would for any emergency.



Fainting

Fainting is a brief period of unresponsiveness that happens when there is not enough blood flowing to the brain. If a person suddenly becomes unresponsive and then "comes to" after about a minute, he or she may have simply fainted.

Common Causes

Fainting is caused by a sudden decrease in blood flow to the brain. Usually the cause of fainting is not serious. The following are common causes of fainting:

- Pregnancy
- Pain
- Heat
- Dehydration
- Decreased blood sugar (e.g., from missing a meal)
- Standing in one position for too long without moving
- Intense emotion
- Traumatic information (e.g., news of someone's death)

Prevention

The following tips help prevent fainting:

- Keep hydrated.
- Eat at regular intervals to maintain a consistent blood sugar level.
- Get up slowly from sitting or laying down.

Fainting may be preceded by paleness, dizziness, sweating, or nausea. If you think that someone is about to faint, have the person sit or lie down.

What to Do

Call

Call EMS/9-1-1 and get an AED if the person is unresponsive for more than a few minutes, the person is pregnant, the person's medical history is unknown, or you suspect that the person fainted as a result of a serious injury or illness. If you are unsure, call EMS/9-1-1 and get an AED.



Care

1. Place the person in the recovery position.
2. Encourage the person to follow up with his or her healthcare provider.



Diabetic Emergencies

Diabetes is a chronic condition characterized by the body's inability to process glucose (sugar) in the bloodstream. An organ called the pancreas secretes insulin, a hormone that causes glucose to move from the bloodstream into the cells, where it is used for energy. In a person who has diabetes, either the pancreas fails to make enough insulin or the body's cells are unable to respond to insulin. Either situation causes glucose levels in the bloodstream to increase.

A person with diabetes may manage the condition with insulin injections or oral medication. Diet and exercise also play an important role. A person with diabetes must follow a well-balanced diet, with limited sweets and fats. The timing of meals and snacks relative to

exercise and medication is important as well. People with diabetes may need to check blood sugar levels more frequently when daily routines are disrupted—for example, by illnesses or vacations—as this can cause blood sugar levels to fluctuate more than usual.

If food intake, exercise, and medication are not in balance, the person may experience a diabetic emergency. A diabetic emergency happens when blood glucose level fluctuates outside the normal range, resulting in either hyperglycemia (too much sugar in the blood) or hypoglycemia (too little sugar in the blood).

Hyperglycemia is a condition in which lowered insulin levels result in elevated blood sugar. Hyperglycemia can result if a person eats too much food, takes too little medication, exercises less than usual, or experiences physical or emotional stress. Hyperglycemia develops slowly, so it is less likely to be a first aid emergency.

With hyperglycemia, the body cells cannot get the sugar they need, even when there is a lot of sugar in the body. To meet its energy needs, the body breaks down other food sources, causing waste products to build up in the body and thereby making the person ill. This may also cause the person's breath to have a fruity or sweet odour. This can lead to a serious form of diabetic emergency called a diabetic coma.

Hypoglycemia occurs when the insulin level is too high relative to the level of sugar in the blood. The small amount of sugar in the blood gets used up quickly. Hypoglycemia can result if a person misses a meal or snack, exercises more than usual, vomits, or takes too much medication. With hypoglycemia, the brain does not get enough sugar to work properly; the result is an acute condition called insulin shock. Hypoglycemia develops quickly, and is the cause of most diabetic emergencies.

Common Causes

A diabetic emergency occurs when there is an imbalance between two or more of the following:

- Exercise
- Food intake
- Medication
- Insulin production



Not all people experiencing a blood sugar emergency have diabetes.

What to Look For

The following are signs and symptoms of a diabetic emergency:

- Changes in the level of responsiveness
- Changes in behaviour, such as confusion, irritability, or aggression
- Rapid breathing
- Cool, sweaty skin
- Skin that is paler than normal
- Appearance of intoxication (e.g., slurred speech, difficulty walking)
- Feeling and looking ill
- Seizures



First aid is the same for both types of diabetic emergencies (hyperglycemia and hypoglycemia).

What to Do



Call

Call EMS/9-1-1 if:

- You are unable to give the person sugar.
- The person is not fully awake.
- The person has a seizure.
- The person's condition does not improve within 10 minutes of having sugar.



Care

If the person is unable to follow simple commands, unable to swallow safely, or is unresponsive, ensure that EMS/9-1-1 has been called and place the person in the recovery position.

1. If the person is able to follow simple commands, answer questions, and swallow safely, offer 15 to 20 grams of sugar. Check the label on packaged products to determine how much of the package's contents to give. The following are the forms of sugar to give, listed in order of preference:

- Oral glucose tablets
- Chewable candy
- Fruit juice
- Fruit strips
- Milk
- Other forms of sugar, such as a non-diet soft drink or a spoonful of sugar mixed into a glass of water



2. Monitor the person's condition for 10 minutes:

- If the person's condition deteriorates or does not improve within 10 minutes, call EMS/9-1-1 and administer more sugar if it is still safe to do so.
- If the person's condition improves, recommend that he or she eat a complete meal.

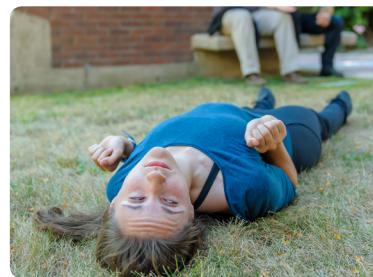
If the person's condition is caused by low blood sugar, ingesting sugar will help improve his or her condition. Even if the person is experiencing hyperglycemia (too much glucose in the bloodstream), giving the person 15 to 20 grams of sugar will not cause additional harm. If a glucometer is available, having the person check his or her blood sugar will reveal whether he or she has hyper- or hypoglycemia.



Do not give the person insulin. Only a medical professional can diagnose the cause of the emergency and be certain that insulin is the correct treatment.

Using a Glucagon Kit for a Diabetic Emergency

Some people with diabetes may carry a prescribed glucagon kit to use in case of a severe hypoglycemic emergency. Glucagon is a hormone that stimulates the liver to release glucose into the bloodstream. The glucagon kit is used only when the person is unresponsive or has lost the ability to swallow. Those who spend a significant amount of time with the person (e.g., family members, teachers, coaches, or co-workers) may receive additional training to learn how to administer a glucagon injection. If you have not received specific training in the use of a glucagon kit, you should never attempt to administer this medication.



Seizures

A seizure is an episode of abnormal electrical signals in the brain that result in temporary and involuntary disturbances in brain function, shaking or contraction of limbs (convulsions), changes in sensation, shifts in behaviour, and altered levels of responsiveness.

Common Causes

Seizures can have many different causes. One common cause is epilepsy, a chronic seizure disorder that can often be controlled with medication. Other causes of seizures include the following:

- Fevers or infections
- Head injuries
- Heat stroke
- Poisons (including drugs)
- Drug or alcohol withdrawal
- Diabetic emergencies
- Audio-visual stimulation (e.g., flashing lights)

What to Look For

The following are common signs and symptoms of seizures:

- Hallucinations
- Uncontrollable muscle movement
- Eyes rolling upward into the head
- Drool or foaming at the mouth
- Uncontrolled repetitive motions (partial seizures)



Any one of these signs can indicate a seizure—not all seizures involve convulsions.

A person may experience an aura (an unusual sensation or feeling) before the onset of the seizure. If the person recognizes the aura, he or she may have time to tell someone what is happening and sit down before the seizure occurs.

There are many different types of seizures, and their specific signs and symptoms vary. Common types of seizures include:

Tonic-Clonic or Convulsive Seizures: Formerly called "Grand Mal" seizures. The person becomes unresponsive and has convulsions. During the tonic phase, muscles will stiffen. Then, during the clonic phase, the extremities will jerk and twitch rhythmically. Saliva that has not been swallowed during the seizure may appear as froth at the mouth. Breathing may be irregular as the respiratory muscles can be affected. A tonic-clonic seizure usually lasts one to three minutes, but may last up to five minutes. The period after the seizure is called the post-ictal phase. During this time,

the body rests to recover from the seizure. The person will slowly regain responsiveness and may appear fatigued, confused, or disoriented.

Absence Seizures: Formerly called "Petit Mal" seizures. The person experiences a brief, sudden lapse in responsiveness. He or she may momentarily become very quiet and have a blank stare, or appear to be daydreaming. The person may also make chewing motions, breathe rapidly, blink rhythmically, or make slight movements such as tugging at clothing. There are no convulsions with absence seizures. Absence seizures are very brief, usually lasting between two and ten seconds. There is no confusion after the seizure, and the person can usually resume full activity immediately.

Focal or Partial Seizures: These seizures begin in one specific part of the brain. The signs and symptoms of the seizure vary depending on which region of the brain is affected. Typically a focal or partial seizure will affect only one part of the body (e.g., one arm may convulse) or aspect of experience (e.g., a person's vision could be disturbed, or a person could experience a sudden change in his or her emotional state). The person may or may not remain aware during the seizure. Some focal or partial seizures can evolve into a generalized tonic-clonic or convulsive seizure.

What to Do



Call

Call EMS/9-1-1 and get an AED if:

- You do not know the person or the person's medical history.
- The seizure lasts more than a few minutes.
- The person has several seizures in a row.
- The person appears to be injured.
- The person is pregnant.
- The person is experiencing a diabetic emergency.
- The seizure takes place in water.
- This is the person's first seizure, or the cause of the seizure is unknown.
- The person does not wake up after the seizure or is unresponsive for an extended period.

Calling EMS/9-1-1 for People with Seizure Disorders

Some people have multiple seizures during a day, and will likely have a seizure treatment plan in place. The treatment plan will outline when a seizure no longer follows the normal pattern or duration for the person and when to call EMS/9-1-1. Follow the person's seizure plan if you are familiar and comfortable with it.

Care

During the seizure:



1. Protect the person from injury by:

- Moving furniture and other objects that could cause injury out of the way.
 - Protecting the person's head with a soft object (such as a blanket).
2. Do not try to hold the person down or stop the seizure from happening.
3. Roll the person onto his or her side, if you are able to do so safely



After the seizure:

The person may be drowsy and disoriented for up to 20 minutes.

1. Check the person's ABCs.
2. Place the person in the recovery position.



Although a seizure can be frightening to see, it is easy to care for a person who is having a seizure. Most seizures only last a few minutes, and the person usually recovers fully without any complications.

Myth-Information

Myth: You should put something between the teeth of a person who is having a seizure to prevent the person from biting or swallowing his or her tongue.

This practice is unsafe and unnecessary. It is impossible to swallow one's own tongue. Although the person may bite down on the tongue, causing it to bleed, this is a minor problem compared to the risks of attempting to put an object in the person's mouth. The person could chip a tooth or knock a tooth loose, creating a choking hazard. The person may also bite down with enough force to break the object and then choke on one of the pieces. Additionally, attempting to place an object in the person's mouth puts you at risk of being bitten.

Febrile Seizures

Babies and young children may have seizures if their body temperatures suddenly rise. These are called "febrile seizure" and are most commonly associated with sudden high fevers, normally with temperatures over 39°C (102°F). In most cases, these seizures are non-life-threatening and do not last long.

To reduce the risk of febrile seizures in a child or baby with a high fever, you must lower his or her body temperature:

1. Remove any excess clothing or blankets.
2. Give the child or baby a sponge bath with water that is room temperature (not icy cold).
3. Give the child or baby plenty of fluids to drink to help prevent dehydration.
4. Consider giving the child or baby fever-reducing medication such as acetaminophen or ibuprofen.

If these steps do not reduce the child's or baby's temperature, seek medical attention.



Call

Call EMS/9-1-1 for a febrile seizure if:

- It is the first time that the child or baby has had a febrile seizure.
- The seizure lasts longer than 5 minutes or is repeated.
- The seizure is followed by a quick increase in body temperature.



Mental Health Crisis

Mental health first aid is the initial care given by a First Aider to a person in a mental health crisis. Like any first aid, it includes the recognition of signs and symptoms and the care that can be given until either appropriate professional follow-up care is received or the crisis is resolved.

A First Aider is not a therapist, but rather a listener. Your role is to look, listen, and feel empathy for the person's situation and provide both physical and mental health first aid as necessary. You may also need to refer the person to the appropriate follow-up care, just as you might when caring for physical conditions.

Mental Health Conditions

Mental health conditions are difficult to identify. They may go unrecognized unless the person shares the information with you. People in distress can be suffering from a number of disorders including substance-related disorders, mood disorders, anxiety disorders or, less commonly, psychotic disorders.

A person with a mental health condition may experience one, many, or none of the following symptoms:

- Inability to think clearly
- Inability to concentrate or focus on a task
- Hallucinations (e.g., hearing voices, seeing, or feeling things that aren't there)
- Delusions
- Depression or acute mood swings (e.g., from happy to depressed with no clear reason for the change)
- Poor memory
- Obvious lack of motivation

What to Do

Helping a person through a mental health crisis can be achieved by using active listening practices:

- Reduce distractions and encourage the person to sit down to promote conversation.
- Keep the person as calm as possible.
- Listen empathetically.
- Acknowledge the person's feelings and emotions without judgment.
- If the person is delusional, do not dismiss his or her beliefs: accept that they are real to the person (but not to you).
- Speak quietly and firmly.



Call

Call EMS/9-1-1 immediately if you suspect that the person poses a risk to you or others, or that the person is contemplating suicide or other self-harm. If you are aware of support systems that are in place for the person, contact them as well.



Care

1. Use active listening practices to provide reassurance, comfort, and support.
2. Offer self-help strategies such as breathing exercises.



Self-Inflicted Injuries

Self-harm ranges from minor self-inflicted injuries to suicide. Suicide is one of the ten most common causes of death in Canada, affecting people from a variety of backgrounds and age groups. Anyone expressing intentions of self-harm requires immediate intervention, and therefore EMS/9-1-1 must always be called.

Possible indicators of self-harm include the following:

- A person expressing negative (especially suicidal) thoughts and comments about him-or herself
- A person expressing his or her intent to die, especially if he or she has a plan to do so
- A person expressing his or her final wishes to someone close by (e.g., a bystander at scene)
- Items associated with a suicide attempt found at the scene (e.g., a gun, sleeping pills)



Childbirth

You may find yourself in the position of helping a pregnant woman who is in labour. Childbirth is a natural process and the woman's body knows what to do: Your primary role will be to provide comfort and reassurance and to facilitate the process while you wait for EMS personnel to arrive. The labour and delivery process will happen without much intervention on your part. Remember, the woman who is pregnant delivers the baby. Be patient and let the birth happen naturally.

What to Look For

Signs and symptoms that signal imminent childbirth include the following:

- Contractions that are 2 minutes apart or less
- The woman says that the baby is coming
- The woman feels the urge to push
- The woman feels like she needs to have a bowel movement
- The baby is crowning

What to Do



Call

Have someone call EMS/9-1-1 if birth is imminent.



Care

1. Clear the area of unnecessary bystanders.
2. Help the woman into a position of comfort.
3. Create a clean birthing area by placing clean blankets and/or towels under the woman. For the sake of privacy, place a clean sheet or towel over the woman's abdomen.

4. As the baby is being birthed:
 - Support the head as it is delivered. Do not push or pull the baby.
 - Once the shoulders emerge, the rest of the baby will be delivered very quickly.
 - Newborns are slippery, so hold the baby firmly but do not squeeze him or her.



5. Position the baby face down and wipe any fluids or mucus away from his or her mouth and nose.
6. Check the baby's airway and breathing. Babies may not breathe and cry immediately after they are born. Usually, actively drying them with a towel will stimulate them to breathe and cry. If the baby does not begin to breathe or cry following stimulation, begin CPR.
7. Keep the baby warm by placing him or her directly onto the mother's chest and covering with a blanket or towel, or by wrapping the baby in a clean towel or blanket.
8. Let the placenta and cord drop onto a clean towel and keep this near the baby. Do not cut the cord. Handle the placenta and cord as little as possible.
9. Record the time of birth.
10. If the mother is bleeding, you may need to apply gentle pressure to any bleeding tears.
11. Provide continual care for both the mother and the baby until EMS personnel arrive.

Assisting with Childbirth: What Not to Do

When providing care for a woman during childbirth:

- Do not let the woman leave to use the restroom. (The woman could deliver the baby into the toilet, putting the baby at risk for injury.)
- Do not try to physically delay delivery, as this can cause serious injuries to both the mother and the baby.
- Do not place your fingers in the woman's vagina for any reason. This can introduce pathogens that can cause an infection.
- Do not pull on the baby.

Miscarriage

Miscarriage is the spontaneous end of a pregnancy any time during the first 20 weeks after conception. This occurs in about 1 in 10 pregnancies. The risk of miscarriage drops as the pregnancy progresses.

Common Causes

There are a number of causes of miscarriage, including the following:

- Hormonal or genetic complications
- Abnormalities in the womb
- Infection and certain illnesses
- Trauma

What to Look For

The signs and symptoms of a miscarriage include the following:

- Anxiety and apprehensiveness
- Vaginal bleeding, which may be minor or profuse
- Cramp-like pain that is similar to labour or menstruation

What to Do



Call

Have someone call EMS/9-1-1.



Care

1. If possible, save any tissue from the miscarriage for EMS personnel.
2. Provide comfort and continual care until EMS personnel arrive.



12 Environmental Illness

How Body Temperature Is Controlled

The human body's core temperature (i.e., the temperature of the heart, lungs, and brain) is normally around 37°C (98.6°F) and is maintained by balancing heat loss with heat gain.

The body generates heat by either converting food into energy or by contracting muscles (e.g., shivering, exercising). The heat produced by routine activities such as walking is usually enough to balance normal heat loss.

The Hypothalamus and Body Temperature

The hypothalamus is the part of the brain that controls thermoregulation, which is the body's ability to maintain a temperature that is within the ideal range. The hypothalamus gets temperature information from the skin and central receptors. If the body is too warm, thermoregulatory "heat loss" responses include increasing the skin's blood flow and/or sweating to facilitate evaporation. If the body is too cold, responses include decreasing the skin's blood flow and shivering, which produces heat by contracting and relaxing muscles.

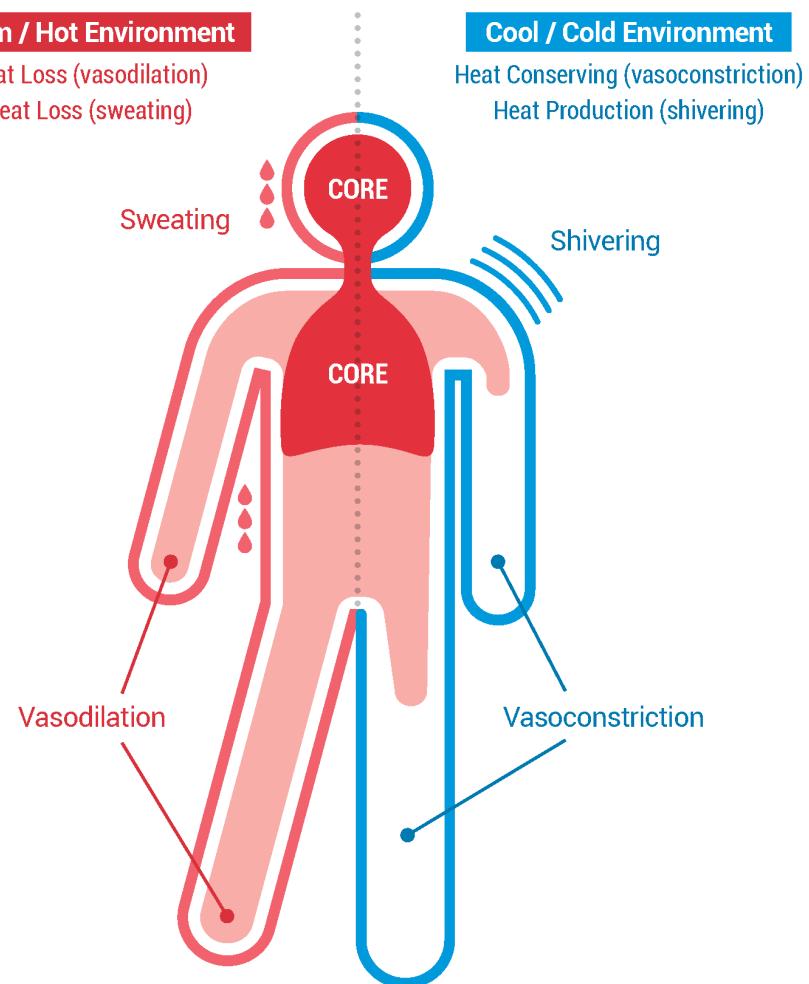
HUMAN THERMOREGULATION RESPONSES

Warm / Hot Environment

- Heat Loss (vasodilation)
- Heat Loss (sweating)

Cool / Cold Environment

- Heat Conserving (vasoconstriction)
- Heat Production (shivering)



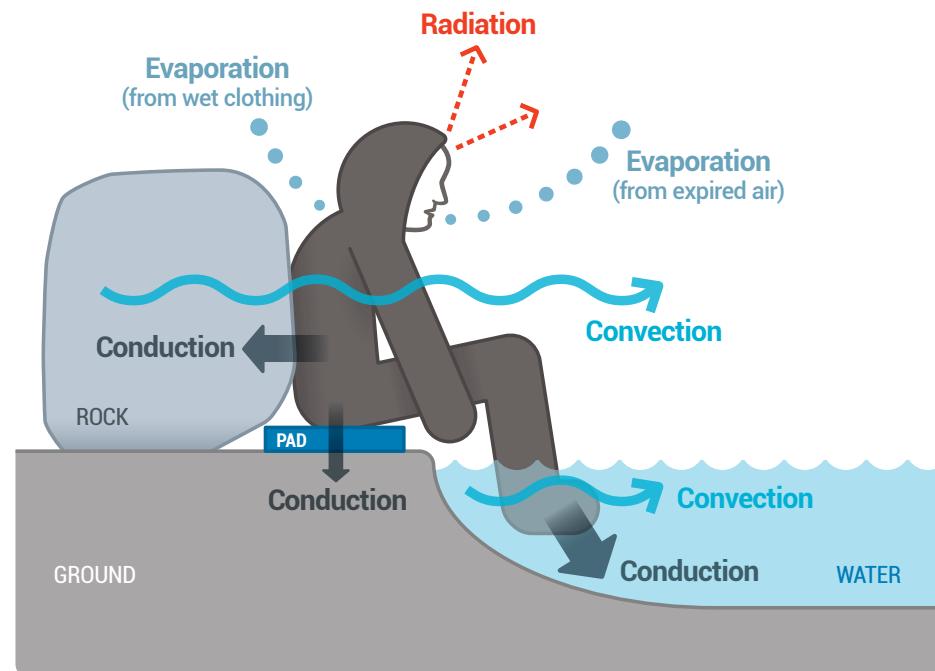
The Four Mechanisms of Heating and Cooling the Body

Heat moves from warmer areas to cooler ones through four mechanisms:

- 1. Radiation:** (Warming or cooling) Involves the direct loss or absorption of heat energy through electromagnetic waves.
- 2. Conduction:** (Warming or cooling) Occurs through direct contact with a solid or liquid. Heat loss due to direct contact with cold snow could be decreased by minimizing contact or increasing insulation (e.g., sitting on an insulated pad on the snow).
- 3. Convection:** (Warming or cooling) Occurs when air or liquid moves across the skin. In cold air, this is known as the wind chill factor. Convective heating can also occur if warm air is blown across the skin.
- 4. Evaporation:** (Cooling only) Occurs when a liquid changes to a vapour. This physical process requires heat, which means that evaporation from the skin takes heat from the surface of the body. When sweat or water (either on the skin or in clothing that is in contact with the skin) evaporates, the skin is cooled. Sweating occurs when either the skin and/or body core temperatures increase. In a cold environment, sweating should be minimized (e.g., layers of clothing should be removed before or during hard work). In a hot environment, evaporative heat loss is beneficial. However, any sweat that does not evaporate will not cause cooling. For example, when humidity is high, sweat does not evaporate as efficiently and may simply drip off the body.

