



THE DIGITAL MANUALS

Outdoor First Aid



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Introduction to Outdoor First Aid



What is First Aid?

This series of first aid manuals is designed to compliment our first aid training courses and to act as a stand-alone learning resource. Participants on courses will receive a free PDF copy of the manual as a companion to their course. This manual does not replace the requirement for appropriate first aid training. To contact the First Aid Training Co-operative visit our [website](#).

First Aid Training Co-operative courses are quality assured and all trainers undergo advanced training and are qualified trainers and assessors of first aid. Trainers take part in annual CPD and are monitored regularly.

This guide has been written by Cory Jones, Director of Training for the First Aid Training Co-operative. Cory works as an expedition leader throughout the world, he holds the International Mountain Leader Award and is an Sea Kayak Leader in Scotland. Cory has been running first aid courses since 2001 and now runs advanced first aid courses throughout the world.

Where relevant the content of this manual matches the guidance given by the UK Resuscitation Council's latest 2015 guidance.

The style of this manual is designed to be instructional, giving you instructions on what to do in a first aid incident. Uniquely, the pages in this PDF manual link to our [YouTube channel](#). Where relevant, content of this manual is linked with interactive videos which demonstrate active first aid techniques in a training environment.

If you have forgotten a particular technique, or would like to refresh your memory with a demonstration of a particular protocol, you can view the relevant video clip after the training course and watch one of our trainers in action.

This manual was part funded by the Scottish Enterprise Innovation By Design Grant.

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Contact First Aid Training
Co-operative for training
courses and equipment.

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WEBSITE

- A** Assess / Airway / Alertness
- B** Breathing
- C** Circulation
- D** Discover / Damage
- E** Emotions / Environment / Ensure / Evacuate / Expose

What is First Aid?



First aid is immediate care given to a person who is injured or taken ill. The immediate nature of first aid incidents makes them stressful to deal with. The good news is with most incidents, your role as a first aider is a temporary one, looking after casualties until support arrives.

Often bystanders are worried about doing the wrong thing which prevents them from doing first aid. If a casualty is not breathing or bleeding badly, prompt immediate action can save a life. It is important to stay calm in an emergency situation. To help you stay calm it is important to try and stick to the [Incident Procedure](#).



Aims of First Aid

1. Preserve life – Assess the scene to ensure it is safe to approach and treat the casualty. Check for potential cross contamination issues at the scene. Consider the welfare of bystanders and colleagues.
2. Prevent worsening – Use the Incident Procedure to assess the casualty and help you make decisions about any treatment required. Only do what is reasonable and what you have been trained to do.
3. Promote recovery - Reassure casualty and contact emergency services if required.

Responsibilities of a First Aider

1. **Preserve life** – The rescuer, by standers and the casualty
2. **Prevent worsening** – Protect casualty from further harm
3. **Promote recovery** – Treat illness or injury. Reassure casualty and bystanders

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BLOG**

Emergency Planning



As the first aider you must take charge of an incident and decide whether to call for the emergency services. Every emergency is different; by following an Incident Procedure you can gather information as to the seriousness of the situation.

First aiders in the workplace should have access to a first aid kit.

An **Emergency Action Plan** can help to make incidents less stressful and save precious time. A workplace specific protocol should be created for each work site, including information such as: location, access to location, nearest hospital, closest location with mobile phone reception, personnel to notify including their contact details, plus other applicable information.



Calling for HELP

1. Call 999 or 112 if you need to contact the emergency services. 999 is the UK emergency response number and 112 works anywhere in the European Community, plus many other countries.
2. If the casualty refuses help, still dial 999 if the situation is serious and inform the call handler.
3. A bystander can call for help for you but make sure they have good basic information to pass onto the call handler. Ask the caller to return and inform you that help is on its way.

Give Good Information

L – Location

I – Incident

O – Other services required e.g. police

N – Number of casualties

E – Extent of injuries

L – Location (confirm)

Legislation and Regulations



In the UK, first aid must be carried out in line with the *Health and Safety Executive (HSE) First Aid Regulations*. All employers and self-employed businesses have a duty to have provision for first aid in the workplace. HSE states that in specific industries, staff are required to undertake appropriate first aid training. Group leaders and organisations have a **Duty of Care** to look after those in their charge and a reasonable level of first aid competence is required as part of this.

The outdoor industry in the UK is governed by individual National Governing Bodies who approve instructor, coach, or leader awards. These awards are only valid in conjunction with a relevant Outdoor First Aid course.



Employers are required to have first aid kits available and to have made appropriate arrangements for workers who are ill or injured and may need immediate attention from the emergency services.

Which Outdoor First Aid course do I need?

Most of the UK's National Governing Bodies state the required length and content of first aid courses required by their award holders. For those who hold more than one Award this can be confusing. Contact [First Aid Training Co-operative](#) where we can help you decide the correct course for you.