FOUR MECHANISMS OF HEAT LOSS

- **Conduction:** Through direct contact with a solid or liquid.
- ~~~ **Convection:** Flowing water or air removes heat.
- - - **Radiation:** Through space (air) by infrared radiation.
- • • **Evaporation:** Change from liquid to gas requires energy.



Heat-Related Illnesses

Hyperthermia occurs when the body's core temperature rises above the normal range. It results when at least one of the four mechanisms that cool the body is impaired by clothing, drugs, or disease, or is overwhelmed by internal heat production and/or external heat exposure. Heat-related illnesses will get worse without treatment and can change from one level to another very quickly.

Prevention

One of the most important actions a person can take to prevent heat-related illnesses is to drink plenty of fluids. You should drink eight 250 mL (8 oz.) glasses of fluid a day for low-exertion, routine activities and more as exertion levels increase. It is important to rehydrate regularly during longer events. If you feel thirsty, you are already dehydrated, so develop the habit of drinking fluids regularly rather than waiting for the warning signs of dehydration to appear.

The following tips will also help to prevent heat-related illness:

- Maintain a healthy level of cardiovascular fitness.
- Prior to a major event in the heat, let the body gradually acclimatize by being exposed to 1 to 2 hours of heat exertion for at least 8 days.
- Avoid being outdoors during the hottest part of the day.
- Reduce the intensity of activities as it gets hotter and don't work or exercise for too long at a time.
- Take frequent breaks in a cool or shaded area to cool off. This will help the body cope with short periods of extreme heat.
- Dress for the heat and for the intended activity.
- Make adjustments to exertion levels and work/rest cycles on hot days (e.g., schedule football practices for cooler parts of the day).
- Wear a light hat when under the sun. Wear loose-fitting light clothing that allows liquid and vapour to escape.
- Choose hydrating drinks, such as water or juice, over dehydrating ones like alcohol.

COMMON CAUSES OF ENVIRONMENTAL ILLNESS

Environmental	Physical	Behavioural
<ul style="list-style-type: none"> • Heat waves, especially if there hasn't been one in recent years • High humidity (above 75%), which decreases the ability of sweat to evaporate 	<ul style="list-style-type: none"> • Age: Babies, children, and the elderly are less able to sweat and adjust to changes in temperature • Body size and mass: Larger bodies with more fat tissue retain heat and warm up more quickly • Clothing that prevents the loss of heat and moisture (e.g., football padding) • Chronic illness • Heart disease • Skin, hormone, or nervous system diseases • Burns • Poor physical fitness 	<ul style="list-style-type: none"> • Working or exercising too much in hot weather • Not drinking enough fluids to replace the water lost by sweating (dehydration) • Drinking too much alcohol in hot weather • Taking stimulants such as cocaine or amphetamines • Salt depletion • Fatigue



Heat Cramps

Heat cramps are painful muscle spasms, usually in the legs and abdomen, caused by loss of fluids and electrolytes as a result of sweating. While they are usually not serious, they are often the first sign that the body is beginning to overheat.

What to Look For

The following signs and symptoms can indicate heat cramps:

- Mild muscle contractions that can become severe, usually in the legs and abdomen
- Moist skin

A person with heat cramps will typically have a normal or slightly elevated core temperature (37°C or 98.6°F).

What to Do



Care

1. Reduce heat exposure (e.g., get into the shade) and, if possible, move the person to a cooler environment.
2. Have the person slowly sip a cool electrolyte-replacement beverage (e.g., commercial sports drink, coconut water, fruit juice, or milk). If a drink containing electrolytes is not available, have the person drink water.
3. Gently stretch and massage the cramped muscles.

When the cramps stop, the person can usually resume his or her activity as long as there are no other signs or symptoms of illness.

Myth-Information

Myth: When a person has heat cramps, you should give salt tablets to replenish lost sodium.

Salt tablets are not an effective treatment for heat cramps. Consuming a concentrated form of salt can actually promote loss of fluid from the body, which will make the person's condition worse instead of better.



Heat Exhaustion

Heat exhaustion occurs when the body begins to overheat, especially when it loses more fluids and electrolytes through sweating than it gains through rehydration. It usually happens after long periods of strenuous activity in a

hot environment, especially if it is humid or lacking in air circulation, as these conditions make it difficult for sweat to evaporate.

Heat exhaustion is an early indicator that the body's temperature-regulating mechanisms are being overwhelmed. As more blood flows to the skin to remove heat from the body's core, not enough blood flows to the vital organs. This causes a mild form of shock. Heat exhaustion can progress to heat stroke, so monitor the person's condition carefully.

What to Look For

The following signs and symptoms can indicate heat exhaustion:

- Normal or slightly raised core temperature (37 to 39°C, or 98.6 to 102.2°F)
- Moist skin that is flushed (red) immediately after exertion, and then turns pale or ashen (grey)
- Dehydration or intense thirst
- Headache, nausea, dizziness or fainting
- Weakness or exhaustion

What to Do



Call

Call EMS/9-1-1 if the person is vomiting, has an altered level of responsiveness, or is unable to drink fluids.



Care

1. Reduce heat exposure (e.g., get into the shade) and if possible, move the person to a cooler environment.
2. Loosen any tight clothing and remove any padded clothing or equipment.
3. Pour cool water on the person's clothing and/or on towels or cloths and place them on the person's chest. Fan the person to increase evaporation.
4. Apply ice or cold packs to the armpits and chest.
5. If the person is responsive and able to swallow, have him or her slowly sip a cool electrolyte-replacement beverage (e.g., commercial sports drink, coconut water, fruit juice, or milk). If a drink with electrolytes is not available, have the person drink water.
6. Advise the person not to do any more activities in the heat that day.



Heat Stroke

Heat stroke is the least common but most severe heat-related illness. It is a life-threatening emergency that occurs when the body's cooling system is completely overwhelmed and stops working.

The body stops sweating because the levels of fluid are too low. When sweating stops, the body's temperature rises quickly. When it gets too high, the brain and other vital organs cannot work properly. The person becomes unresponsive, has seizures, and can die without immediate first aid.

What to Look For

- High core temperature, above 40°C (104°F)
- Hot, dry skin
- Flushed (red) or pale skin
- Headache
- Altered mental status (e.g., confusion)
- Irritable, bizarre, or aggressive behaviour
- Progressive loss of responsiveness
- Rapid, weak pulse that becomes irregular
- Rapid, shallow breathing
- Vision problems
- Seizures or coma

What to Do

Call

Call EMS/9-1-1 and get an AED.

Care

1. Move the person to a cooler environment.
2. Quickly lower the person's core temperature with one of the following methods:
 - Immerse the person in cool water from the neck down. Do not remove the person's clothing.
 - Immerse the person's forearms and hands in cool water.
 - Pour cool water on the person's clothing and/or on towels or cloths and place them on the person's chest. Fan the person to increase evaporation.
 - Apply ice or cold packs to the person's armpits and chest.
3. Continue to use the rapid cooling methods listed above until either the person's condition improves or EMS personnel arrive.
4. If the person is responsive and able to swallow, have him or her slowly sip a cool electrolyte-replacement beverage (e.g., commercial sports drink, coconut water, fruit juice, or milk). If a drink with electrolytes is not available, give the person water.

ASSESSMENT OF A HEAT-STRESSED PERSON					
	SKIN	PHYSICAL	MENTAL	PULSE	BREATHING
HEAT CRAMPS	MOIST WARM	MUSCLE CONTRACTIONS (MILD TO SEVERE)	NORMAL	NORMAL	NORMAL
HEAT EXHAUSTION	MOIST WARM	HEADACHE WEAKNESS/EXHAUSTION NAUSEA, VOMITING FAINTING	ANXIETY DIZZINESS	NORMAL	NORMAL
HEAT STROKE	DRY HOT	SEIZURES COMA SEVERE HEADACHE	ALTERED BEHAVIOUR: IRRITABLE AGGRESSIVE BIZARRE	RAPID WEAK	RAPID SHALLOW

CAUTION CALL EMS/9-1-1

Heat Cramps

Remove from heat



Loosen tight clothing, remove padding from torso



Gentle stretching



If person is alert, provide cool drink

Heat Exhaustion

Remove from heat



Loosen tight clothing, remove padding from torso

**ACTIVE COOLING**

Pour water on torso



Fan skin



If person is alert, provide cool drink

Heat Stroke

Remove from heat



Loosen tight clothing, remove padding from torso



Do not dry skin

**AGGRESSIVE COOLING
(ORDER OF PREFERENCE)**

Immerse body in cool water



Immerse forearms in cool water



Pour water on torso



Fan skin



If person is alert, provide cool drink

Cold-Related Illness

Cold-related illnesses are any conditions that are caused by exposure to colder temperatures. They range in severity from superficial frostbite to life-threatening hypothermia.



Frostbite

Frostbite is a local, superficial injury caused by freezing of the skin and, in more extreme cases, the underlying tissues. Extremities, such as the toes, feet, fingers, hands, ears, and nose are particularly prone to frostbite.

There are two levels of frostbite: **Superficial frostbite** occurs when the skin freezes but the underlying tissues are unaffected. It may produce clear blisters after the tissue thaws, but little or no tissue loss typically occurs. **Deep frostbite** occurs when tissues beneath the skin (including tendons, muscles, and blood vessels) freeze. Inside the body, ice crystals and swelling begin to damage or destroy the body's cells, blood vessels, and nerves. Deep frostbite may produce dark, hemorrhagic blisters when the tissue thaws, and is more likely to result in tissue loss.

Before frostbite occurs, a person's skin may appear shiny and rosy (a condition sometimes called "frost nip"). This is a warning that frostbite is imminent. If you see these signs, advise the person to move to a warmer environment or protect his or her skin with layers of clothing.

Common Causes

Factors that increase the risk of frostbite include the following:

- Moisture on the skin
- Exposure to wind
- Insufficient insulation
- Clothing or equipment that reduces or constricts blood flow

Prevention

The following tips will help to prevent frostbite:

- Never ignore numbness: If an extremity feels numb or tingly, you must take steps to warm it immediately (e.g., put your hands under your armpits or pull your arms inside your jacket for direct skin-to-skin contact).
- Cover up vulnerable areas such as the cheeks, nose, and ears by wearing clothing that is appropriate for the weather (e.g., scarf, toque, mittens).
- Wear mittens instead of gloves when possible, as mittens provide better insulation.
- Maximize foot insulation but avoid a tight fit around the toes.
- Wear clothing in layers and adjust as necessary so that you feel warm but are not overheating and sweating.
- Keep well hydrated.
- Keep clothing dry and change out of wet clothing as soon as possible.

What to Look For

Superficial Frostbite

Signs and symptoms of superficial frostbite include:

- Hardened skin
- Skin that looks paler than the area around it
- Pain or stinging in the area, followed by numbness

Deep Frostbite

Signs and symptoms of deep frostbite include:

- Waxy skin that is colder than the area around it
- Skin and underlying tissue that is hard and solid to the touch
- Skin that is white, blue, black, or mottled
- Complete loss of feeling

What to Do

Because both hypothermia and frostbite are caused by exposure to the cold, you may be providing care for someone with signs and symptoms of both conditions. Because hypothermia is more serious, however, you should care for it first before caring for the frostbite.



Care

1. If possible, remove jewellery or other extraneous material that may restrict blood flow to the affected area.
2. Thaw the area only if you are sure it will not freeze again.

3. Warm the affected area using warm water, if available (approximately 38 to 40°C (100.4 to 104°F)) or body heat (e.g., by placing the person's hands in his or her armpits or on the abdomen). You should be able to place your own hands in the water for a minute without feeling too warm.



4. If the frozen area has thawed, don't break any blisters. Protect them with loose, dry dressings. Place gauze between the fingers or toes if they are affected.



5. If possible, elevate any thawed extremities above the level of the heart.
6. Because thawing frostbite can be extremely painful, the person may wish to take an over-the-counter painkiller.
7. Rehydrate the person by providing plenty of fluids.
8. Encourage the person to seek medical attention.

Myth-Information

Myth: When a person has frostbite, you should rub the frozen area or apply snow to it.

When providing care for frostbite, never rub the frozen area or put snow on it. Rubbing the area can cause the ice crystals within the cells to damage the surrounding tissues, and rubbing snow on the area will only worsen the condition.

Hypothermia

Hypothermia occurs when the body's core temperature (i.e., the temperature of the heart, lungs, and brain) drops to 35°C (95°F) or lower. Hypothermia becomes a life-threatening condition when the core temperature drops below 28°C (82.4°F). People with smaller body types, lower overall body weights, and lower body-fat content are much more likely to experience hypothermia. Hypothermia can occur at any time of year, with young children and the elderly being most at risk.

Common Causes

The following may lead to hypothermia:

- Sweating while outdoors in cold weather
- Cold, wet, windy conditions
- Cold-water immersion, especially in water below 10°C (50°F)
- Dehydration
- Taking medications to eliminate water from the body

Prevention

The following tips will help to prevent hypothermia:

- Prepare for activities in cold environments by wearing appropriate clothing:
 - Wear a hat and clothing made of tightly woven fibres (e.g., wool, fleece), which provide insulation and allow moisture transmission from the skin to the external environment.
 - Avoid cotton because it soaks up water and stays wet.
 - Wear clothing in layers so that they can be added or removed according to the weather conditions and exercise intensity. Remove some clothing before working to reduce the amount of sweat and keep clothing dry.
- Keep clothing dry. If clothing gets wet, change into dry clothing as soon as possible.
- Carry and consume high-energy foods that have a lot of sugar.

- Drink plenty of warm, high-calorie drinks to help fuel heat production. If high-calorie drinks are not available, drink plenty of water to at least keep from becoming dehydrated.
- Do not drink alcohol.
- Take frequent breaks from the cold to let the body warm up.
- Increase your activity level, add insulation, add a heat source, or get out of the cold if shivering occurs.
- Be careful around cold water and always wear a personal flotation device (PFD).

What to Look For

Levels of Cold Stress

Cold Stress (Not Hypothermic)

- Shivering
- Normal mental status
- Able to care for self

Mild Hypothermia

- Vigorous shivering; complaining of the cold
- Decreased physical function
- Difficulty taking care of self

Moderate Hypothermia

- Weak and intermittent shivering or shivering that later stops
- Sometimes complaining of the cold
- Lack of coordination or speech; confused or unusual behaviour
- Impaired judgment
- Possible unresponsiveness

Severe Hypothermia

- Shivering has stopped
- Unresponsiveness; breathing has slowed down or stopped
- Body feels stiff
- No pulse

What to Do

Check

Hypothermia can slow a person's breathing, so you may need to spend longer than usual checking the person's ABCs. If the person is unresponsive and you suspect hypothermia, check for signs of breathing for 60 seconds.

Call

Call EMS/9-1-1 and get an AED if the person has moderate to severe hypothermia.

Care

When caring for hypothermia, handle the person very gently and keep him or her horizontal. You should only move the person if it is absolutely necessary. Take care to avoid jostling or bumping him or her. Remove wet clothing, but only in an area sheltered from the cold environment.

1. Insulate the person (e.g., by applying a hypothermia wrap) to protect him or her against further cold exposure.
2. Warm the person by applying warm water bottles, heating pads, or electric blankets to the person's upper torso (i.e., the armpits, chest, and upper back). Body heat from yourself or a bystander can also work in an emergency. Never put the person in a warm bath or shower or try to warm the person with a fire, a stove, or hot rocks.
3. If the person is responsive, provide warm, sugary, non-alcoholic liquids to drink.

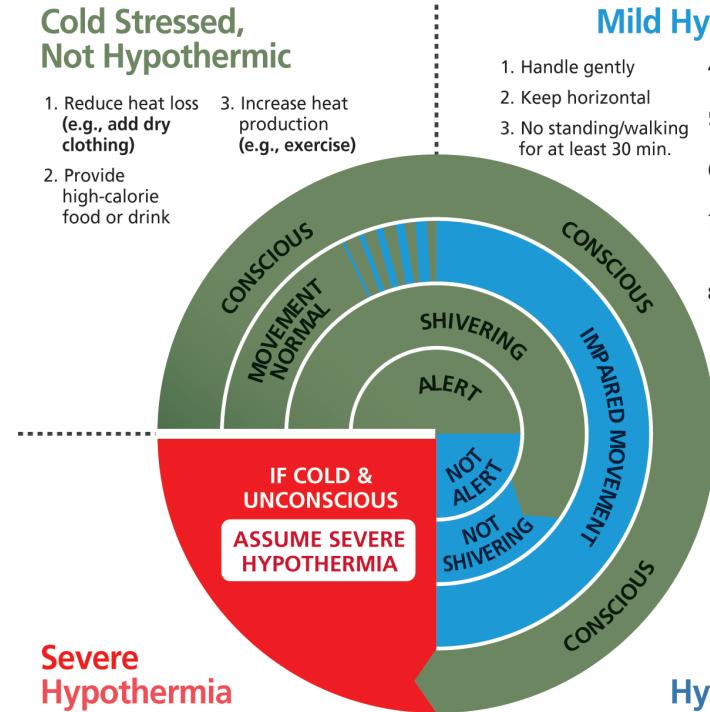
1. From outside ring to centre: assess responsiveness, movement, shivering, alertness
2. Assess whether **normal function**, or **impaired or no function**
3. Treat according to appropriate result-quadrant

Cold Stressed, Not Hypothermic

1. Reduce heat loss (e.g., add dry clothing)
2. Provide high-calorie food or drink
3. Increase heat production (e.g., exercise)

Mild Hypothermia

1. Handle gently
2. Keep horizontal
3. No standing/walking for at least 30 min.
4. Insulate/vapour barrier
5. Apply heat to upper trunk
6. Provide high calorie food/drink
7. Monitor until improvement (at least 30 min.)
8. Call EMS/9-1-1 if no improvement



Severe Hypothermia

1. Treat as moderate hypothermia, and
 - a) IF no obvious vital signs, **THEN 60-second breathing check**
 - b) IF no breathing, **THEN start CPR**
2. Call EMS/9-1-1

Moderate Hypothermia

1. Handle gently
2. Keep horizontal
3. No standing/walking
4. No drink or food
5. Insulate/vapour barrier
6. Apply heat to upper trunk
7. Call EMS/9-1-1

SUGGESTED SUPPLIES FOR A HYPOTHERMIA WRAP:

- | | |
|---|--|
| 1 - Tarp or plastic sheet for vapour barrier outside sleeping bag | 1 - Plastic or foil sheet (2 x 3 m) for vapour barrier placed inside sleeping bag |
| 1 - Insulated ground pad | 1 - Source of heat (e.g., <i>chemical heating pads/blankets or warm water in a bottle or hydration bladder</i>) |
| 1 - Hooded sleeping bag (or equivalent) | |

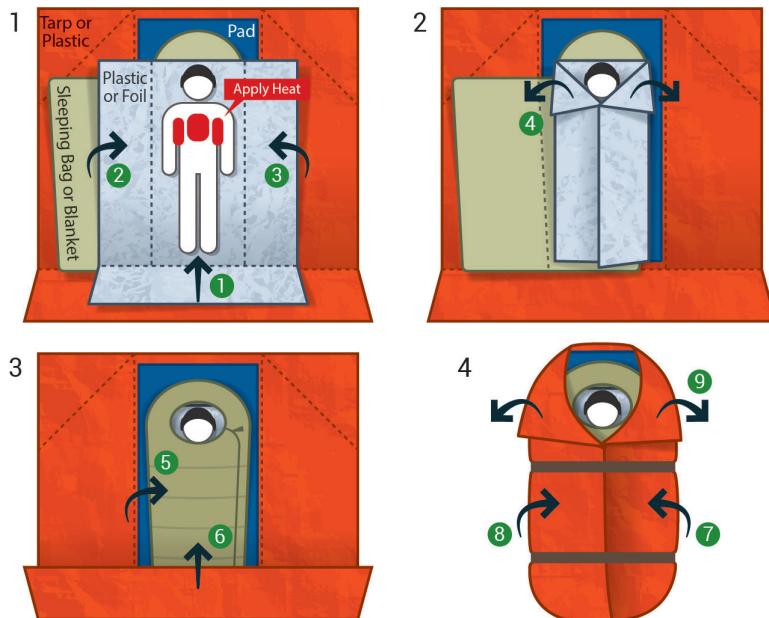
INSTRUCTIONS FOR HYPOTHERMIA WRAP

1. Dry or damp clothing: *Leave clothing on*

*IF shelter/transport is **less than** 30 minutes away,
THEN wrap immediately*

2. Very wet clothing:

*IF shelter/transport is **more than** 30 minutes away,
THEN protect person from environment, remove wet clothing, and wrap*



Applying a Hypothermia Wrap

Applying a hypothermia wrap is one way to minimize the heat lost by a person with hypothermia. It consists of a number of layers of insulation and heat-reflecting material.

To apply a hypothermia wrap:

1. Place an insulation pad (or pads) between the person and the ground.
2. Apply as much insulation as possible. Add extra clothing and wrap the person in blankets or sleeping bags.
3. Cover the person's head and neck with a toque, heavy hat, or hood.
4. Place a vapour barrier (plastic or foil blanket) outside the insulation wrap if the person is dry. If the person is still wet, place the vapour barrier inside the insulation wrap. If two vapour barriers are available, place one inside and one outside the insulation wrap.

If the person's clothing is wet and shelter or transport is less than 30 minutes away:

1. Leave the person in the hypothermia wrap.
2. Seek protection from the wind.
3. Create shelter if necessary.
4. Remove wet clothing. Cut the clothing to remove it, if necessary.
5. Dry (blot, don't rub, the skin) and rewrap the person.
6. Provide continual care until EMS personnel arrive.

Freezing of Skin to Metal Objects

A person's skin (especially the tongue and lips) can freeze to cold metal objects. This is especially a risk when skin is wet or moist. While this is a concern mainly in cold weather, skin can also freeze to metal objects in other situations (e.g., skin freezing to cold appliances such as freezers).

What to Do



Call

Call EMS/9-1-1 if you cannot safely remove the body part.



Care

1. Do not pull or tug the frozen body part.
2. Pour warm (not hot) water on the surface of the object or the skin that is stuck to the object.
3. As the skin begins to come free, gently help release the person from the metal object.
4. Treat any torn skin as an open wound.



Snow Blindness

Common Causes

Snow blindness occurs when a person's eyes are exposed to ultraviolet rays. It most commonly occurs when the sun's light is reflected from snow, ice, sand, or water into a person's eyes. Snow blindness can occur even on cloudy days.

Prevention

To help prevent snow blindness, wear sunglasses that block 100% of UV rays and prevent light from shining in from below, above, or the sides.

What to Look For

Signs and symptoms of snow blindness may include:

- Redness of the eyes
- Swelling of the tissue around the eyes
- Pain, itchiness, or a burning sensation in the eyes that may become intense
- Temporary colour changes in vision, or even vision loss



The signs and symptoms of snow blindness may not appear for several hours following exposure to bright, snowy conditions.

What to Do



Care

1. Place the person in a darker environment, if possible, or cover his or her eyes.
2. Apply a cool, damp cloth to reduce pain and burning.
3. If the person's vision is affected, seek medical attention.



Cold-Water Immersion

Cold-water immersion can occur in open water (e.g., when a boat capsizes) or after breaking through the ice. Although hypothermia occurs faster in cold water than cold air, the signs, symptoms, and care are essentially the same.

Cold-water immersion has four distinct phases:

- 1. Cold-Shock Response:** Rapid cooling of the skin causes a gasp followed by hyperventilation (lasting 1 to 2 minutes).
- 2. Cold Incapacitation:** Further cooling of nerve and muscle fibres causes weakness and a loss of coordination, leading to incapacitation within approximately 15 minutes.
- 3. Hypothermia:** A person dressed appropriately for the weather conditions will take 30 minutes or more to become mildly hypothermic.
- 4. Circum-Rescue Collapse:** Can occur just prior to, during, or after rescue. The signs and symptoms range from collapsing, to fainting, to cardiac arrest. When rescuing a person from cold water, monitor the person's condition carefully and be prepared to provide emergency care.

Most deaths in cold water result from the Cold-Shock Response (when the head is under water) or drowning due to Cold Incapacitation. A properly worn personal flotation device (PFD) will keep a person afloat after he or she loses the ability to swim during the Cold Incapacitation phase.

What to Do (Rescue)

Self-Rescue

- If you are in open water, do a self-rescue by getting into a boat, raft, or other mode of marine transportation, if available.
- If you have fallen through the ice, place your arms on the surface of the ice, kick your legs until your body is horizontal to the water's surface, and then kick and pull forward until you are on the ice. Roll away from the hole before standing up.

Survive to Await Rescue

If you are in open water and self-rescue is not possible, increase your survival time by doing the following:

- Get out of the water as much as possible by using a capsized boat or other floating object as a flotation device.
- If you are wearing a personal flotation device (PFD), adopt the Heat Escape Lessening Position (HELP):
 - Press your arms against your armpits.
 - Place your forearms across your chest.
 - Squeeze your thighs together and raise your knees toward your chest.
- If several people are together, adopt the HUDDLE position:
 - Face each other.
 - Have each person squeeze his or her thighs together.
 - Form a circle and hug each other. Each person should place one arm above and one arm below the arms of those adjacent, and pull the sides of the chests together.
 - Sandwich any children or persons without a PFD inside the HUDDLE.

If you have fallen through the ice and are unable to exit by yourself, stop struggling. Place your arms on the ice and let them freeze in place. This will prevent you from drowning if the cold exposure causes incapacitation or unresponsiveness.

First Aider Rescue

To help rescue a person from cold water:

- 1. Talk** – Instruct the person on self-rescue.
- 2. Throw** – Throw a rope or buoyant object to the person.
- 3. Reach** – Reach out to the person with a rigid object like a ladder, paddle, or tree branch.



Any person rescued from cold water should be treated for hypothermia.



Unless you have received specific training in water rescue, never enter the water or approach a hole in the ice to attempt to help a person.

Drowning

Drowning occurs when a person's airway is submerged in water, cutting off the oxygen supply to body.

Drowning is a leading cause of death for children and babies. An average of 400 Canadians drown each year. Young children aged 1 to 4 and men aged 15 to 44 are at the greatest risk.

Prevention

The following tips will reduce the risk of drowning:

- Always wear a personal flotation device (PFD) when in a boat or other mode of marine transportation.
- Supervise children in, on, and around any body of water.
- Those who do not swim or are weak swimmers should wear a PFD when in, on, and around any body of water.
- Check water depth before swimming or diving.
- Have appropriate safety equipment available when in or on the water.
- Take Canadian Red Cross Swimming and Water Safety lessons.

Responsive Drowning Person

What to Look for

These common warning signs can indicate that someone is drowning:

- The person is vertical in the water, and is not using his or her legs to move forward or tread water.
- The person may have an expression of fear.
- The person's arms may be flailing up and down as he or she tries to rise out of the water to breathe, rather than trying to swim forward.
- The person's movements are uncontrolled.

What to Do



Call

Call for a lifeguard or other trained person (if one is nearby), or call EMS/9-1-1.



Care

1. Remove the person quickly and safely from the water, but do not put yourself in danger. Follow the same steps you use to perform a First Aider Rescue for cold-water immersion. Remember, any person rescued from cold water should be treated for hypothermia.

Unresponsive Drowning Person

What to Do



Call

Call EMS/9-1-1 and get an AED.



Care

1. If the person is not breathing, begin CPR.



Seasickness

Seasickness (motion sickness) is a sudden illness largely due to the motion of a ship or vessel. People who are not accustomed to the sea are most susceptible, but even experienced seafarers may be affected in rough water conditions.

Signs and symptoms of seasickness vary, but include:

- Loss of appetite, nausea, vomiting, or abdominal cramps
- Headaches, dizziness, or exhaustion
- Cold sweat
- Dry mouth



Care

- In mild cases, the condition will gradually wear off (often during sleep) and no specific treatment is necessary
- Providing small portions of dry food (such as crackers) can help settle the person's stomach
- Sucking on ice chips instead of drinking water will reduce the risk of vomiting while still preventing dehydration
- More severe cases of prolonged vomiting may be managed with over-the-counter preventive medications.



13 Poisons

A poison is a substance that has a harmful effect within the body if it is inhaled, swallowed (ingested), absorbed, or injected. Poisons are immediately life-threatening if they affect breathing or circulation. Practically anything can be a poison if it is not meant to be taken into the body. Even some substances that are meant to be taken into the body, such as medications, can be poisonous if they are taken by the wrong person, or if the person takes too much. Combining certain substances can also result in poisoning.

Poisoning can happen anywhere, but most poisonings take place in the home. Children younger than 5 years, especially toddlers, are at the highest risk for poisoning. Children may be attracted to pretty liquids in bottles, sweet-smelling powders, berries on plants that look like they are edible, or medications or vitamins that look like candy. Additionally, very young children explore their world by touching and tasting things around them, so even substances that do not look or smell attractive are poisoning hazards among this age group. Older adults who have medical conditions that cause confusion (such as dementia) or who have impaired vision are also at a higher risk of unintentional poisoning.

When providing first aid for a poisoned person, use caution to avoid contact with the poison.

Your local Poison Control Centre can provide you with specific first aid instructions for a variety of types of poison, but remember that you should always call EMS/9-1-1 if the person has an altered level of responsiveness or is having difficulty breathing. Keep the local Poison Control Centre number by your telephone and save it as a contact in your mobile phone.

TYPES OF POISONS

Swallowed Poison



Enters the body through the mouth, lips, esophagus, or stomach. Drinking bleach is an example of swallowed poisoning.

Absorbed Poison



Enters the body through the skin. Plants (such as poison ivy) and chemicals can cause absorbed poisoning.

Injected Poison



Enters the body through bites or stings or as drugs injected with a needle.

Inhaled Poison



Is breathed into the body. Breathing in carbon monoxide from a car's exhaust is an example of inhaled poisoning.

HOUSEHOLD POISONS

Many everyday household items can be poisonous if they are used incorrectly. Common causes of unintentional poisonings at home include:

- Alcohol (found in many products, including hand sanitizer, mouthwash, perfume, cologne, aftershave, and vanilla extract)
- Medications (over-the-counter and prescription) and vitamins
- Cleaning products (detergent "pods" are especially attractive to children)
- Glues and paints (lead paint remains toxic even when it is applied, and children may put peeling paint into their mouths)
- Insect and weed killers
- Car products (e.g., antifreeze, windshield washer fluid)
- Plants (both houseplants and outdoor plants)
- Oils, lubricants, and polishes
- Tobacco

Identifying Hazardous Materials

The international hazard symbols on product labels make it easier to identify harmful materials.

If you must handle a product that is labelled with any of the international hazard symbols:

- Carefully read the warnings and follow the instructions.
- Wear protective equipment (such as eye goggles, a face mask, and disposable gloves).
- Ensure the product is properly sealed and stored after use.

THE INTERNATIONAL HAZARD SYMBOLS



Flammable

These materials catch fire easily and burn quickly when exposed to any form of ignition (such as fire or heat).



Toxic

These materials can harm the respiratory (breathing) system, nervous system, and other systems if they are absorbed through the skin, inhaled, or ingested.



Explosive

These materials can explode when exposed to heat, flame, or pressure.



Corrosive

These materials can burn the skin and cause permanent blindness.

Prevention

Prevention at Home

The following tips will help reduce the risk of poisoning:

- Keep all medications, household cleaning products, poisonous plants, and other toxic substances well out of the reach of children. Use locked cupboards or child-resistant latches.
- Use child-resistant safety caps on medications and other potentially toxic products.
- Never call medicine "candy" to persuade a child to take it.
- Teach children to check with an adult before eating an unknown substance.
- Keep potentially poisonous products in their original containers with their original labels.
- Ensure that prescription medicine is taken only by the person whose name is on the label.
- Carefully dispose of expired medications through your local hazardous waste process.
- Be aware that many cleaning products and aerosol sprays have toxic fumes. Use potentially poisonous chemicals in a well-ventilated area.
- Wear proper protective clothing any time you are working with or around a poisonous substance.
- Run gas and other combustion engines only in open, well-ventilated areas.
- Learn about poisonous plants in your area and before going into a new environment.

Prevention in the Workplace

The following tips will reduce the risk of poisoning in the workplace:

- Clearly label all toxic substances and never use a product that is not clearly identified.
- Have a detailed MSDS (Material Safety Data Sheet) available for every hazardous substance in the workplace.
- Ensure that workers who might be exposed to hazardous materials receive the proper training in safety measures and emergency procedures.
- Check all warning labels, tags, and posters in the workplace and follow their instructions carefully.
- Read labels and the MSDS to find out the risks of each hazardous material, the safety measures that must be taken to prevent poisoning, and the first aid required if poisoning occurs.

General Care for Poisoning

Your check of the scene and the person might give clues that point to poisoning as the cause of the person's illness. For example, you may note an open or spilled container, an unusual odour, burns around the person's mouth, a strange odour on the person's breath, or other people in the area who are also ill.

If you think that a person has been poisoned, try to find out the following key points so that you and others can give the most appropriate care:

- The type of poison
- The quantity taken
- When it was taken

Calling EMS/9-1-1 or a Poison Control Centre is the most important thing you can do if a poisoning of any type is suspected. Other general first aid care tips for poisoning include the following:

- Limit further exposure by moving either the person or the source of the poison.
- If the poison's container is found nearby, give the information from the label to the Poison Control Centre or EMS/9-1-1 dispatcher.
- Do not give the person anything to eat or drink unless an EMS dispatcher or Poison Control Centre staff member tells you to do so.
- If you do not know what the poison was and the person vomits, save a sample to give to EMS personnel.

Swallowed Poisons



What to Look For

The following may indicate that a poisonous substance has been swallowed:

- An open container of poison nearby
- Burns around the mouth
- Increased production of saliva or salivation that is an abnormal colour
- Abdominal cramps, vomiting, or diarrhea
- Seizures
- Dizziness or drowsiness
- Unresponsiveness
- A burning sensation in the mouth, throat, or stomach

What to Do

Call

If the person is responsive and alert and his or her ABCs are unaffected, call the local Poison Control Centre. Call EMS/9-1-1 and get an AED if the person has an altered level of responsiveness or has difficulty breathing.

Care

1. If the person is not breathing, start CPR. Use a barrier device so that you don't contaminate yourself with the poison.
2. Check the packaging of the poison, if possible, so that you know what it is.
3. Induce vomiting only if told to do so by the EMS dispatcher or the Poison Control Centre.
4. If the person needs to go to the hospital, bring a sample of the poison (or its original container).

Myth-Information: Induce Vomiting in a Poisoned Person

Myth: Inducing vomiting in a poisoned person will remove the harmful substance from the person's body.

Inducing vomiting in a person who has been poisoned often causes additional harm and is not recommended. Sometimes the person may vomit on his or her own, but you should never give the person anything to make him or her vomit unless you are specifically instructed to do so by an EMS dispatcher or a Poison Control Centre staff member.

Inhaled Poisons

What to Look For



The following may indicate that a poisonous substance has been inhaled:

- Breathing difficulties
- Irritated eyes, nose, or throat
- Dizziness
- Vomiting
- Seizures
- Bluish colour around the mouth
- Unresponsiveness
- An unusual smell in the air

What to Do



Call

If the person is responsive and alert and his or her ABCs are unaffected, call the local Poison Control Centre. Call EMS/9-1-1 and get an AED if the person has an altered level of responsiveness or has difficulty breathing.



Care

1. If the person is not breathing, start CPR. Use a barrier device so that you don't contaminate yourself with the poison.
2. Get the person into fresh air but do not enter into a hazardous atmosphere in order to do so.

Inhaled poisons can affect everyone in an area. Stay out of the area if you suspect that the poison may still be in the air.

Carbon Monoxide Poisoning

Carbon monoxide (CO) is a gas that has no smell, colour, or taste. CO poisoning is often called a "silent killer" because it is not detectable to any of the body's senses. CO bonds to red blood cells 200 times better than oxygen, preventing oxygen from attaching and therefore starving the body of oxygen.

It releases when fuel is burned in small engines, lanterns, fireplaces, stoves, grills, gas ranges, furnaces, cars, and trucks. When equipment that burns these fuels is properly ventilated, CO poisoning is not a problem. But if the equipment or ventilation system is faulty, or if outdoor equipment is used in an enclosed area, toxic levels of CO can build up quickly, creating the risk of CO poisoning. Concentrated CO is poisonous and life-threatening to those who inhale it.

Prevention

The following tips help prevent carbon monoxide (CO) poisoning:

- Ensure that a battery-operated or battery back-up CO detector is installed in the home or workplace where the alarm will be easily heard.
- Check the CO detector's batteries twice a year, ideally once in the fall and once in the spring.
- Have all fuel-based appliances and equipment installed and repaired by a qualified technician.
- Have all fuel-based appliances and equipment serviced annually by a qualified professional.
- Use fuel-based appliances and materials as intended (e.g., do not use generators or portable flameless chemical heaters indoors, do not use a gas stove or oven for heating, do not burn charcoal indoors).
- Ensure that chimneys are inspected and cleaned annually by a professional.
- Never run a car or truck inside an attached garage. For detached garages, always leave the garage door open when running a car or truck inside.

What to Look For

The signs and symptoms of acute carbon monoxide (CO) poisoning are commonly mistaken for a stomach virus, the flu, or food poisoning. Signs and symptoms include the following:

- Headache
- Dizziness or light-headedness
- Confusion
- Impaired hearing and vision
- Weakness or fatigue
- Muscle cramps
- Nausea and vomiting
- Chest pain
- Altered level of responsiveness

What to Do



Care

1. Treat the person as you would for any other type of inhaled poison.

Absorbed Poisons

What to Look For



The following signs and symptoms can indicate that a poisonous substance has been absorbed:

- Rash or hives (raised, itchy areas of skin)
- Burning or itching skin
- Swelling
- Blisters
- Burns
- Unresponsiveness

What to Do



Call

If the person is responsive and alert, and the person's ABCs are unaffected, call the local Poison Control Centre. Call EMS/9-1-1 and get an AED if the person has an altered level of responsiveness or has difficulty breathing.



Care

1. If the person is not breathing, start CPR.
2. If the poison is a dry powder, brush it off the person's skin. Be careful to avoid contaminating yourself.
3. Remove any clothing or items covered in the poison.
4. Flush the skin with running water for at least 15 minutes. To prevent any further injury, make sure the water flushes away from any unaffected areas of the body.

Rash-Causing Plants

Some plants produce chemicals that can cause absorbed poisoning on contact. These plants vary in appearance depending on the location, species of the plant, and time of year. As prevention is the best strategy, it is a good idea to become familiar with the appearance of rash-causing plants in your area.

Prevention

When there is the potential for exposure to rash-causing plants, follow these guidelines:

- Wear a long-sleeved shirt, long pants, and closed-toed shoes.
- Apply a pre-contact barrier cream or lotion before going outside.
- Wash skin with a specialized skin cleanser designed to remove plant oils or a degreasing soap (such as dishwashing liquid) and plenty of water immediately after returning indoors.
- Wash tools, work gloves, and clothing that may have contacted rash-causing plants, as oils can remain on these items and transfer to the skin the next time they are used.

If you suspect that your skin has come into contact with a rash-causing plant, wash the entire area with a degreasing soap immediately.

Poison Ivy, Sumac, and Oak

Plants such as poison ivy, poison sumac, and poison oak are covered with an oil called urushiol, which causes a skin reaction in most people.



What to Look For

Contact with urushiol can cause the following signs and symptoms:

- Itchy skin
- Reddening of the skin
- Bumps
- Blisters

The rash can range from irritating to unbearable, depending on the person's sensitivity, the amount of skin exposed, and the rash's location.



Do not burn plants containing urushiol. The oil is carried in the smoke, and inhalation can cause swelling of the throat and irritation of the lungs.

What to Do



Call EMS/9-1-1 only if the person experiences a severe allergic reaction or is having trouble breathing.



1. Encourage the person to apply a cream or ointment designed to reduce itching and blistering (e.g., calamine).
2. Suggest that the person take an oral antihistamine to help relieve itching.
3. If the rash is severe or on a sensitive part of the body (such as the face or groin), the person should see a healthcare provider.

Giant Hogweed and Wild Parsnip

The sap of giant hogweed and wild parsnip contains toxic photosensitizing compounds called furanocoumarins. Contact with the plant transfers these compounds to the skin. While they do not have an immediately visible effect, they cause the skin to react when exposed to the sun's UV radiation to produce severe inflammation, intense burning, and weeping blisters. If any of these plants are found, their location should be reported to the local environmental or municipal authorities.



What to Look For

If the person's skin has come into contact with the sap of giant hogweed or wild parsnip, and is then exposed to the sun's UV radiation, the following signs and symptoms may occur:

24 hours after exposure:

- Swelling of the skin
- Reddening of the skin

48 hours after exposure:

- Painful blistering
- Purplish scarring of the skin

What to Do

Call

Call EMS/9-1-1 if the person is having trouble breathing, or if the sap is on the person's eyes, face, or groin.

Care

1. Protect the area from sunlight.
2. If sap gets into the eyes, rinse them thoroughly with water for at least 15 minutes, or until EMS personnel arrive.
3. Encourage the person to seek medical attention.

If a reaction occurs, the affected area may be sensitive to sunlight for months or even years. Protect the area by keeping it covered, wearing sunglasses, and applying sunscreen.

RASH-CAUSING PLANTS

Poison Ivy



Found in all the provinces except Newfoundland and Labrador, but has not been reported in any of the territories.

Poison Oak



Found in British Columbia

Poison Sumac



Found in Southern Ontario and Quebec

Giant Hogweed



Found in Nova Scotia, New Brunswick, Quebec, Ontario, and British Columbia

Wild Parsnip



Found in all provinces and territories except for Nunavut

Injected Poisons

What to Look For



What to Do

Call

If the person is responsive and alert, and the person's ABCs are unaffected, call the local Poison Control Centre. Call EMS/9-1-1 and get an AED if the person has an altered level of responsiveness or has difficulty breathing.

Care

1. Clean the puncture site with clean running water.
2. Keep the person as still as possible.



Poisoning Caused by Alcohol or Drugs

Drug Overdose

Drugs (whether over-the-counter, prescription, or illegal) are a frequent cause of death by poisoning. Drug overdoses may be accidental or intentional. Signs and symptoms will vary depending on the drug.

Stimulants

- Stimulants affect the brain and nerves to speed up physical and mental activity.
- Many stimulants are swallowed as pills, but some can be absorbed or inhaled.

Hallucinogens

- Hallucinogens cause changes in mood, sensation, thought, emotion, and self-awareness.
- They can cause intense fear, panic, paranoid delusions, vivid hallucinations, deep depression, tension, and anxiety.

Depressants

- Depressants send signals to the brain and nerves that slow down physical and mental activity.
- They cause drowsiness and impair coordination and judgment.
- Alcohol is the most widely used and abused depressant in Canada.

Designer Drugs

- Designer drugs don't fit into any of the categories mentioned above.
- They are often chemically altered versions of medical drugs, such as narcotics and amphetamines.
- Their effects can be unpredictable and dangerous.
- Ecstasy, GHB, ketamine, and LSD are examples of designer drugs.

What to Look For

The signs and symptoms of drug poisoning will vary depending on the drug but often include the following:

- Moist or flushed skin
- Sweating
- Chills or fever
- Nausea or vomiting
- Vomiting blood or passing blood
- Changes in breathing or difficulty breathing
- Racing or pounding heart
- Continuous pain or pressure in the chest or abdomen
- Seizures
- Severe headache
- Slurred speech
- Changes in level of responsiveness
- Changes in behaviour (e.g., aggression or fear)

What to Do



Call

Call EMS/9-1-1 and get an AED if you suspect a drug overdose or if the person is having seizures, has difficulty breathing, is unresponsive, or has a change in behaviour.



Care

1. Try to find out from others at the scene what substance or substances the person may have taken, and then communicate that information to EMS personnel or the Poison Control Centre worker.

Opioid Overdose

Opioid drugs, such as heroin, oxycodone, and fentanyl, are a common cause of drug overdose in Canada. Many prescription drugs are or contain opiates. EMS personnel use naloxone (Narcan®) to reverse the effects of opioid drugs. In some provinces, First Aiders, first responders, and people in high-risk addiction situations can receive training in administering naloxone. Naloxone can be supplied as a nasal spray or an injectable solution.



Naloxone and Opioid Drug Overdoses

Naloxone is used to quickly reverse the effects of an opioid drug overdose, specifically counteracting central nervous system depression and respiratory depression.

Administering naloxone requires special training. If you are trained and naloxone is available, you can give naloxone to someone suffering from an opioid drug overdose, as this is an effective and lifesaving treatment.

What to Look For

Signs and symptoms of an opioid overdose include the following:

- Slowed breathing (or no breathing)
- Chest tightness
- Extreme drowsiness or unresponsiveness
- Small pupils

What to Do



Call

Call EMS/9-1-1 and get an AED.



Care

1. If the person is unresponsive and not breathing, begin CPR. Do not delay CPR treatment to give the person naloxone.
2. If the person is unresponsive but is breathing, and if you have received training in its use, give the person naloxone by following the instructions on the label. Always follow specific policies and the training you have received in providing naloxone.
3. Stay with the person and provide continual care until EMS personnel arrive. Ensure that the person receives professional medical care, as naloxone alone is not enough to care for a person who has overdosed on opioids.

Alcohol Poisoning

Alcohol is a depressant that affects the central nervous system. It impairs judgment, slows down reflexes, and makes driving unsafe. Very high levels of alcohol in the bloodstream can affect the brain's ability to control the body's breathing, heart rate, and temperature, which can lead to death. Alcohol poisoning occurs when large quantities of alcohol are consumed in a short period of time, resulting in toxic levels of alcohol in the body.

There are many factors that can contribute to an unsafe blood alcohol level:

- Speed of drinking
- Full or empty stomach
- Type of alcohol
- The person's weight and sex

What to Look For

The signs and symptoms of alcohol poisoning include the following:

- Confusion
- Vomiting
- Seizures
- Slow or irregular breathing
- Low body temperature (hypothermia)
- Unresponsiveness
- Blue-tinged skin or skin that is paler than normal

What to Do



Call

Call EMS/9-1-1 and get an AED.



Care

1. Roll the person into the recovery position.
2. Carefully monitor the person until EMS personnel arrive, as his or her condition can deteriorate rapidly.

Bites and Stings

Bites and stings can range in severity from mildly irritating to life-threatening. When a person is bitten or stung, proper first aid care can help to limit complications and speed healing, and it may even be lifesaving.



Animal Bites

Any animal that has teeth, whether domesticated (e.g., pets or livestock) or wild, can be the source of a bite wound. If the person does not know the animal, rabies may be a concern. Most animal bites carry a high risk of infection, so they should be monitored closely in the hours and days after the incident.

What to Do



Call

Call EMS/9-1-1 if bleeding is life-threatening. Call your local animal control department if the animal is wild or a stray.



Care

1. Try to get the person safely away from the animal without putting yourself in danger.
2. Do not try to capture the animal.
3. If the wound is bleeding heavily, provide care for external bleeding.
4. If the wound is minor:
 - Wash the wound thoroughly with clean water, ideally by running it under a tap, as the pressure from the running water lets it penetrate more deeply into the wound.
 - Control any bleeding.
 - Encourage the person to apply antibiotic ointment or cream to the wound, if they have no known allergies or sensitivities.
 - Cover the wound with a dressing or bandage.

5. Seek medical attention if the animal is wild, stray, or unknown to you, or if you suspect the animal might have rabies.
6. Watch for signs and symptoms of infection and ensure that the person continues to monitor the wound over the next several days.

Rabies

Rabies is a serious infection that attacks the brain and spinal cord. It is fatal if it is not treated. The virus that causes rabies is spread when an animal that has the disease bites another animal or a person. Wild animals (such as foxes, skunks, bats, and raccoons) can carry rabies, as can pets and livestock that have not been vaccinated against it. Only mammals can be infected with rabies.

Animals with rabies may act strangely. For example, an animal that is usually active at night may appear in the daytime, or a normally shy wild animal might not run away when people approach. Rabid animals may drool, appear to be partially paralyzed, or be aggressive or strangely quiet. Call EMS/9-1-1 if a person is bitten by an animal that you suspect might have rabies. If possible, try to remember details about the animal's behaviour and appearance, and where you last saw it. When you call EMS/9-1-1, the dispatcher will direct the proper authorities (e.g., animal control) to the scene.

A person who is bitten by an animal that might have rabies must get medical attention immediately. Treatment for rabies includes a series of injections to build up immunity that will help fight the disease.



Insect Stings

Most of the time, insect stings are merely uncomfortable. However, allergic reactions and anaphylaxis are always a concern. Some insects, such as bees, leave their stingers embedded in the person's skin. Others, such as wasps, can sting multiple times, but leave no stinger behind.

Prevention

To reduce the risk of insect stings:

- Wear a long-sleeved shirt, long pants, and closed-toe shoes.
- Don't wear perfume, cologne, or other products with strong scents.
- Remove or cover items that will attract insects, such as garbage or food.

What to Look For

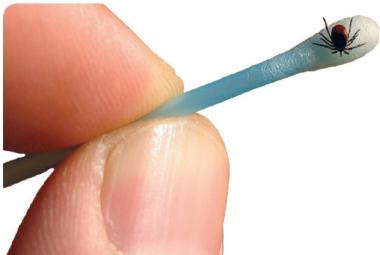
The following can indicate an insect sting, especially if you see insects nearby:

- Quick, sharp pain at the site of the sting
- Pain, redness, or swelling at the site of the sting
- A stinger embedded in the skin

What to Do



Call EMS/9-1-1 and get an AED if there are any signs of a severe allergic reaction.



Tick Bites

Ticks are found in wooded, bushy areas, in tall grass, and in leaf litter on the ground. They can attach themselves to any warm-blooded animal that they come into direct contact with, including people. When ticks attach themselves to the skin, they can spread pathogens

from their mouths into the person's body. These pathogens can cause serious illnesses, such as Lyme disease. Promptly remove any ticks that you find before they become swollen with blood. Ticks are most active from April to September.



Care

1. If the stinger is still in the person's skin, remove it by scraping it away from the skin. Use a plastic card (such as a debit card) to do this.
2. Wash the area with clean water.
3. Cover the site with an adhesive bandage.
4. Apply ice or a cold pack to help control swelling. Put a thin cloth between the cold source and the person's skin to avoid freezing the skin.
5. Continue to watch for signs of infection, an allergic reaction, or anaphylaxis.



Prevention

Tips to help prevent tick bites include the following:

- Avoid wooded areas and areas with high grass and leaf litter.
- Walk in the centre of hiking trails.
- Limit the amount of exposed skin. Wear long-sleeved shirts and long pants. Tuck your shirt into your pants and your pant legs into your socks or boots.
- Use insect repellents with 10 to 30% DEET on skin and clothing. A parent, guardian, or caregiver should apply repellents to children, carefully avoiding the eyes, mouth, and hands.
- Check gear and pets for ticks when coming in from outside.
- Immediately after being outdoors, do a head-to-toe check for ticks using a hand-held or full-length mirror. Check the scalp, under the arms, in and around the ears, inside the navel, around the waist, behind the knees, and between the legs. If you are outdoors for an extended period of time, check several times throughout the day. Caregivers and parents or guardians should check children for ticks.
- Put outdoor clothing in a tumble dryer on high heat for 1 hour to kill any ticks that might be attached.
- When walking with children in a tick-infested area, prevent ticks from entering their clothing by using a rubber band or tape to seal the area where children's pants and socks meet.

Using Insect Repellents to Prevent Tick Bites

Consider using an insect repellent if you will be in a grassy or wooded area for a long period of time, or if you know that the tick population in the area is high. Use repellents sparingly, as one application will last 4 to 8 hours and heavier or more frequent applications do not increase effectiveness.

What to Do

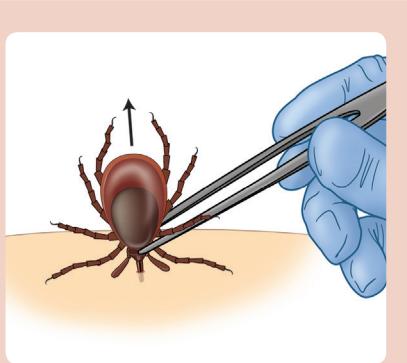


Care

If the tick hasn't started to dig into the flesh, remove it by brushing it off the skin.

If the tick has begun to bite:

1. Use tweezers to grasp the tick by the head as close to the person's skin as possible.
2. Pull upward slowly and steadily without twisting until the tick releases its hold. If you cannot remove the tick or if its mouthparts stay in the skin, the person should seek medical attention.



3. If the tick is removed, wash the area with clean tap water. The pressure of the running water lets it penetrate more deeply into the wound.
4. If possible, save the tick in a resealable bag and record the date of the bite.
5. Advise the person to monitor the bite for several days for signs and symptoms of infection. If the area becomes infected (i.e., it becomes red, warm, or painful), or the person develops a fever, he or she should seek medical attention.



Ticks can be infected with more than one type of bacteria that can cause human illness. Signs can appear weeks to months after a bite. If a person feels unwell after a tick bite, he or she should seek medical attention.

Myth-Information: Properly Removing a Tick

Myth: You can remove a tick safely by burning it off with a flame or smothering it with petroleum jelly or nail polish.

These folk remedies are not the most effective methods. They rely on the tick detaching itself, which could take hours. As long as the tick's mouthparts are in contact with the skin, the tick is potentially transmitting disease. The goal is to remove the tick in one piece as quickly as possible. The best tool for doing this is a pair of fine-tipped tweezers or a special tick removal tool, such as a tick key.



Lyme Disease

Lyme disease is caused by bacteria that are transmitted to humans through bites from infected ticks. If Lyme disease is not treated, it can become a chronic condition with serious symptoms such as cognitive dysfunction, joint and muscle pain, and neurological disorders.

What to Look For

The most distinctive sign of Lyme disease is a small red rash centred on the location of the bite in the shape of a bullseye (a red dot on a paler circle with an outer red ring). These rashes are typically 13 to 18 cm (5 to 7 in.) across.

Other signs and symptoms of Lyme disease include:

- Fatigue
- Headache
- Fever or chills
- Swollen lymph nodes
- Numbness or tingling
- Muscle spasms or weakness
- Joint and muscle pain (similar in feeling to the flu)

What to Do

Seek medical attention as soon as possible. If possible, save the tick responsible for the bite in a resealable bag or empty pill bottle, and bring it to the medical appointment. It may help the doctor diagnose the illness.



Snakebites

In the wild, snakes like to occupy rock outcrops, swamps, undergrowth, and abandoned human structures. When disturbed, some snakes can inject venom as they bite.

The vast majority of Canada's snakes are non-venomous, but there are three venomous snakes currently native to Canada. All three are rattlesnakes:

1. Northern Pacific Rattlesnake
2. Massasauga Rattlesnake
3. Prairie Rattlesnake

Other venomous snakes in North America include copperheads, cottonmouths (water moccasins), and coral snakes. Most deaths from venomous snakebites occur because:

- Too much time passed before the person received medical care.
- The person had an allergic reaction to the venom.
- The snake bite compounded an existing health condition in the person.

Prevention

The following steps will help prevent snakebites:

- Do not aggravate a snake.
- Wear proper footwear and watch where you put your feet when hiking.



If you hear a rattlesnake, remain still until the snake is located, then back away slowly: avoid stomping or jumping as this may startle the snake.

A Snake's Striking Range

A snake's striking range is about two-thirds of its length forward and one-third upward. (In water, snakes have a shorter striking range.) If you are within striking distance, slowly back out of range.

What to Look For

Signs and symptoms of a possibly venomous snakebite include:

- A pair of puncture wounds in the skin
- Localized redness of the skin
- Pain and swelling in the area of the bite

What to Do



Call

Call EMS/9-1-1 and get an AED. If you are not sure whether the snakebite was caused by a venomous snake, call EMS/9-1-1 anyway. Do not wait for life-threatening signs and symptoms of poisoning to appear.



Care

Before providing care, ensure that the snake is no longer present. If you see the snake, remember what it looks like so that you can describe it to EMS personnel. This information will help them provide the most appropriate treatment. Never attempt to capture or handle a potentially venomous snake.

1. Keep the injured site still and level with the heart, if possible.
2. If the bite is on a limb, remove any jewellery or tight clothing from the limb and watch for swelling.
3. Wash the wound with water.
4. Cover the bite with a clean, dry dressing.

VENOMOUS SNAKES IN CANADA

Northern Pacific Rattlesnake



Found in British Columbia

Massasauga Rattlesnake



Found in Ontario

Prairie Rattlesnake



Found in Alberta and Saskatchewan

Myth-Information

Myth: You can help to slow the spread of venom through the body by cutting the wound or applying suction, ice, electricity, or a tourniquet.

These measures are not effective for slowing the spread of venom. In fact, they are likely to cause pain and injury. Your time is better spent seeking medical attention as quickly as possible.

Spider Bites

Very few spiders in Canada can cause serious illness or death. The bites of harmless spiders often cause reactions similar to those of bee stings (e.g., swelling, redness, and stinging or pain at the site). However, two types of venomous spiders are occasionally encountered in Canada: the brown recluse and the black widow. The bite of either spider can, in rare cases, be life-threatening.



Black Widow Spiders

The black widow spider is black with a reddish hourglass shape on the underside of its body. Its bite is the most painful and deadly of all the widow spiders, especially for very young children and older adults. The bite usually causes an immediate, sharp, "pin-prick" pain, followed by dull pain in

the area of the bite. However, the person often does not know that he or she has been bitten until he or she starts to feel ill or notices a bite mark or swelling.

The signs and symptoms of a black widow spider bite (e.g., abdominal cramps), can mimic those of other medical emergencies. Anyone with a suspected bite should be seen by a doctor for correct diagnosis and treatment.



Brown Recluse Spiders

The brown recluse spider has a distinctive violin-shaped pattern on the back of its front body section. At first, the bite may produce little or no pain. Pain in the area of the bite develops an hour or more later. A blood-filled blister forms under the surface of the skin, sometimes in a target or bull's-eye pattern. Over several hours, the blister increases in size and eventually ruptures, leading to tissue destruction and a black scab.

What to Look For

Signs and symptoms of spider bites depend on the amount of venom injected and the person's sensitivity to the venom. Most spider bites heal with no adverse effects or scarring. Signs and symptoms of venomous spider bites can seem identical to those of other conditions and therefore can be difficult to recognize. The only way for a First Aider to be certain that a venomous spider has bitten a person is to have witnessed it.

Black Widow Spider Bite

Signs and symptoms of a black widow spider bite include the following:

- A raised, round, red mark
- Cramping pain in the thighs, shoulders, back, and abdominal muscles
- Restlessness and anxiety
- Dizziness
- Headache
- Excessive sweating
- Weakness

Brown Recluse Spider Bite

Signs and symptoms of a brown recluse spider bite include the following:

- A slight stinging sensation (though bites may not be initially felt)
- A blood-filled blister that appears within 2 to 8 hours
- A bull's-eye pattern around the bite

Signs and symptoms of a severe reaction to a brown recluse spider bite occur within 72 hours of the bite and include nausea, vomiting, and joint pain.

What to Do



Call

Call EMS/9-1-1 only if you suspect the person has been bitten by a black widow or brown recluse spider.



Care

To care for a bite from a non-venomous spider:

1. Wash the area with water.
2. Suggest that the person apply an antibiotic ointment to the wound if the person has no known allergies or sensitivities.
3. Apply a cold pack wrapped in a thin, dry towel to help reduce pain and swelling.

To care for a spider bite from a black widow spider or a brown recluse spider:

1. Wash the area with water.
2. Apply a cold pack wrapped in a thin, dry towel.



Stings from Marine Life

Many forms of marine life (e.g., jellyfish, stingrays, sea urchins, stinging coral, and spiny fish) cause stinging wounds. In Canada, stings from marine life are usually from jellyfish, though stingrays can also cause injury. Stings from marine life can have effects that range from merely painful to potentially life-threatening.

What to Look For

The signs and symptoms of a sting from marine life include the following:

- Pain
- Rash
- Redness
- Swelling
- Puncture wounds
- Lacerations

What to Do



Call

Call EMS/9-1-1 and get an AED if the person is having airway or breathing problems, the person was stung on the face or neck, or you do not know what caused the sting.



Care

To care for a person who has been stung by a jellyfish:

1. Get the person out of the water as soon as possible.
2. Flush the injured area with vinegar for at least 30 seconds to counteract the toxin. If vinegar is not available, mix baking soda and water into a paste and leave it on the area for 20 minutes.
3. While wearing gloves or using a towel, carefully remove any stingers, tentacles, or pieces of the animal.
4. Immerse the affected area in water as hot as the person can tolerate (no more than about 45°C (113°F)) for at least 20 minutes or until the pain is relieved.
5. If hot water is not available, use dry hot packs, or, as a second choice, dry cold packs to help decrease the pain. Remember to wrap the hot or cold packs in a thin, dry towel or cloth to protect the skin. Do not rub the area or apply a bandage.



If the person has been stung by a Portuguese man-of-war (also called a bluebottle jellyfish), flush the injured areas with ocean water instead of vinegar. Do not flush any jellyfish sting with fresh water, ammonia, or rubbing alcohol because these substances can increase the person's pain.

To care for a person who has been stung by a stingray, sea urchin, or spiny fish:

1. Get the person out of the water as soon as possible.
2. Flush the affected area with tap water. Ocean water may also be used.
3. Keep the injured part still and soak the affected area in water as hot as the person can tolerate for at least 20 minutes or until the pain is relieved.
4. Check with a healthcare provider to determine if a tetanus shot is necessary and monitor the wound for signs and symptoms of infection.



14 Childhood Illnesses

Caring for children, either at home or in a child care setting, involves special considerations. Children often have a higher risk of complications from illnesses and there are certain diseases that children are more susceptible to. Young children, especially, may not yet be vaccinated against diseases that most adults are immunized against. In general, children's immune systems are less developed and less able to resist infection.

Infections can spread quickly between children, as they don't always follow proper hygiene procedures (such as blowing their noses and washing their hands). Child care settings have special notification and disinfection procedures, so ensure that you are aware of the protocols that apply to your workplace and follow them carefully.

Protecting Children from Infection

In a child care setting, protect children from infectious diseases by:

- Insisting that staff members who are sick not come in to work.
- Encouraging parents and guardians to keep sick children at home.
- Having an isolation room for children who unexpectedly become ill.
- Washing your hands before and after contact with a child who has diarrhea or is vomiting.
- Washing bedding and equipment at least once a week, or every day when children are sick.
- Teaching children the importance of covering their mouths (preferably with the inside of their elbow) when they cough or sneeze and washing their hands afterward.

In a child care setting, follow these guidelines for cleaning the bathroom:

- Clean and sanitize the bathroom sink, countertop, toilet, and floor with a bleach solution once a day.
- If you use the bathroom sink to clean toilet trainers, use a bleach solution to sanitize the sink afterward.

Questions to Ask Yourself If You Think a Child May Be Ill

It can be more difficult to identify illness in a child than in an adult, because children may not be as good at communicating what is wrong. If you suspect that a child may be ill, ask yourself the questions in the following table. If you answer "yes" to any, it may be a sign of illness.

Area to Watch	Questions to Ask
Behaviour	<p>Is the child:</p> <ul style="list-style-type: none"> • Confused? • Unusually sleepy? • Unusually irritable or fussy? • More active or more subdued than normal? • Not interested in other children or play? • Crying nonstop, even when cuddled?
Face	<p>Does the child:</p> <ul style="list-style-type: none"> • Appear pale or flushed? • Show signs of pain or anxiety? • Have bluish lips? • Have any swelling?
Skin	<p>Does the child have:</p> <ul style="list-style-type: none"> • Hot and dry skin or cold and moist skin? • A rash or spots? • An unusual skin colour? • Itchy skin? • Any bruising or swelling?

Area to Watch	Questions to Ask	Area to Watch	Questions to Ask
Eyes	<p>Does the child:</p> <ul style="list-style-type: none"> • Rub and scratch his or her eyes? • Have red and inflamed eyes? • Have discharge in his or her eyes? • Have dull or unusually bright eyes? • Have swollen or puffy eyes? • Have yellow eyes? • Complain of seeing spots? 	Breathing	<p>Does the child have:</p> <ul style="list-style-type: none"> • Rapid shallow breathing? • Painful breathing? • A strange odour on his or her breath?
Ears	<p>Does the child have:</p> <ul style="list-style-type: none"> • Trouble hearing? • Swelling in or around the ears? • Ringing in the ears? • An earache? • Any discharge? • Loss of balance? • A tendency to pull, cup, or poke his or her ears? 	Throat	<p>Does the child have:</p> <ul style="list-style-type: none"> • A sore throat? • Difficulty swallowing? • Unusual drooling? • A red and inflamed throat? • A voice that sounds different?
Tongue	<p>Does the child have a:</p> <ul style="list-style-type: none"> • Dry and cracked tongue? • Red and raw tongue? • White or yellow coating on his or her tongue? 	Cough	<p>Does the cough:</p> <ul style="list-style-type: none"> • Occur frequently, and is it dry? • Bring up sputum? • Sound unusual?
			<p>Does the child have:</p> <ul style="list-style-type: none"> • Little or no appetite? • An unusual level of thirst?

Area to Watch	Questions to Ask
Vomiting	<p>Is the child:</p> <ul style="list-style-type: none"> • Unable to keep food or water down? • Nauseated? • Frequently vomiting? • Projectile vomiting?
Temperature	<p>Does the child:</p> <ul style="list-style-type: none"> • Complain about feeling very cold? • Complain about feeling very hot? • Shiver uncontrollably?
Bowel Movements	<p>Are the child's bowel movements:</p> <ul style="list-style-type: none"> • Abnormally frequent and liquid? • Abnormally infrequent, dry, and hard? • Abnormal in content, such as undigested food, mucus, or blood? • An unusual colour or odour?

When to Call the Parent or Guardian of a Child in Your Care

Call the child's parent or guardian if:

- The child has a fever.
- The child has diarrhea more than twice in a day.
- The child has been vomiting.
- The child has an injury that requires medical attention.

For minor issues, such as a small cut, a change in behaviour (e.g., not playing as usual), or a change in appetite, you should inform the parent or guardian when he or she picks the child up.

Common Childhood Conditions: Guidelines for Care

Some childhood illnesses and conditions are contagious. Some conditions cause irritation and discomfort, while others can cause lifelong complications or even death. Preventative practices include proper hygiene (including routine hand washing) and limiting exposure to people who are ill. Babies who are 6 months or older are the most vulnerable to these diseases.

Vaccination is also a fundamental preventive strategy. Vaccines have been incredibly effective in preventing childhood diseases and decreasing child mortality rates. Common childhood vaccines include diphtheria, tetanus, pertussis, measles, mumps, and rubella.

Provincial/territorial legislation dictates which contagious diseases must be reported to the local health unit. For some contagious diseases, parents and guardians have a responsibility to ensure that the child care facility or school is informed, in addition to the local health unit.

CHILDHOOD CONDITIONS

Conditions	What to Look For	What to Do	Remember
Eczema <ul style="list-style-type: none"> Not contagious <p>Note: Eczema sores can become infected.</p>	<ul style="list-style-type: none"> Inflamed skin One or a combination of rashes, pimples, scaly skin, and scabs Dry skin, or skin with a watery discharge Itchy or burning skin 	<ul style="list-style-type: none"> Soften crusts and dry skin with cold cream or oil. This often relieves itching. Prepare a lukewarm bath (39.6°C (103°F)) for the child. Do not scrub the affected area with soap. Eczema can often be helped with medication prescribed by a doctor. 	<p>Eczema may be caused by stress or it may be an allergic reaction to something in the child's environment or diet.</p> <p>Eczema in babies is often related to milk allergies. This type of eczema does not respond to creams and does not heal easily.</p>
Impetigo <ul style="list-style-type: none"> Bacterial infection Contagious 	<ul style="list-style-type: none"> Inflamed skin Clusters of pimples filled with straw-coloured fluid that become crusted and break, found around the mouth and nose; may be flat and pitted 	<ul style="list-style-type: none"> Wash the infected area frequently with soap and water. Doctors often prescribe antibiotic ointments or creams for the treatment of impetigo. 	<p>Impetigo can spread through contact with infected skin or items that have contacted infected skin (e.g., clothing, towels, and bed linens). Careful handwashing by both the child and the caregivers is the best prevention.</p> <p>A child who has had impetigo should not return to the child care setting or school until prescribed medication has been taken for at least one full day.</p>

CHILDHOOD CONDITIONS

Conditions	What to Look For	What to Do	Remember
Ringworm <ul style="list-style-type: none">• Fungal infection• Very contagious	<ul style="list-style-type: none">• Red, scaling rings on the skin	<ul style="list-style-type: none">• Clean the area twice a day with mild soap and water.• Doctors often prescribe anti-fungal medication for ringworm, which should be applied after cleaning the affected area.	A child with ringworm is contagious until 48 hours after treatment begins, and so should not return to the child care setting or school before this time has passed.
Scabies <ul style="list-style-type: none">• Skin parasite• Very contagious• This is a reportable condition.	<ul style="list-style-type: none">• Many tiny blisters, scratch marks, and scaly crusts found mainly in skin folds (e.g., between fingers, on wrists, on the torso, and on genitals)• Extreme itchiness	<ul style="list-style-type: none">• Bathe the child prior to medication application.• After the bath, apply the special lotion prescribed by the doctor.	<p>Scabies is a skin parasite called the "human itch mite."</p> <p>The scabies mite is passed by direct skin-to-skin contact, so everyone in the household should be treated at the same time.</p> <p>After treatment, wash all bed linen, underclothes, sleepwear, and blankets, or press them with a hot iron.</p> <p>A child who has scabies should not return to the child care setting or school until treatment has been completed.</p>

CHILDHOOD CONDITIONS

Conditions	What to Look For	What to Do	Remember
Prickly Heat Rash <ul style="list-style-type: none"> • Not contagious 	<ul style="list-style-type: none"> • A rash of tiny, pinpoint blisters surrounded by blotches of pink skin • A rash on the face or on the parts of the body that are most heavily clothed • Occurs in hot weather or whenever a child or baby is overdressed 	<ul style="list-style-type: none"> • If the child or baby is feverish, give him or her a sponge bath. • Pat the skin dry to avoid rubbing the skin. • Dress the child or baby in layers, and remove layers as necessary. • Replace wet or sweaty clothing immediately. 	Prickly heat rash rarely bothers the child, but if there is a fever at the same time, the child may be irritable.
Diaper Rash <ul style="list-style-type: none"> • May be contagious, depending on the underlying cause 	<ul style="list-style-type: none"> • Red, scalded appearance that does not fade when left un-diapered and exposed to air • Pimples or sores found in the diaper area 	<ul style="list-style-type: none"> • Wash and dry the area well. • Expose the area to the air. • Change diapers often. • Use a zinc-based cream. • If the rash does not clear up within 48 hours, or you are concerned about the underlying cause, seek medical attention. 	Some diaper rashes are yeast infections. Watch for whitish, curd-like deposits found in genital folds that are not easily wiped away. These may need to be treated with prescription ointment. A yeast infection can be contagious. Use proper precautions.

CHILDHOOD CONDITIONS

Conditions	What to Look For	What to Do	Remember
Lice <ul style="list-style-type: none">• Contagious• This is a reportable condition.	<ul style="list-style-type: none">• Small white eggs (nits) on the scalp or in body hair (nits look like dandruff but cannot be washed off)• Live lice (dark and slightly bigger than nits) on the scalp or in body hair• Pustules and scabs on the scalp due to scratching	<ul style="list-style-type: none">• Wash the child's hair with the medicated shampoo recommended by a doctor, then comb it with a fine-toothed comb to remove nits.• Disinfect all clothing and bedding by having them dry-cleaned, washing them in very hot water, or freezing them for 72 hours. Items such as stuffed animals should also be disinfected, and then sealed in a plastic bag for 3 weeks.• The whole family may need to be treated.• Vacuum the environment regularly during the treatment period.	<p>Lice are very common among children because they play closely together. However, anyone can get lice. Lice is not caused by a lack of personal cleanliness.</p> <p>Always store children's headgear separately and do not allow children to share brushes and combs.</p> <p>Children may return to the child care setting or school after the first treatment.</p>

CHILDHOOD CONDITIONS

Conditions	What to Look For	What to Do	Remember
Pink Eye (Conjunctivitis) <ul style="list-style-type: none"> • Bacterial infection • Contagious 	<ul style="list-style-type: none"> • Pink colouration of the white of the eye • Swollen eyelids • Pus on eyelids • Itchy or sensitive eyes 	<ul style="list-style-type: none"> • Seek medical attention: doctors often prescribe antibiotics. • Protect the eyes from bright light. • Do not let children share towels or washcloths. • The child should not rub or touch his or her eyes. • Use warm water compresses to remove pus. 	<p>Pink eye can be bacterial or viral, is transmitted through direct contact, and is very contagious.</p> <p>If the child's eyes have pus, keep the child home from the child care setting or school for 24 hours.</p>
Pinworms <ul style="list-style-type: none"> • Very contagious 	<ul style="list-style-type: none"> • Constant scratching around the anus • Unusual irritability • Restlessness or inability to sleep at night 	<ul style="list-style-type: none"> • Wash the child's hands and nails (using a nail brush). • Keep the child's fingernails short and discourage nail biting. • Make sure the child has a daily bath or shower and a daily change of towels, sheets, and underwear. • Doctors often prescribe oral medication. • The whole family must be treated. 	<p>Pinworms are intestinal parasitic worms. Tiny eggs deposited around the anus by a female worm spread the infection.</p> <p>Keep the child home from the child care setting or school until after starting medication.</p>

CHILDHOOD CONDITIONS

Conditions	What to Look For	What to Do	Remember
Chickenpox <ul style="list-style-type: none"> • Viral infection • Contagious 	<ul style="list-style-type: none"> • A rash of tiny red spots covering the skin • Fluid-filled blisters and scabbing on the skin • Fever • Itchiness 	<ul style="list-style-type: none"> • Try to make sure the child does not scratch. • Give fever-reducing medications as recommended by a doctor. • The doctor may also recommend a cream to relieve itching. 	<p>Chickenpox is most contagious 1 to 2 days before the rash appears, and for approximately 5 days after onset, or until the lesions have become crusted.</p> <p>Chickenpox is transmitted by direct contact with blisters or body fluids, or through coughing and sneezing.</p> <p>The child may have to stay home until lesions become crusted, depending on the protocols of the school or child care centre.</p>
Diarrhea <ul style="list-style-type: none"> • Usually a symptom of an underlying condition, which may or may not be contagious 	<ul style="list-style-type: none"> • Unusually frequent and liquid bowel movements • Pain or bloating in the abdomen • Dehydration 	<ul style="list-style-type: none"> • Seek medical attention if there is vomiting or blood in the stool, or if diarrhea persists for more than 72 hours. • Disinfect diaper-change areas and toilet areas very carefully. • Isolate the child. • Give the child plenty of clear fluids for 24 hours. • If the child has two or more episodes of diarrhea, give fluids with electrolytes (e.g., sports drinks or coconut water). 	<p>Diarrhea may be a symptom of an infection. Food poisoning or a change in diet can also cause diarrhea.</p> <p>For child care workers and babysitters: Call the parent or guardian if a child has diarrhea more than twice during the day.</p>

CHILDHOOD CONDITIONS

Conditions	What to Look For	What to Do	Remember
Dehydration <ul style="list-style-type: none">• Not contagious	<ul style="list-style-type: none">• Dry mouth and tongue• No tears when crying• Sunken eyes• Less frequent urination or urine that is darker than usual• In babies, the soft spot on the top of the head is sunken	<ul style="list-style-type: none">• Seek medical attention.• Continue to give fluids.	<p>Dehydration results from a loss of bodily fluids.</p> <p>Dehydration in children is most commonly caused by prolonged vomiting and diarrhea. It can be life-threatening.</p>
Earaches <ul style="list-style-type: none">• Not contagious	<ul style="list-style-type: none">• Fever or chills• Deafness• Dizziness• Nausea• Fluid from the ear• A worried appearance• Pulling at the ear or covering it with the hand• Pain	<ul style="list-style-type: none">• Seek medical attention.• The doctor may recommend an antibiotic.	<p>Never put anything into the ear canal (e.g., a cotton swab), even if fluid or discharge appears.</p>

CHILDHOOD CONDITIONS

Conditions	What to Look For	What to Do	Remember
Persistent Vomiting <ul style="list-style-type: none"> Usually a symptom of an underlying condition, which may or may not be contagious 	<ul style="list-style-type: none"> Nausea Stomach pain 	<ul style="list-style-type: none"> Give the child plenty of fluids. When the vomiting subsides, give small amounts of easily digestible food, such as toast. If the vomiting continues for more than 24 hours, signs of dehydration appear, or the vomiting is associated with diarrhea or pain, seek medical attention. 	Persistent vomiting could be caused by illness, emotional upset, food poisoning, or a reaction to medication or a new food.

Note: Although these conditions are most common in children, adults who are in regular contact with them (e.g., teachers) should check themselves often and follow the same care steps outlined above.

Comparison Chart for Epiglottitis and Croup

Both epiglottitis and croup affect the throat, and can be difficult to distinguish.

Epiglottitis is a bacterial infection that causes severe inflammation of the epiglottis. The epiglottis is a flap of tissue above the vocal cords that protects the airway during swallowing. When it becomes infected, it can swell until the airway is completely obstructed. A child with epiglottitis may:

- Appear severely ill and have a high fever.
- Need to be sitting up.
- Strain to breathe.
- Appear to be very frightened.
- Drool from the mouth, as swelling may prevent swallowing.

Croup is a respiratory condition, usually triggered by an acute viral infection of the upper airways. The infection causes swelling of the throat and of the tissues below the vocal cords. Croup is generally non-life-threatening, but it can lead to severe shortness of breath and hypoxia. Croup is commonly identified by its distinctive harsh, barking cough, often described as being like the bark of a seal. Croup is often preceded by 1 or 2 days of illness, sometimes with a fever. Croup occurs more often in the winter months and the signs and symptoms of croup are often more evident in the evening. The child may show improvement when exposed to cool air.

THE DIFFERENCES BETWEEN EPIGLOTTITIS AND CROUP

	Epiglottitis	Croup
What Is It?	Inflammation and swelling of the epiglottis. When it strikes, it is life-threatening.	Inflammation of the throat and vocal cords
Cause	Bacterial infection	Viral infection
Ages Most Likely to Be Affected	3 to 7 years old	6 months to 5 years old Called laryngitis among children 5 years and older
Onset	Comes on suddenly, from 6 to 24 hours after infection	Develops more gradually, from 24 to 72 hours after infection
Child's Appearance	Looks very ill and anxious	Looks only mildly or moderately ill
Drooling	Frequent: child has trouble swallowing saliva	No drooling
Hoarseness	Not usually	Very marked hoarseness
Coughing	Rare	Frequent, harsh "crowding" cough
What to Do	Call EMS/9-1-1 immediately. Report the child's condition to the parent or guardian. Note: Do not inspect the mouth and/or throat, as this may increase irritation.	Call EMS/9-1-1 immediately if the child shows signs of respiratory distress. The child may show improvement when exposed to cool air. Report the child's condition to the parent or guardian.

Childhood Fevers

A fever is one of the body's defense mechanisms. A mild fever should not be a concern unless it continues for more than 3 days. If the child's temperature rises to 39°C (102°F) or is not easily controlled, seek medical attention.

A fever alone is not a clear indicator of how sick a child is. A child may be very sick and not have a fever, or may be running a fever and playing happily. The best way to gauge the severity of an illness is to note changes in the child's behaviour.



Taking a Child's Temperature

Normal body temperature is 37°C (98.6°F). Anything higher than this is considered a fever. To determine a child's temperature you must use a thermometer. Many types of digital thermometers are available, including those intended for use in the mouth and ear. Follow these general principles when taking a child's temperature, along with any specific manufacturer's instructions for your thermometer.

What to Do

1. Wash your hands thoroughly.
2. If taking the temperature orally, make sure that the child has not had anything hot or cold to eat or drink in the previous 10 minutes.
3. Clean and reset the thermometer as per the manufacturer's guidelines.
4. Place the thermometer in the child's mouth (under the tongue) or in the child's ear.
5. Leave the thermometer in place until it beeps, or for up to 1 minute (if your model does not have an audio notification).
6. If you are using a thermometer for more than one child (e.g., in a child care setting), use protective covers and throw them away after every use.
7. Record the temperature, the time, and the method of taking the child's temperature (e.g., "oral").
8. Clean the thermometer after every use as instructed by the manufacturer.



Do not take the temperature rectally as this can damage the bowel lining.

Reducing a Child's Temperature:

1. Children with fevers should be dressed lightly because they may feel warm. If they get too cold or start to shiver, cover them until the skin feels warm when you touch it.
2. Sponge the child with room temperature water.
3. Give the child plenty of fluids to ensure that he or she stays hydrated.
4. If the fever rises above 39°C (102°F) or persists for more than 3 days, seek medical attention.
5. Give fever-reducing medications, as discussed with the healthcare practitioner.

Complications Related to Fever

Reye's Syndrome

A child or teenager with a viral infection, such as chickenpox or influenza, may develop Reye's syndrome if given ASA (e.g., Aspirin®). Reye's syndrome is a disease of the brain and liver that can lead to death. Never give ASA to a child or teenager with a viral infection without first consulting a healthcare practitioner.

Seizure

A child or baby may suffer a seizure during a high fever. If this occurs, follow the care steps for febrile seizures.

Giving Medication

When to Give Medications

Give medication to a child or baby in your care:

- Only if you have written permission from a parent or guardian for each medication that is to be given
- Only when the medication is in the original container with the original label
- Only when the medication is properly labelled with:
 - The child's name.
 - The date the prescription was issued.
 - The instructions.
 - The time period during which the medication is to be taken.

If a child is being given non-prescription medication, ensure you have written permission from a parent or guardian for each medication that is to be given.



Parents or guardians should give the first dose of a new medication so that they can watch for any unusual signs, symptoms, reactions, or behaviours in their children or babies.



General Rules for Medication

To reduce the risk of miscommunication and error, it is a good idea to have just one person in the child care setting who is responsible for giving all medications. Store all medication out of the reach of children.

When giving medication:

- Wash your hands thoroughly.
- Check the medication three times:
 - When you take the medication out from the cupboard or refrigerator
 - When you take the medication out of the package
 - Just before you administer the medication
- Keep a written record of the date and time the medication was given, the name of the child, the name of the medication, the person who gave the medication, and the amount given. Record all this information when you give the medication.
- Call the parent or guardian if the child cannot keep the medication down.
- Report to the parent, guardian, or doctor any reactions or effects not usually experienced by the child.
- At the end of each day, tell the parent or guardian what medication was given and at what time.
- Follow any specific directions for the medication (e.g., "do not take with food").
- When applying topical medication, protect yourself by using an applicator or by wearing disposable gloves.
- Emergency medicine, such as inhalers or epinephrine auto-injectors, should be accessible at all times but out of the reach of children.



Some provinces and territories have legislation regarding medication administration in child care settings. Always follow local protocols.

How to Give Specific Medications

Medication in the Eye

1. Have the child look up while in a lying or sitting position.
2. Gently pull down the lower eyelid.
3. Hold the dropper horizontally about one inch out from the child's eye.
4. Drop the medication into the little pocket between the lower lid and the eyeball.
5. Ask the child to close the eye then briefly hold a cotton ball against the inside corner of the eye. Use a separate cotton ball for each eye.
6. Wipe away any excess medication.

Medication in the Nose

1. Have the child lie on a flat surface with his or her head hanging over one edge. If the child must sit up, have the child tilt his or her head back as far as possible.
2. Place the exact number of drops indicated in the prescription into each nostril.
3. Have the child remain with his or her head back for a few minutes.



15 Caring for Children

Children are very vulnerable. Their bodies are more susceptible to injury, and they are typically less aware of risks and hazards in their environments. When caring for children, prevention, preparation, and constant supervision are critical to preventing injury.

Toy and Equipment Safety

Products designed for children have many features to keep them safe, but these products must be selected and used properly.

You should always discard broken equipment and toys immediately, and always follow the manufacturer's directions for safe use. When considering second-hand equipment or toys, first check the label and contact Health Canada to find out if there has been a recall or safety alert on that specific model.

Equipment for Babies

Safe Use of Cribs

- Cribs manufactured before September 1986 do not meet current safety standards and should be disassembled and either thrown away or taken to your local recycling centre.
- Manufacturers of cribs are required to include a label showing the date of manufacture. If there is no label, assume that the crib is not safe to use.
- Allow only one small toy inside the crib and remove all mobiles or activity centres as soon as the baby can pull him- or herself up.
- Place the crib well away from potential hazards such as blind cords, windows, pictures, and shelves.
- When a child shows signs of trying to climb out of a crib, it is time to move the child to a bed or mattress on the floor.
- Keep the wheels on a crib locked whenever it is in use.
- Make sure that the crib slats are no more than 6 cm (2 3/8 in.) apart.

- Make sure that the corner posts extend no more than 3 cm (1 1/4 in.) above the headboard and footboard.
- The height from the mattress support to the top rail must be at least 66 cm (26 in.) when the support is in its lowest position.
- Make sure the mattress fits snugly inside the crib. Use only mattresses sold for use in cribs. Any other substitutes, such as foam pads, may allow for pockets or spaces in which a child may get stuck or be smothered.

Safe Use of Playpens

- Manufacturers of playpens are required to include a Canadian Standards Association (CSA) label showing that the playpen has been approved by CSA. The label also shows the playpen's date of manufacture. Any playpen manufactured before 1985 has not been approved by the CSA. If there is no label, assume that the playpen is not safe to use.
- If a child shows signs of trying to climb out of a playpen, the playpen is no longer safe for that child.
- Ensure that the playpen's wheels are locked whenever it is in use.
- Make sure that playpen walls are sturdy and at least 48 cm (19 in.) high.
- Inspect the playpen regularly to ensure that there are no hazards such as rips or exposed sharp edges.

Safe Use of High Chairs

- Do not allow older children to climb on the chair, even when it is unoccupied.
- A safe chair is stable and has a wide base to reduce the risk of tipping.
- The harness should consist of a strap that fits between the child's legs and a waist belt that is easy to fasten and is in good condition.

- Ensure that the child's hands, arms, and legs are clear of any moving parts before making adjustments to the chair or the tray.
- Keep the chair a safe distance away from hazards such as windows, blind cords, and mirrors, or surfaces that a child could push off of such as walls, doors, or furniture.

Safe Use of Baby Strollers

- Manufacturers of baby strollers are required to include a Canadian Standards Association (CSA) label showing that the baby stroller has been approved by CSA. The label also shows the stroller's date of manufacture. Any stroller manufactured before 1985 has not been approved by the CSA. If there is no label, assume that the stroller is not safe to use.
- Do not load heavy parcels on the back or on the handles of the baby stroller. These could cause the stroller to tip backward.
- Use a stroller with safety straps that go around the child's waist and between the legs.
- Keep children's fingers away from moving parts.

Safe Use of Pacifiers

- When purchasing a pacifier, make sure it is from a reputable manufacturer.
- Check pacifiers regularly for wear and tear. Discard them immediately if there is any sign of deterioration, such as discolouration, hardening, or cracking of the nipple.
- If a doctor diagnoses a child or baby with a yeast infection of the mouth, immediately discard any pacifier the baby is using. Give the baby a new one only after the infection has cleared.
- Use a pacifier clip, as opposed to a cord, to secure the pacifier to the child.
- A teething ring should be used instead of a pacifier once the baby's teeth start to appear.

Equipment for Children

Safe Use of Child Bike Trailers

- Child bike trailers are recommended over child bike carriers because they reduce the risk of falls, do not cause as many steering and balance problems, and increase protection from the weather. They are also farther from the bicycle wheels, ensuring that the child cannot reach the spokes.
- If possible, choose a bike trailer that has a five-point harness and roll bar.
- Attach a tall, bright flag to the trailer.
- Connect the trailer with a flexible joint so that it will not tip over, even if the bike does.
- As a bike trailer is wider than a bike, ensure that the wheels do not go over the road edge.
- Ride in low-traffic areas.
- Ensure that children wear Canadian Standards Association (CSA) approved and properly fitting helmets.

Safe Use of Safety Gates

- Use only approved safety gates. Avoid makeshift alternatives, such as pieces of furniture.
- Manufacturers of safety gates are required to include a label showing the date of manufacture. If there is no label, assume that it is not safe to use.
- If you can fit a pop can between the railings, a child could get stuck and the gate is not safe.
- Install safety gates wherever stairs are exposed (at the top and bottom of the staircase). Make sure they are properly fitted and secure.
- If the gate has a pressure bar, make sure it is on the side away from children.

- Always open and close gates to pass through. Climbing over a gate is unsafe and may cause an injury. It also models unsafe behaviour to children.
- Safety gates are not a substitute for constant supervision. Always monitor children closely, even if a safety gate is in place.

Toys for Children and Babies

The following are guidelines to keep children safe when playing with toys:

- Follow the manufacturer's directions for safe use, including suggested age level.
- Choose toys that are appropriate for the children who will be using them. The Canadian Toy Testing Council issues a list of guidelines for choosing toys.
- Toys must be cleaned daily in child care centres. To clean toys and equipment, use a solution of 6 mL (1 tsp.) of bleach to 400 mL (1½ cups) of water. Label the bottle and make a fresh solution every day.
- When there are older children in the same space, their toys may have smaller parts: These toys should be separated and stored out of common play areas.
- Avoid toys with sharp edges.
- Paints, crayons, and markers must be completely washable and non-toxic.
- Ensure that toys (and all of their detachable pieces) are too big to fit into the baby's or child's mouth, ears, or nose.
- Provide only toys without strings because strings may cause strangulation.
- Inspect toys regularly. Discard any pieces that are loose. If the toy seems unsafe, discard it immediately.
- Wooden toys should be glued or screwed together instead of nailed.
- Ride-around or ride-on toys must be selected according to the size of the child.
- Children should wear all safety equipment that is recommended for the activity. "Toy" protective gear (e.g., plastic helmets) is for imaginative play only.

- Electrical toys must bear the Canadian Standards Association (CSA) label.
- Choose costumes that are made of flame-retardant materials. Use face paints instead of face masks to avoid blocking vision.
- Large toy boxes and other containers must have air holes and self-supporting hinges if they have lids. This is necessary in case children decide to hide inside.

Playground Safety

Playgrounds are the site of many serious injuries, mainly falls. Some playground equipment can be unsafe or inappropriate for certain age groups. The following points help to keep children safe on the playground:

- Examine park and school playgrounds for hazards such as broken glass or exposed sharp edges.
- Ensure that children use playground equipment as intended (e.g., ensure that they do not climb on the outside of a tubular slide).
- Ensure that there are enough adults present to watch all children carefully.
- If you see unsafe or broken equipment in a playground, report this to the managing agency (e.g., community centre, park board, school board).
- If you are installing or maintaining playground equipment, consider the age and size of the children who will be using it, and follow the manufacturer's directions.
- Ideally, sandboxes should be fitted with a cover to keep dogs, cats, and other animals from using it as a litter box.



Provincial/territorial legislation specifies regulations for child care centre play equipment.

Car Safety

Motor vehicle injuries are the number one cause of death of children in Canada. Follow the guidelines on the safe use of car seats and the passenger rules for children to help ensure children's safety in and around motor vehicles.

Safe Use of Car Seats

The law requires that all children use appropriate and approved child-restraint systems, such as child or baby seats and booster seats. These must have a label stating that they conform to the Canada Motor Vehicle Safety Standards (CMVSS), administered by Transport Canada.

Use caution when buying or using a pre-owned child car seat. Buy the seat from someone you know, and check it carefully. Make sure the car seat has:

- Instructions and all necessary hardware
- Not been in a collision
- A CMVSS sticker and is less than 10 years old
- No discoloured (stress) marks or cracks
- No signs of wear or tears on the harness

Always follow the manufacturer's instructions for installation and use.

When driving with children who do not require a car seat, remember:

- Children under the age of 13 should ride in the back seat.
- If you absolutely must put a child in the front seat of a car that has an airbag, push the seat back as far as it will go.

Make sure that any child who is no longer in a car seat is secured with a seat belt. Show the child how to wear the belt. The lap belt should be low across the hips, and the shoulder belt should be over the shoulder and across the chest. If the seat belt does not fit properly, a booster seat should be used.



It is against the law to leave a child or baby alone in a car, even for a short time.

Passenger Rules for Children: Safety Education

Teach children the following rules for safety in and around motor vehicles:

- Always enter and exit the car on the curb side.
- Remain seated with your seat belt on while the car is moving. Stay that way until the driver has reached your destination and the car is completely turned off or the driver tells you it is safe to remove your seat belt.
- Remember that the driver needs to be able to concentrate on driving, so minimize distractions inside the car.
- Keep your head, arms, and feet in the car at all times.
- Remember that the car's controls are for the driver only. They are not for playing with, even when the car is parked.



As a caregiver, ensure that everyone's fingers, hands, and feet are clear of doors before the doors are closed. Ensure that any person driving children has adequate insurance coverage.

Safe Use of Wheeled Equipment

Choosing a Safe Bicycle

When choosing a bicycle for a child, ensure that it is the proper size:

1. Have the child stand over the bicycle seat with both feet flat on the ground.
2. Lift the bicycle up to the child's body (both tires off the floor). There should be at least 2.5 cm (1 in.) between the tires and the floor. Adjust the height of the seat as needed.

While on the seat, the child should be able to put the balls of his or her feet on the ground.

Regularly check the following for any bicycle used by a child:

- The brakes must work properly, and the child must be able to use them safely.
- The tires must be fully inflated.
- The wheels must be tightly secured and truly round.
- The chain must be oiled and tight.
- The spokes must be tight, straight, and unbroken.
- The seat post and handlebars must be securely attached.
- The bike must have a working bell or horn.
- The bicycle must pass the "bounce test:" Bounce the bicycle up and down on its wheels on a paved surface and listen for shakes and rattles. A safe bike is a quiet bike.



Local legislation may dictate what needs to be on your bike for safety (e.g., bike lights).

Choosing a Safe Helmet

Mishaps during sports that require a helmet are the leading cause of head injuries for children in Canada. Wearing helmets can reduce the risk of a serious or fatal head injury by up to 80%.

Keep the following points in mind when choosing a helmet for a child:

- Use helmets approved by the Canadian Standards Association (CSA), Snell Memorial Foundation, or American National Standards Institute (ANSI).
- A helmet should fit squarely on the child's head and have a snug chin strap.

If a helmet is involved in a fall, buy another one. Even if no damage is visible, the helmet may have lost some of its ability to absorb shock.



As a role model and for safety reasons, adults should always wear a helmet while riding a bicycle.

Safe Use of Bicycles

Ensure that children follow these rules when using a bicycle:

- Walk bicycles across roads only at intersections and pedestrian crosswalks.
- Before you cross, make sure that traffic crossing your path is fully stopped at stop signs or traffic signals.
- Ride in a straight line when you go down a road or street. Do not swerve between parked cars or onto driveways. Always look and signal in plenty of time before turning.
- Wear bright clothes even during the day. When motorists can see a cyclist, it is easier for them to co-operate with the cyclist.
- Do not ride a bicycle after dark.



Even the safest cyclist must watch for drivers who aren't paying attention!



It is important to teach children balancing, turning, hand signalling, and stopping on a bicycle before they go out riding. Practice these skills in the yard, a school yard, a park, or other low-traffic area.

Safe Use of Skateboards and Rollerblades

To keep children safe while skateboarding and rollerblading:

- Restrict skateboarding and in-line skating to children over 5 years of age.
- Allow children to use only playgrounds and paths built for skateboarding and in-line skating.
- Insist that children wear the correct equipment: a bicycle helmet approved by the Canadian Standards Association (CSA), Snell Memorial Foundation, or American National Standards Institute (ANSI), as well as elbow, wrist, and knee pads.
- Ensure that children wear bright clothing while skateboarding or in-line skating. This will make the children more visible and reduce the risk of collisions.

Fire Safety

Reducing Risk of Fires and Burns

The following tips can reduce the risk of fires and burns:

- Keep children away from heat sources and appliances such as cooking ovens, barbecues, space heaters, wood stoves, and fireplaces.
- Make sure all fireplaces and wood stoves are cleaned and inspected regularly to follow safety codes.
- Keep space heaters at least 1 metre (3 ft.) away from flammable objects such as curtains and furniture.
- Turn pot handles in toward the centre of the stove.
- Keep cooking areas free of clutter. This will reduce the risk of igniting pot holders, aprons, and other kitchen items.
- Snuff out candles immediately after use.
- Keep all hot drinks out of children's reach.
- For nightwear, use only clothing designated as sleepwear. Other materials are sometimes more flammable. The government sets guidelines as to what is classified as sleepwear.
- Contact your local fire department for information on inspecting your home or workplace (including child care settings) for fire hazards and reviewing your fire escape plan.
- Make sure that smoke detectors are placed in all areas required by your local fire department or whichever agency regulates fire safety in your area. Change the batteries in all smoke detectors twice a year.
- Keep bedroom and sleeping-area doors closed when children are sleeping. Doors are important barriers to smoke.
- Make sure that all breakers and fuses on the electrical panel in your home, workplace, or child care setting are clearly labelled.
- Use only single-cord plugs, as multiple-cord or octopus plugs may overheat. Keep loose cords secured and out of the way to prevent tripping and to keep children from pulling them out.
- Keep an approved, all-purpose chemical fire extinguisher in the kitchen.

Fire Escape Plan

Draw a floor plan. Mark the normal exit from each room. Then mark an emergency exit, such as a window. This exit can be used if fire blocks the doorway.

Identify a location where everyone will meet if they must escape from a fire. Decide who will assist those who cannot get themselves out, such as young children or people with difficulty walking.

In professional settings, legislation may determine how often this escape plan must be practiced.

What to Do in the Case of Fire During the Night

1. When you hear the smoke detector, roll out of bed and onto the floor. Shout "Fire, fire, fire!" Be sure to shout it 3 times. Shout "Get out and stay out!" Teach children to do this as well.
2. Crawl to the door and touch it. If it is warm, do not open it. Unlock the door so that the firefighters can open it. Seal off any cracks with blankets or towels. Wet the blankets or towels if possible.
3. Escape via the emergency exit.
 - If you cannot get out, take refuge in a room with a window. Open it for ventilation. Hang a sheet out the window as a signal for help.
4. Join everyone at the special meeting spot.
5. After everyone is together, go to a neighbour's home to call the fire department.
6. Meet the fire trucks and tell the firefighters that everyone has escaped the burning building.

Ice Safety

Safe Skating or Walking on Ice

Teach children these safety rules for skating or walking on ice:

- Ice must be a minimum of 15 cm (6 in.) thick before it can support one person. Ice must be solid, clear blue, and not covered with snow.
- Always skate with a buddy.
- If you cannot be sure how thick a section of ice is, do not walk or skate on it.

Ensure that children know what to do if they fall through the ice:

- In shallow water, feel for the bottom with your feet. Then walk toward the shore or bank, breaking ice as you go. Keep going until you can slide up onto thicker ice.
- In deep water, flutter-kick your feet and extend your hands forward along the ice until you can slide up onto it. Slowly crawl to safety.
- After you are out of danger, get to shelter and change into warm clothing. This will help prevent hypothermia.

Water Safety

General Tips for the Prevention of Drowning

- Pay constant attention to babies or children when they are in, on, or around water.
- Turn wading pools upside down when not in use.
- Empty buckets of water immediately after use.
- Keep toilet lids down and keep the bathroom door closed.

Safe Use of Bathtubs

- Always be present when a child or baby is in a bathtub or bathing basin. Drowning can occur even in a few centimetres of water.
- Check bathwater temperature by splashing water on your inner wrist. If it feels too hot or cold to you, do not place the child or baby in the bath until you have adjusted the temperature.
- If your bathtub is a Jacuzzi-type or is equipped with water jets, do not turn these on with the child or baby in the tub.
- Turn off all water taps tightly.
- Place a non-slip mat in the bathtub.

Safe Use of Backyard Pools and Hot Tubs

- Keep children under constant supervision when they are playing in or around a backyard pool or hot tub.
- Make sure basic lifesaving equipment is available at all times. Examples of basic lifesaving equipment are: (1) a strong, lightweight pole with blunt ends; and (2) a ring buoy with a long throwing rope. Be aware of equipment requirements outlined in the legislation that applies to your situation.
- Cover hot tubs securely and lock them when they are not in use.
- Keep decks around the pool or hot tub clean and free of debris.
- Pay close attention to the surface of a diving board. Make sure the slip-resistant surface is always in good repair. Ensure that the water is deep in the entire area that divers use (mark the slope of the pool to avoid hitting the upslope).
- Install a rope with buoyant markers across the pool where the deep end slope begins.
- Use only unbreakable cups, dishes, and other utensils at the poolside.
- Keep electrical appliances away from backyard pools.
- Remove all floating toys and store them in a secure area when pool time is over.

- Make sure electrical equipment used to operate the pool or hot tub conforms to electrical code requirements.
- Have a phone available on the pool deck. Post a list of emergency numbers beside it.
- Ensure that an outdoor pool is surrounded by a fence or wall that children cannot get through or over. Gates should have self-closing latches above the reach of toddlers. They should also include hardware for permanent locking. Obey the fencing requirements of your local municipality.
- Make sure all pool chemicals are stored in a secure area.

Safe Swimming

- Make sure that children and adults learn to swim. For swimming lessons, take a Red Cross Swim course.
- Ensure children are always supervised by a responsible adult.
- Establish sensible safety rules before children do any swimming. Enforce these rules consistently and firmly.
- Supervise even strong swimmers at all times. Sudden cramps can sink the most accomplished swimmer.
- Allow swimming only during daylight hours and in good weather.
- Remind non-swimmers and swimming supervisors of the dangers of relying on inflatable toys (e.g., inner tubes). Inflatable toys can leak and no longer provide support, and they can also create barriers to effective supervision.
- Ensure children stay within specified boundaries.
- When distance swimming at the beach, make sure that children swim parallel to the shore.
- Always know the depth of the water and ensure it is clear of all obstacles before diving.
- Post "No Diving" signs around above-ground pools.
- Allow only one person at a time on diving boards and waterslides.
- Ensure that swimmers stay away from the area underneath diving boards.

Safe Boating

- Make sure that all boat occupants are wearing approved lifejackets or personal flotation devices (PFDs). Look for lifejackets or PFDs with labels stating that they have been approved by Transport Canada or the Canada Coast Guard.
- As a parent, guardian, or caregiver of a child, set a good example by wearing your lifejacket or PFD and by following boating safety rules.
- Small crafts can be unstable. Teach children to stay low in the boat.
- Teach children how to use a boat radio and fire extinguisher in case of an emergency.
- Discuss and practice survival techniques often.
- Choose PFDs or lifejackets carefully to match the wearer's size and weight.
- Children should use PFDs fitted with crotch straps. The strap must be used when wearing the PFD.
- All pleasure crafts, power vessels, sailing vessels, canoes, kayaks, and rowboats must carry safety equipment that is in good working order. To find out exactly what is needed for your boat, contact Transport Canada.
- As of September 15, 2009, anyone operating a powerboat on Canadian waters must have a pleasure craft operator card. Contact Transport Canada for more information on where to obtain your certification.

Teaching Children Safety Awareness

Teach children how to get help in an emergency:

- Teach them to go to a trusted neighbour if they need help.
- Teach them about the Block Parent Program of Canada in your area, if applicable.

- Make a list of emergency phone numbers and teach children what to say when they call EMS/9-1-1:
 - Their name
 - The address they are calling from
 - What the problem is
 - The telephone number they are calling from
- Teach children to "hang up last" when they call EMS/9-1-1. This way the dispatcher will have all the necessary information.
- Teach children about traffic safety.

Child and Youth Protection

There are different types of abuse. It is important to be able to understand the different situations in which abuse toward children and youth may occur. Many of these situations are preventable, and if you are able to recognize the signs, you may be able to intervene on a child or youth's behalf.

Vulnerable Children and Youth

All children and youth live with some risk of experiencing abuse, violence, neglect, and bullying or harassment.

Abuse and Violence

Abuse and violence may take different forms: emotional, physical, and sexual.

Emotional abuse is defined as chronic attacks on a child or youth's self-esteem.

Physical abuse occurs when a person in a position of power or trust purposefully injures or threatens to injure a child or youth.

Sexual abuse occurs when a younger or less powerful child is used by an older or more powerful child, adolescent, or adult for sexual gratification.

Violence is the intentional threat or use of physical force or power. It can be directed against oneself, another person, a group, or a community. It usually results in injury, death, psychological harm, abnormal development, or deprivation.

Neglect

Neglect is the **chronic** inattention to the basic necessities of life, such as clothing, shelter, nutritious diet, education, good hygiene, supervision, medical and dental care, adequate rest, a safe environment, moral guidance and discipline, exercise, and fresh air.

Understanding Bullying and Harassment

Bullying involves a person expressing his or her power through the humiliation of another person.

Types of Bullying

- **Physical:** Hitting or kicking people, or taking or damaging their property or possessions.
- **Verbal:** Name-calling, insults, negative comments, and constant teasing.
- **Relational:** Trying to cut targets off from social connection by convincing peers to exclude or reject them.
- **Reactive:** Engaging in bullying, as well as provoking bullies into attacking, by taunting.
- **Cyberbullying:** Sending mean, cruel, and/or defamatory messages or images by electronic means (e.g., email, text messaging, instant messaging (IM), or personal and social websites).

Harassment

According to the Canadian Human Rights Commission, discrimination is treating people "differently, negatively or adversely" on the basis of a prohibited ground of discrimination under federal, provincial, or territorial human rights legislation.

Types of Harassment

- **Personal harassment:** Based on an individual's personal characteristics that are prohibited grounds for discrimination (e.g., racism).
- **Sexual harassment:** Unwelcome behaviour of a sexual or gender-based nature that negatively affects the person or the environment.
- **Criminal harassment:** When the harassing behaviour contravenes Canada's Criminal Code; also referred to as stalking.

Abuse is a protection issue.

Bullying is a relationship issue.

Harassment is a human rights issue.

All need intervention and support.

Responding to Disclosures

A disclosure occurs when someone shares something with you in confidence. If someone discloses that they have experienced abuse, violence, neglect, or bullying, you must *always* act.

How to Respond to Disclosures

If you are responding to a disclosure, you need to ask yourself three basic questions:

1. **What do I need to know?**
2. **What do I need to do?**
3. **When do I need to do it?**

Your jurisdiction's Child Protection Act may govern how you must respond to a disclosure.

When abuse is suspected or disclosed, you have a responsibility to **ACT**:

A **ACKNOWLEDGE** the child's situation and feelings.
Access support

C **COMFORT** the child and take him or her to a safe place.
Carefully listen to what the child says.

T **TAKE** notes and document what the child says and/or what you see. Take action—report the abuse immediately. Depending on the circumstances of the situation, use your judgment to decide if the child's parent or guardian should be contacted first (e.g., if he or she is being bullied or harassed by another child) or the Child Protection Authorities and police in your area (e.g., if the abuse is coming from an adult).

For more information on child and youth protection or to take a Respect Education course, please visit our website at redcross.ca.

REMEMBER: You do not have to be 100% certain that abuse has occurred. If you suspect it, report it. The safety of the child may be at risk. The authorities have the responsibility to determine the facts and evidence, not you.

Children's Hygiene

Diapering

Follow these steps to ensure that diapers are changed in a sanitary way:

- Use disposable gloves and remove them before sanitizing the area.
- Set up your changing area close to running water, away from the kitchen or eating area.
- Ensure that the changing surface and area is cleaned for at least 30 seconds with a bleach solution after each diapering.

- Dispose of dirty cloth diapers in a pail with a snug-fitting lid. Diaper pails and garbage cans need to be put out of children's reach.
- Place disposable diapers into the garbage can immediately.
- Avoid washing soiled clothes. Place them in a sealed plastic bag to be picked up by the parent or guardian at the end of the day.

Dental Health

- Encourage children to brush their teeth every day.
 - A good time to brush is right after lunch. Use a pea-sized amount of toothpaste that contains fluoride.
 - Rinse the toothbrush well. When you put it away, make sure it is not touching other toothbrushes.
 - Replace the brush when the bristles become flattened.
 - Supervise young children when they are brushing.
- Children and babies' teeth can decay if they nap with a bottle because their soft teeth are constantly exposed to liquid with sugar. This is called nursing bottle syndrome, and it can be caused by:
 - Cow's milk
 - Juice
 - Formula
 - Sweetened liquids
- When children are between the ages of 1 and 2, encourage them to start drinking from a cup instead of from a bottle.
- Don't put honey, sugar, or syrup on soothers.
- Serve well-balanced meals. Too much sugary food is not healthy.
- Watch for the signs of tooth decay: dull, white or brown spots on the teeth.



Example of an Emergency Supplies Kit

Have supplies ready for an emergency. Store them in a backpack or a duffle bag so you can take them with you if you have to evacuate the area. The following are examples of the items to include in your emergency supplies kit:

- 4 L (1 gal.) of water per person per day (use sealed, unbreakable containers and replace the supply every 6 months). Have enough for at least 3 days.
- Non-perishable packaged or canned food and a can opener. Replace the food once a year.
- Walking shoes, rain gear, and a change of clothing.
- Blankets or sleeping bags.
- A first aid kit and prescription medications (check the medications every 6 months to make sure they haven't expired).
- Toilet paper and other personal supplies.
- An extra pair of glasses.
- A battery-powered radio and flashlight, along with extra batteries.
- Spare cash.
- An extra set of car keys.
- A list of your family doctors.
- Important family information such as a list of any medical conditions or medical devices, including pacemakers.
- Photocopies of all important identification for you and your family, including health card numbers.
- Special items for babies, elderly, or disabled household members.
- Mobile phone and contact information for family and friends.



Example of an Emergency Car Kit

Keep an emergency kit in your car. The following are examples of the items to include in your emergency car kit:

- A battery-powered radio and flashlight, with extra batteries
- A blanket
- Booster (jumper) cables
- A fire extinguisher
- A Canadian Red Cross first aid kit
- Bottled water and non-perishable high-energy foods (replace the water every 6 months and the food once a year)
- Maps of the area
- A shovel
- Flares
- A tire repair kit and pump
- Matches and a "survival" candle in a deep can that will burn for many hours

Generally speaking, you should avoid moving an injured or ill person to give care. Unnecessary movement can cause additional injury and pain and may complicate the person's recovery.

Three general situations require you to move a person:

1. There is an immediate danger (either a danger to you or to the person being rescued) e.g., from fire, a lack of oxygen, risk of drowning, a possible explosion, a collapsing structure, or uncontrolled traffic hazards.
2. You have difficulty accessing ill or injured people. For example, a person with minor injuries may need to be moved quickly to allow access to other people who may have life-threatening conditions.
3. There is a barrier that makes it difficult to provide proper care. For example, a person with a medical emergency, such as a cardiac arrest or heat stroke, may need to be moved to provide proper care. For example, a person in cardiac arrest requires CPR, which should be performed on a firm, flat surface. If the person collapses on a bed or in a small bathroom, the surface or space may not be adequate to provide appropriate care, and the person will need to be moved.

Usually, you will not face hazards that require you to move the person immediately. In most cases, you can give the necessary care wherever you find the person. Needless movement of a person can lead to further injury, and therefore should be avoided. For example, moving someone with a closed fracture of the leg, without taking the time to splint it, could result in an open fracture if the end of the bone tears the skin. This may result in soft-tissue damage, damage to nerves, blood loss, and infection.

Some rescue situations make gaining access to people especially challenging, and as such require first responders who have specialized training and equipment. One such situation is when the ill or injured person is in a confined space. Confined spaces are particularly challenging because they:

- Are not designed or intended to have people in them
- Have restricted entrances or exits due to their location, size, or structure
- Can present a risk to the health and safety of anyone who enters (including first responders), due to one or more of the following factors:
 - Their design, construction, location, or atmosphere
 - The materials or substances inside
 - Work activities being carried out inside

Before you act, you must consider the limitations of the situation. Considering the following factors will help you ensure that you move a person quickly and safely:

- Dangerous conditions at the scene
- The size of the person
- Your own physical ability
- Whether others can assist you
- The person's condition

Failing to consider these factors could result in an injury to the First Aider—you. If you become injured, you may be unable to move the person and may risk making the situation worse. Back injuries (and other musculoskeletal injuries) can occur as a result of lifting and carrying a great deal of equipment during an emergency. If this happens at a scene, you will not be able to help and another First Aider will have to provide care for you, in addition to the other ill or injured person/people.

To protect yourself and the ill or injured person, follow these guidelines when moving someone:

- Attempt to move a person only when you are sure you can comfortably handle the rescue.
- Walk carefully, using short steps.
- Walk forward with the person, instead of backward, wherever possible.
- Always take the shortest, most direct route to your destination, as long as it is safe.
- Scan the pathway you want to use before moving so that you can identify potential hazards (such as slip hazards or poor lighting).



There are specific ways to deal with confined spaces (e.g., a grain silo, vat, or pipe). Without appropriate training, you are putting yourself at risk if you enter them. Ensure that the appropriate responders are on the way and manage the scene until they arrive. Only people with specialized training and equipment should enter confined spaces.

Body Mechanics

To reduce the risk of personal injury, everyone involved in a lift or carry should use proper body mechanics (also called “biomechanics”). The basic principles of body mechanics that can be used for all lifts and moves include the following:

- Use your legs, not your back, to lift. When lifting, use the muscles of your legs, hips, buttocks, and abdomen. Never use the muscles of your back to move or lift a heavy load.
- Keep the weight as close to you as possible. Reduce the distance you have to reach.
- Keep your body aligned. Imagine a straight line running from your shoulders through your hips and down to your feet, and then move

them as a unit. This will reduce twisting forces.

- Reduce the height or distance you need to move a weight and lift in stages, if necessary.
- Keep your wrists and knees in normal alignment.

If performed incorrectly, reaching for a person or object can also injure the ligaments of your back. When reaching, keep your back locked (avoid hyperextending it) and never twist your back. You should avoid reaching more than 15 to 20 centimetres (6 to 8 in.) in front of the body as the muscles in your upper back and shoulders can only stay stretched in that position for a matter of seconds before they become fatigued and the risk of injury increases.

How to Move an Ill or Injured Person

There are many different ways to move someone to safety. The move is successful as long as you can move the person without injuring yourself, causing further injury to the person, or taking unnecessary risks.

Assists, carries, and drags are the different ways you can safely move an injured person. The most common of these moves include the following:

- Walking assist
- Two-person seat carry
- Clothes drag
- Blanket drag
- Extremity lift

These moves can be performed by one or two people without specialized equipment. This is important because equipment is often not immediately available and time is usually critical when a person must be moved.

Walking Assist

The most basic move is the walking assist. It is used to help a responsive person who requires simple assistance with walking. Either one or two First Aiders can use this method.

To perform a walking assist:

1. Have the person stand up and position yourself on the person's weaker or injured side.
2. Place the person's arm across your shoulders and hold it in place with one hand.
3. Place your other hand around the person's waist. Your body acts as a "crutch," supporting the person's weight while you both walk.
4. A second First Aider can support the person in the same way from the other side.



Two-Person Seat Carry

The two-person seat carry is a method for moving a person who cannot walk and who is not likely to have a head and/or spinal injury. It requires two First Aiders.

To perform the two-person seat carry:

1. Stand on one side of the person and have the other First Aider stand on the opposite side.
2. Put one arm under the person's thighs and the other across the person's back, while the other First Aider does the same.
3. Grab and hold the wrists of the second First Aider under the person's legs and behind the person's back while the second First Aider does the same to you.
4. Lift the person in the "seat" formed by your joined arms.



Clothes Drag

The clothes drag is an emergency move that is appropriate for someone suspected of having a head and/or spinal injury, as it helps keep the head and neck stabilized.

To perform a clothes drag:

1. Gather the person's clothing, such as a jacket or shirt, behind the person's neck.
2. Cradle the person's head using both his or her clothing and your hands, and keep the person's head, neck, and back as straight as possible.
3. Pull the person to safety.



This type of emergency move is exhausting and may result in back strain for the First Aider, even when done properly.

Blanket Drag

The blanket drag is an appropriate emergency move if you do not have a stretcher.

To perform a blanket drag:

1. Kneel beside the person and spread out a blanket on the person's other side.
2. Gather half of the blanket and place it up against the person's side.
3. Roll the person toward you, moving the person's body as one unit.
4. Tuck the gathered half of the blanket under the person as far as you can, and then roll the person back onto the blanket.
5. Wrap the blanket around the person and then drag him or her, holding the blanket around the person's head.



Extremity Lift

The extremity lift (also called a fore-and-aft lift) is performed with a partner. The extremity lift is not appropriate for a person with a suspected head or spine injury, or with injuries to the pelvis, arms, or legs. This move can be used to lift an unresponsive person from the floor to a chair.

To perform an extremity lift:

1. Crouch at the person's head. Have the other First Aider kneel, either beside or between the person's knees.
2. Place one hand under each of the person's shoulders and reach through to grab the person's wrists. Ensure that the person's back is close to your chest.
3. Have the other First Aider slip his or her hands under the person's knees.
4. On your signal, both of you should lift simultaneously.



Stretchers and Lifting Devices

There are many kinds of stretchers and lifting devices. The more common types are:

- Scoop stretcher (clamshell)
- Backboard
- Basket stretcher
- Multi-level stretcher (wheeled cot)
- Flexible litter
- Stair chair

Any of these stretchers will carry a person's entire body.



Scoop Stretcher

The scoop stretcher (also called a clamshell) is a lifting device suitable for lifting a person from the ground to another kind of stretcher or backboard. The scoop stretcher is only used for lifting and is not intended for carrying people across long distances. It allows people to be lifted without moving or rolling them. One disadvantage is that the person's back cannot be examined unless the person is rolled.

Backboard

The backboard (also referred to as the spine board or full board) is only used for lifting and is not designed to carry people across long distances. It is constructed of either plywood or plastic. Backboards are either rectangular in shape or tapered at one end. The board has holes cut along the sides through which straps may be placed to secure the person's body to the board. Most boards are approximately 1.8 metres (6 feet) long. If a backboard is used with a basket stretcher, the board must fit inside the stretcher.



Basket Stretcher

The basket stretcher, also called the Stokes basket, comes in various types and strengths. Traditional basket stretchers are constructed of metal support frames, usually combined with a wire mesh lining. Other basket stretchers have metal frames and high-impact plastic liners. Basket stretchers are commonly used for rescues and also as lifting devices.

Follow these guidelines when using a basket stretcher:

- Place blankets under the person for comfort.
- Place a backboard or litter board on the bottom to make loading and unloading easier.
- If used in combination with a scoop stretcher, the basket stretcher must be able to accommodate the scoop stretcher.
- Secure the person if the stretcher is to be carried over a long distance or the person is to be lowered or raised off the ground as in a low- or high-angle rescue.





Multi-Level Stretcher

This type of stretcher can be lowered or raised using release handles found at the end or side. This device is equipped with wheels. It has an adjustable head section and leg section. Each side of the stretcher has a safety rail. The stretcher should not be lifted using these rails. This stretcher is commonly used in transportation vehicles, such as ambulances.

Flexible Litter

A flexible litter has no rigid structure of its own. These devices are made of synthetic materials that require some type of spinal immobilization device to provide rigidity. Because they are flexible, they work well when moving people through narrow passageways. They wrap around the person, so the litter is little more than the circumference of the person's body. Flexible litters also have the distinct advantage of being usable with people of a variety of sizes, including those for whom a basket stretcher may be restrictive.



Stair Chair

A stair chair is used for transporting a person in a sitting position. It is used when a wheeled stretcher is deemed to be too long for the rescue or extrication. It is especially useful when there is a small elevator or staircase in which a long stretcher will not fit. The front wheels swivel to manoeuvre around tight corners and landings. Some stair chairs have a track that make navigating stairs or steep terrains easier for the First Aiders. When using the stair chair, it is recommended that three First Aiders be present to ensure a person's safety: two First Aiders to act as carriers and one to serve as a spotter for potential difficulties.

As a First Aider, you need a basic understanding of normal human structure and function. Knowing the body's structures and how they work will help you more easily recognize and understand illnesses and injuries. Body systems do not function independently. Each system depends on other systems to function properly. When your body is healthy, your body systems are working well together. But an injury or illness in one body part or system will often cause problems in others. Knowing the location and function of the major organs and structures within each body system will help you to more accurately assess a patient's condition and provide the best care.

Body Systems

The human body performs many complex functions. Vital organs are organs whose functions are essential for life, such as the brain, heart, and lungs.

A body system is a group of organs and other structures that are especially adapted to perform specific body functions. They work together to carry out a function needed for life. For example, the heart, blood, and blood vessels make up the circulatory system, which keeps all parts of the body supplied with oxygen-rich blood.

For the body to work properly, all of the body's systems must work well together. When one or more of the body systems does not perform its function properly, illness can occur.

Interrelationships of Body Systems

Each body system plays a vital role in survival. Body systems work together to help the body maintain a constant healthy state. When the environment changes, the body's systems adapt to the new conditions. For example, because the musculoskeletal system works harder during exercise, the respiratory and circulatory systems must also work harder to meet the body's increased oxygen demands. Your body systems also react to the stresses caused by illness or injury.

The impact of an injury or a disease is rarely restricted to one body system. For example, a broken bone may result in nerve damage that may impair movement and feeling. Injuries to the ribs can make breathing difficult. If the heart stops beating for any reason, breathing will also stop.

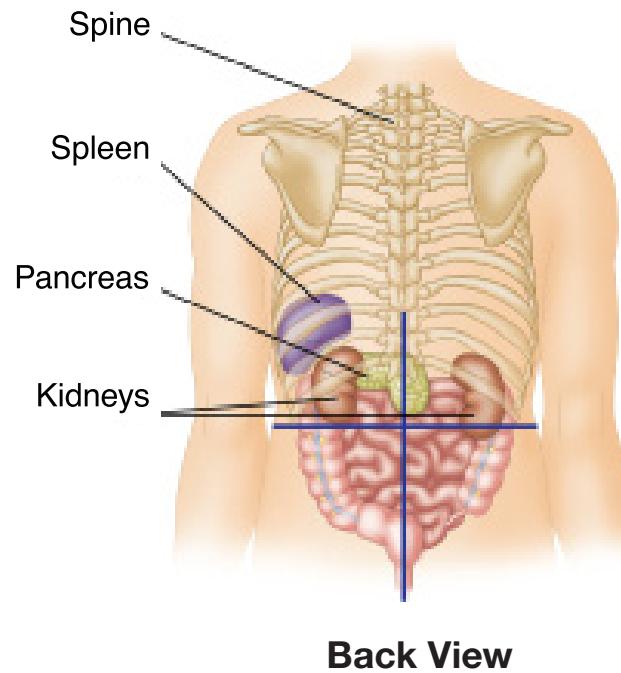
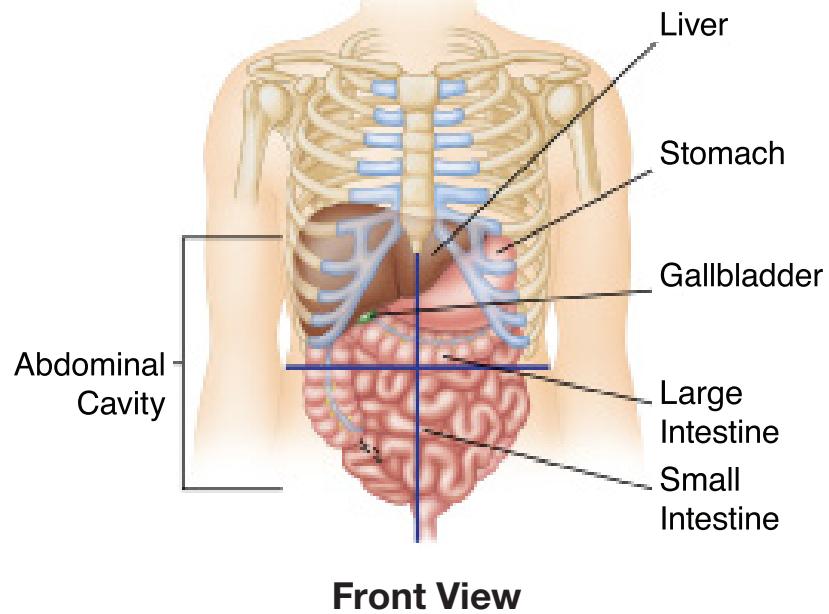
In any significant illness or injury, body systems may be seriously affected. This may result in a progressive failure of multiple body systems. Generally, the more body systems that are involved in an emergency, the more serious the emergency.

BODY SYSTEMS

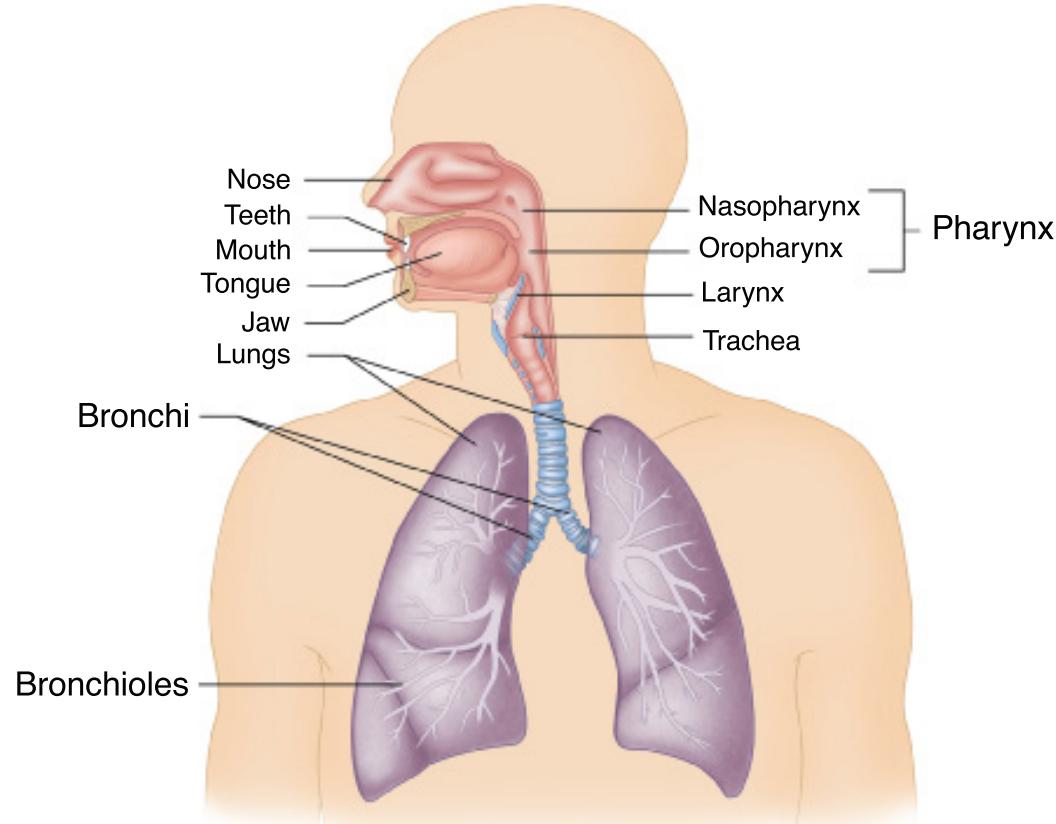
System	Major Structures	Primary Functions	Relationship with Other Body Systems
Respiratory System	Airway and lungs	Supplies the body with oxygen through breathing	Works with the circulatory system to provide oxygen to cells; is under the control of the nervous system
Circulatory System	Heart, blood, and blood vessels	Transports nutrients and oxygen to body cells and removes waste products	Works with the respiratory system to provide oxygen to cells; works with the urinary and digestive systems to remove waste products; helps give skin its colour; is under the control of the nervous system
Lymphatic System	Lymph, lymph nodes	Removes excess fluid (lymph) from body tissues; absorbs fatty acids and transports fat to the circulatory system; transports white blood cells around the body and initiates the formation of antibodies	Works to return fluid to the circulatory system
Nervous System	Brain, spinal cord, and nerves	Transmits messages to and from the brain	Regulates all body systems through a network of nerves
Musculo-skeletal System	Bones, ligaments, muscles, and tendons	Provides the body's framework; protects internal organs and other underlying structures; allows movement; produces heat; manufactures the components of blood	Provides protection to organs and structures of other body systems; muscle action is controlled by the nervous system

BODY SYSTEMS

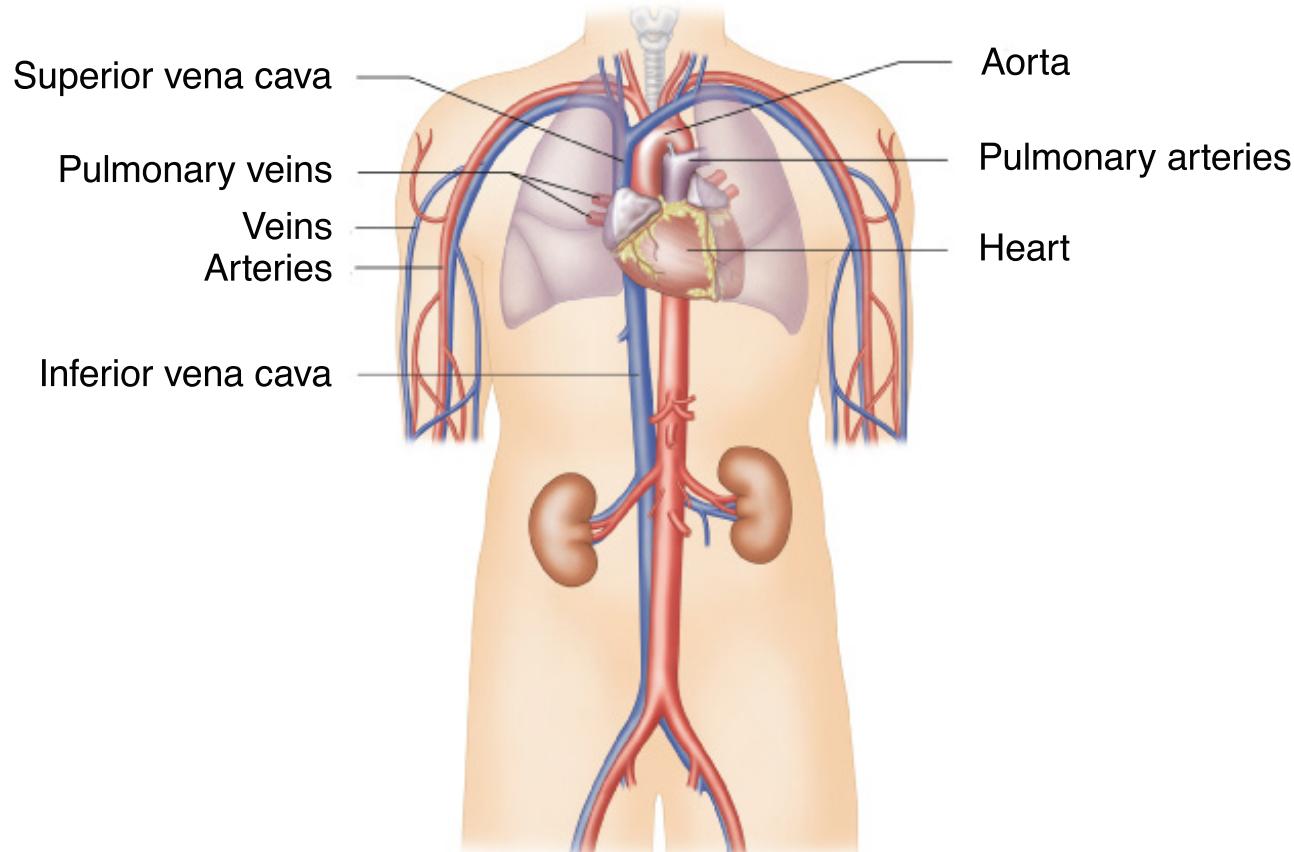
System	Major Structures	Primary Functions	Relationship with Other Body Systems
Integumentary System	Skin, hair, and nails	An important part of the body's communication network; helps prevent infection and dehydration; assists with temperature regulation; aids in production of certain vitamins	Helps protect the body from disease-producing organisms; together with the circulatory system, helps regulate body temperature; communicates sensation to the brain by way of the nerves
Endocrine System	Glands	Secretes hormones and other substances into blood and onto skin	Together with the nervous system, coordinates the activities of other systems
Digestive System	Mouth, esophagus, stomach, intestines	Breaks down food into a usable form to supply the body with nutrients and energy	Works with the circulatory system to transport nutrients to the body
Genitourinary System	Uterus and genitalia	Performs the processes of reproduction	Regulated through hormones produced by the endocrine system
	Kidneys, bladder	Removes wastes and regulates water balance	Receives waste from the circulatory system



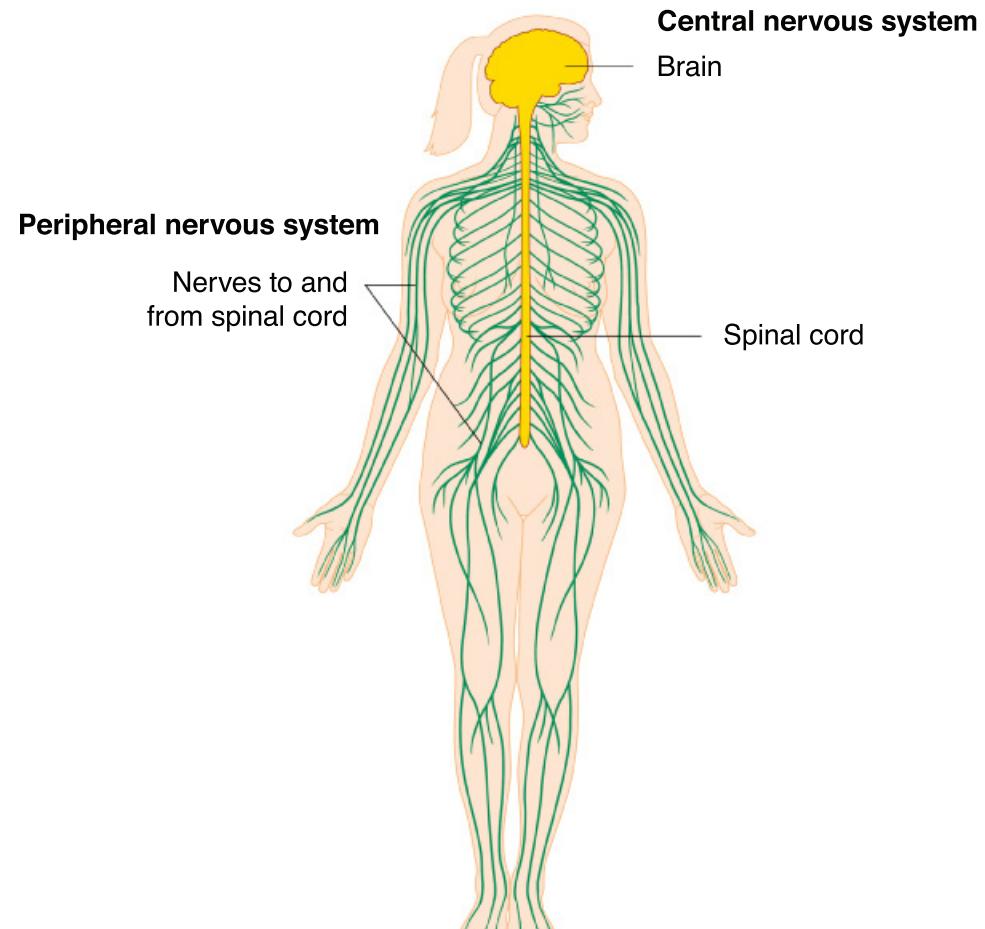
The Abdominal Quadrants



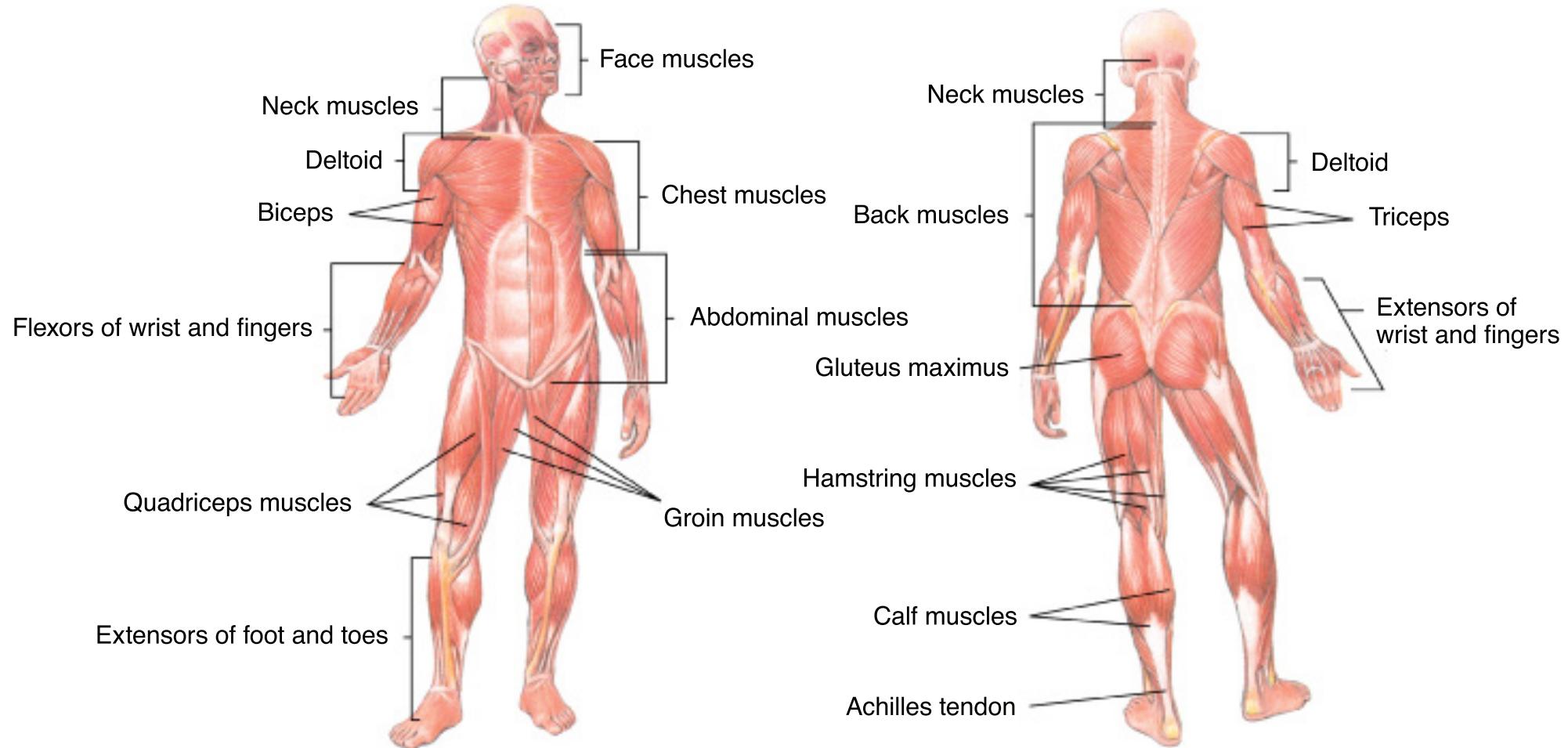
Respiratory System



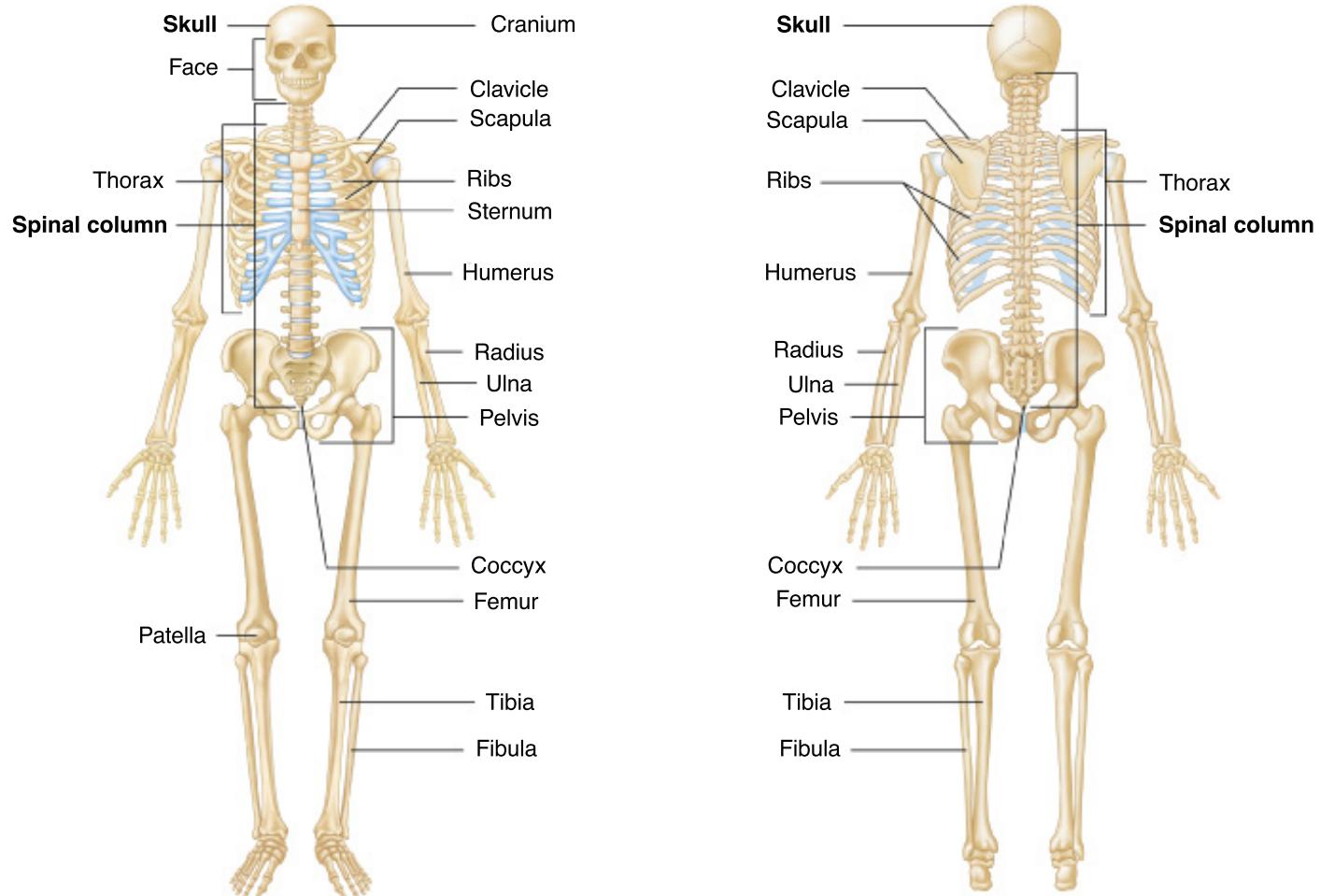
Circulatory System



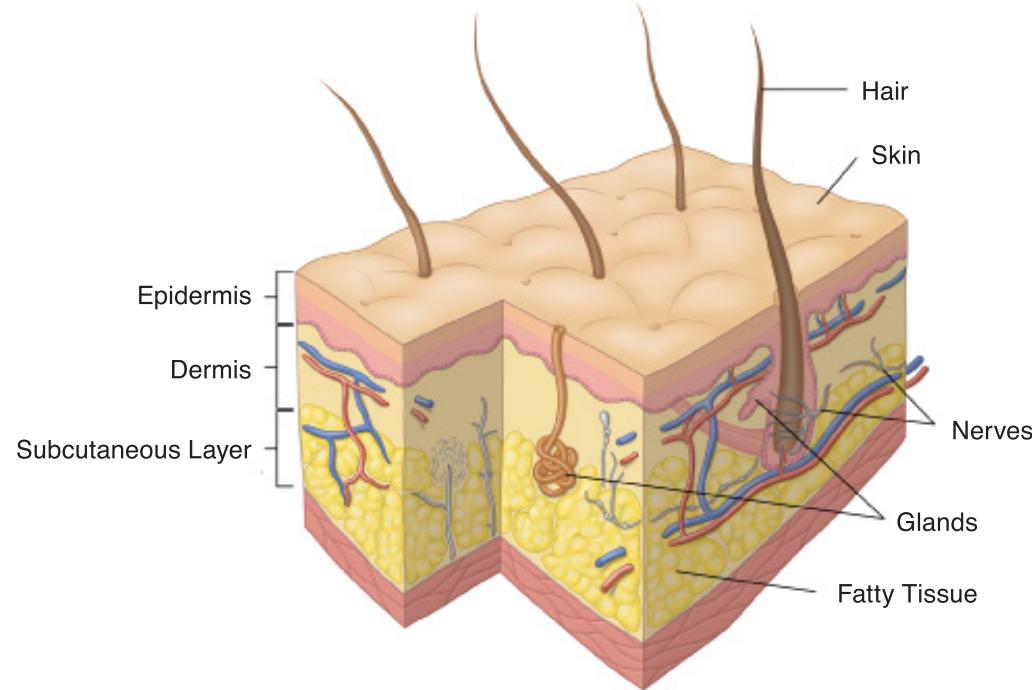
Nervous System



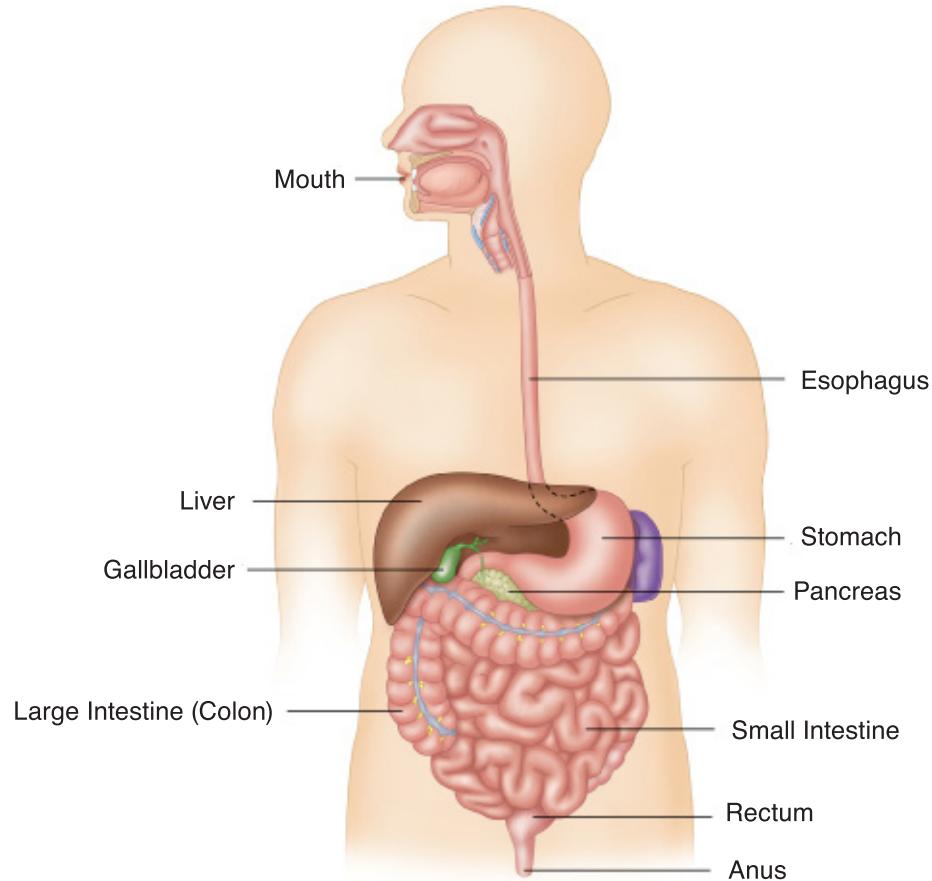
Musculoskeletal System Muscles



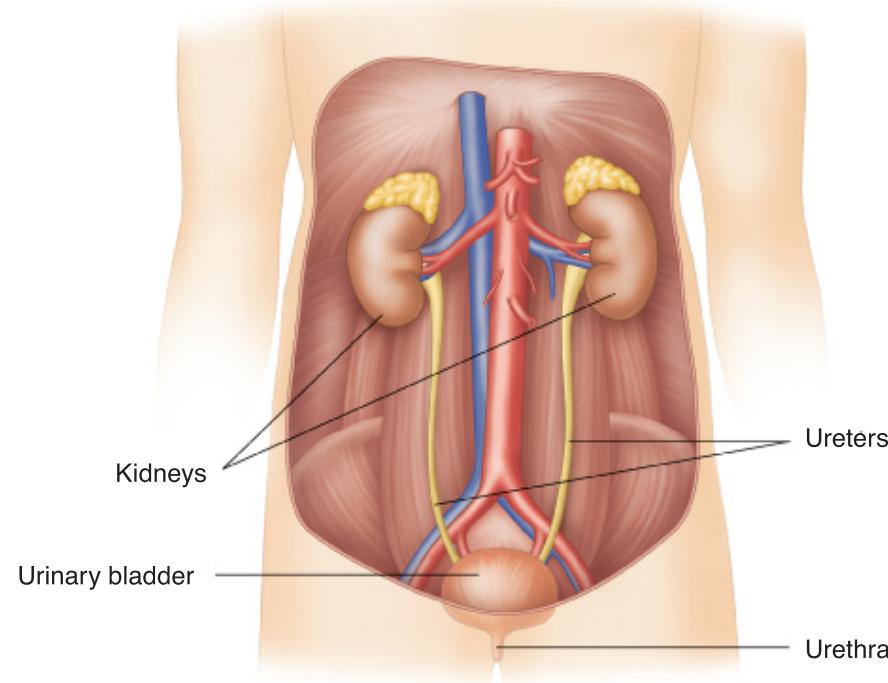
Musculoskeletal System Skeleton



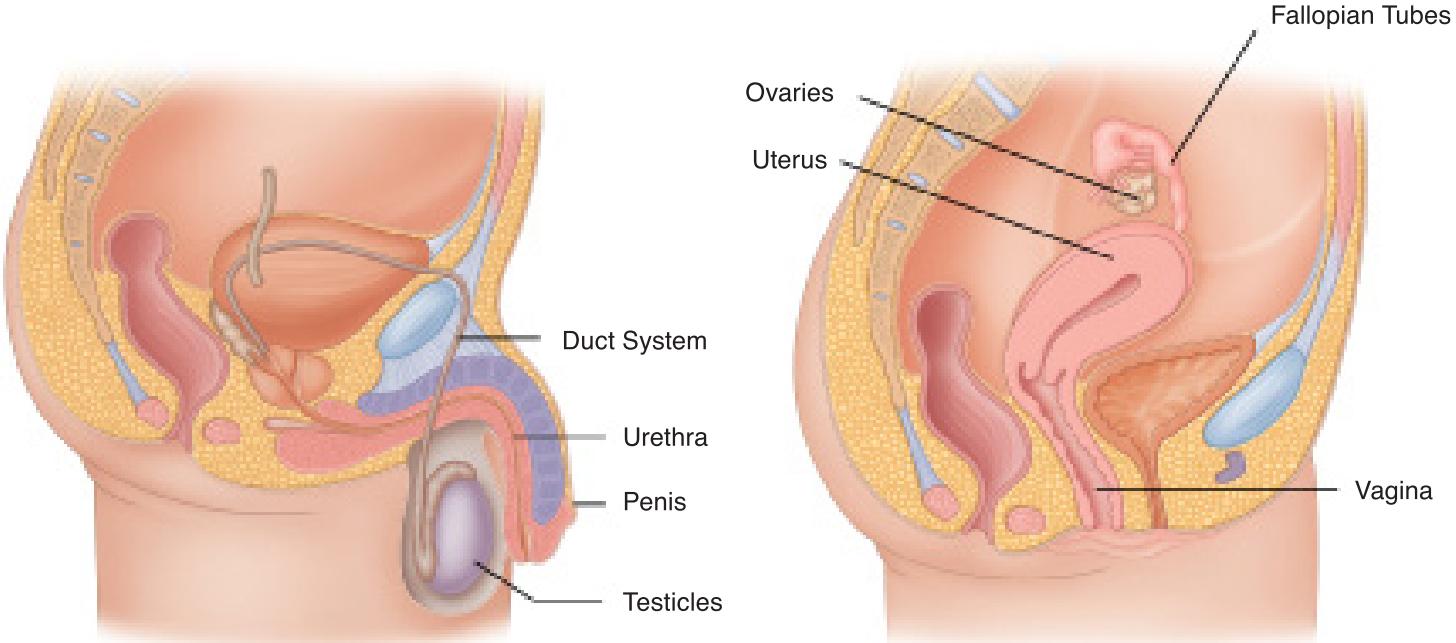
Integumentary System



Digestive System



Urinary System



Reproductive System

A

Abdomen: The part of the body below the chest and above the pelvis. It contains the stomach, intestines, liver, spleen, and other organs.

Abdominal thrusts: A method to remove a foreign object from the airway.

Airway: The pathway that allows air to travel from the mouth and nose to the lungs.

Airway obstruction: A blockage in the airway that stops air from reaching the lungs.

Allergic reaction: The body's response to a substance to which it is particularly sensitive. The response can be mild or very severe.

Anemia: A condition caused by a lack of red blood cells.

Arteries: Large blood vessels that carry oxygen-rich blood from the heart to the rest of the body.

Aspiration: Inhaling blood, vomit, saliva, or foreign material into the lungs.

Asthma: A chronic illness in which certain substances or conditions (triggers) cause inflammation and swelling of the bronchioles, making breathing difficult.

Automated external defibrillator (AED): An electronic device that analyzes the heart's electrical rhythm and, if necessary, tells the user to deliver a shock to a person in cardiac arrest.

B

Baby: A child under the age of 12 months.

Bandage: Material used to wrap or cover a part of the body or to hold a dressing or splint in place.

Breathing emergency: A situation in which breathing is so impaired that the person's life is in danger.

Bronchioles: Small tubes at the base of the lungs where oxygen and carbon dioxide are exchanged.

Burn: An injury caused by heat, chemicals, electricity, or radiation.

Bystander: Someone who is present at the scene of a situation or emergency (other than an ill or injured person).

C

Cardiac arrest: A condition in which the heart has stopped beating or beats too irregularly or too weakly to pump blood effectively.

Cardiopulmonary resuscitation (CPR): A first aid technique that combines rescue breaths and chest compressions for someone who has stopped breathing and whose heart has stopped beating.

Cardiovascular disease: Any disease of the heart and blood vessels (also called heart disease).

Caustic: Capable of causing chemical burns

Child: Anyone between the ages of 1 and 8 years. (When giving CPR or using an AED, a child is considered to be anyone between 1 year old and the onset of puberty.)

Choking: A condition in which someone's airway is partly or completely blocked by a foreign object, swelling of the mouth or throat, or fluids such as vomit.

Cholesterol: A fatty substance that can cause build-up on artery walls, making the arteries narrower and restricting blood flow.

Compression: Rhythmic pressure that is put on the chest to dislodge something blocking the airway or to circulate blood when the heart isn't beating effectively.

Concussion: A temporary impairment of brain function, usually caused by a blow to the head.

Contraction: A squeezing action made by the muscles in the womb during labour.

Crowning: The point in labour when the baby's head is at the opening of the vagina.

D

Defibrillation: An electric shock that is given to correct a life-threatening heart rhythm.

Direct pressure: Pressure that is put on a wound to control bleeding.

Dislocation: An injury in which a bone is moved out of its normal position at a joint.

Dispatcher: The emergency medical services worker who answers the EMS/9-1-1 telephone number and decides which EMS personnel to send to the scene and who may give advice about first aid until EMS personnel arrive.

Dressing: A pad placed directly over a wound to absorb blood and other body fluids and to prevent infection.

E

Emergency medical services (EMS) personnel: Trained and equipped people, including police, firefighters, and ambulance personnel, who are dispatched through a local emergency number to give emergency care to ill or injured people.

Epinephrine: A drug that can be injected into the body to counteract a severe allergic reaction.

External bleeding: Bleeding from an open wound in the skin.

F

First Aider: A person with training who gives immediate care to someone who is ill or injured until more advanced care can be obtained.

Foreign object: Any item that enters the body from outside.

Fracture: A break, crack, or chip in bone tissue.

H

Head-tilt/chin-lift: A technique for opening the airway in an unresponsive adult, child, or baby.

Heart attack: A sudden illness in which an artery that feeds the heart becomes blocked, stopping part of the heart from getting the oxygen-rich blood it needs.

Hypothermia: A life-threatening condition that develops when the body's temperature drops too low, usually from being exposed to cold temperatures for too long.

I

Immobilize: To use a splint or other method to keep an injured body part from moving.

Internal bleeding: Bleeding that occurs inside the body.

J

Joint: The point where two or more bones are held together by ligaments that allow movement.

L

Ligament: A fibrous band that holds bones together at a joint.

M

Medical identification product: A wallet card, bracelet, watch strap, anklet, or necklace with a tag indicating that the person wearing it has a particular medical condition.

P

Pelvis: The part of the body between the abdomen and the legs. It contains the intestines, bladder, and reproductive organs.

Poison: Any substance that causes injury, illness, or death if it is inhaled, swallowed (ingested), absorbed, or injected.

Poison Control Centre: A centre staffed by medical professionals who can give information about first aid in cases of poisoning.

Primary assessment: An examination of an ill or injured person to determine his or her initial condition and whether there are any life-threatening concerns.

Pulse: The beat felt in arteries near the skin with each contraction of the heart.

R

Recovery position: A position for an unresponsive person that helps to keep the airway open and allows any blood or vomit to drain from the person's mouth.

Respiratory arrest: A condition in which breathing has stopped or isn't effective.

Respiratory distress: A condition in which breathing is difficult.

Responsiveness: Awareness of the environment and ability to respond to stimuli.

Risk factors: Conditions or behaviours that increase the chance that a person will develop a particular disease or suffer a particular injury.

S

Secondary assessment: A verbal, visual, and/or physical check of an ill or injured person for conditions that were not identified in the primary assessment.

Seizure: An episode of abnormal electrical signals in the brain that results in disturbed brain function, shaking or contraction of limbs, and/or an altered level of responsiveness.

Shock: A serious condition caused when the circulatory system cannot get enough oxygen-rich blood to all parts of the body. Causes include severe blood loss, allergic reactions, and emotional trauma.

Sign: An indicator of injury or illness that a First Aider can see, feel, smell, or hear.

Soft tissue: Skin, fat, muscles, and other soft body structures.

Splint: A device used to stop body parts from moving.

Sprain: The stretching or tearing of ligaments and other soft tissues at a joint.

Strain: The stretching or tearing of muscles and tendons.

Stroke: A disruption of blood flow in the brain, causing weakness and/or speech problems.

Symptom: An indicator of injury or illness that is felt and expressed by the ill or injured person.

T

Tendon: A fibrous band that attaches muscle to bone.

Tissue: A group of cells that work together to perform specific functions.

Tuberculosis (TB): A potentially fatal bacterial infection of the lungs that is spread through the air from one person to another. It can also affect the bones, brain, kidneys, and other organs. Treatment is complex and involves taking many different medications over an extended period of time.

U

Unresponsive: A state in which a person is unaware of the environment and does not react to stimuli.

V

Veins: Blood vessels that carry oxygen-poor blood from all parts of the body back to the heart.

Vertebrae: The 33 bones that make up the spine.

Vital signs: Three key characteristics of a person's condition (level of responsiveness, breathing, and skin).

W

Wound: An injury to soft tissues.

Each time a program is revised, it is built on the great work completed in the previous revisions. The Canadian Red Cross would like to recognize everyone who worked on developing these programs in the past; their work set the foundation for our success.

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