Scene Survey

When you arrive on scene, carry out a Scene Survey in order to assess for dangers and hazards. Removing a hazard may include turning off electricity or stopping traffic at a road incident. You should leave dangerous situations to the emergency services to manage and call 999 immediately.

Thought	Action
<ul style="list-style-type: none"> Assess the scene for danger 	<ul style="list-style-type: none"> Stop and look, take your time. Don't approach unless safe to do so. Call 999 immediately if not safe to approach.
<ul style="list-style-type: none"> Hazards 	<ul style="list-style-type: none"> Remove these if safe to do so or move the casualty if the situation is life threatening.
<ul style="list-style-type: none"> Cross contamination 	<ul style="list-style-type: none"> Look for cross contamination hazards at the scene.



Cross contamination / Infection Control

Take care when approaching the casualty to check for broken glass or other objects that might cause hazard to you or the casualty. Look for any vomit, blood or other fluids on the ground.

[HSE guidance on blood borne viruses in the workplace.](#) Wear nitrile gloves when possible.

After an incident wash your hands with soap and water, followed by proper hand drying.



Incident Procedure (ABC)

This is the initial assessment of the incident scene and a primary survey of the casualty. It provides a systematic way of assessing what has happened and what to do next. The ABC procedure will help you stay calm under pressure and guide you through an incident.

Thought	Action
A - Assess the scene and casualty	<ul style="list-style-type: none"> Stop and look, is it safe to approach? Think cross contamination.
A - Alert response (AVPU)	<ul style="list-style-type: none"> Ask a question, shout command and touch shoulders. If no response, shout for 'Help!'
A - Airway	<ul style="list-style-type: none"> Head tilt and chin lift. Check mouth. Keep head tilted and chin lifted.
B - Breathing	<ul style="list-style-type: none"> Look, listen and feel for breathing for up to 10 seconds. With chin lift both on and off.
C - Circulation	<ul style="list-style-type: none"> Look for significant bleeds. Check clothing and ground.

Watch the Videos



Airway Management

The first aid priority is always to keep checking the airway is open and the casualty is breathing effectively. If the airway is compromised, put the casualty immediately into the [recovery position](#).



Helmets

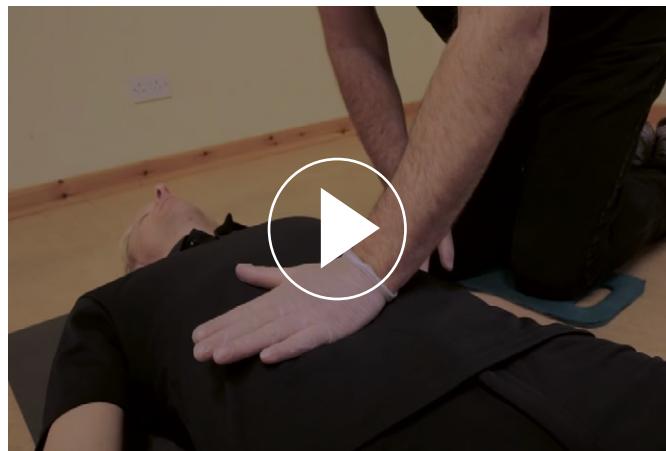
If the airway and breathing are compromised by a casualty's helmet, you will need to remove it.

Secondary Survey

Once you have completed the primary survey and dealt with any life-threatening conditions, it is safe to perform a secondary survey to check for injury or illness. This can be carried out on a conscious or unconscious casualty.

'Head to Toe' casualty assessment	Systematic search looking for clues of damage or illness
<ul style="list-style-type: none"> • Head and neck 	<ul style="list-style-type: none"> • Feel round head and face for swelling / deformity. Check pupil response and ears/nose for discharge. Feel neck bones to check alignment.
<ul style="list-style-type: none"> • Shoulders and chest 	<ul style="list-style-type: none"> • Feel round and compare shoulders. Does chest flex? Is breathing equal in both lungs?
<ul style="list-style-type: none"> • Abdomen and pelvis 	<ul style="list-style-type: none"> • Compare quarters of the abdomen and feel for differences. Check for abnormalities. DO NOT squeeze or spring pelvis.
<ul style="list-style-type: none"> • Legs and arms 	<ul style="list-style-type: none"> • Check for deformity.
<ul style="list-style-type: none"> • Pockets and clothing 	<ul style="list-style-type: none"> • Look for clues, ID, or medication. Watch out for sharp objects. Loosen tight clothing.

Watch the Videos



Evidence may include medi-alerts round neck or wrists, mobile phones with an emergency contact number, or medication / medical information found in the casualty's wallet, bag, or pockets. Carefully remove and check anything you find but ensure they are kept safe.



Insulate and Shelter. Think how you can protect them from the elements?

Recovery Position

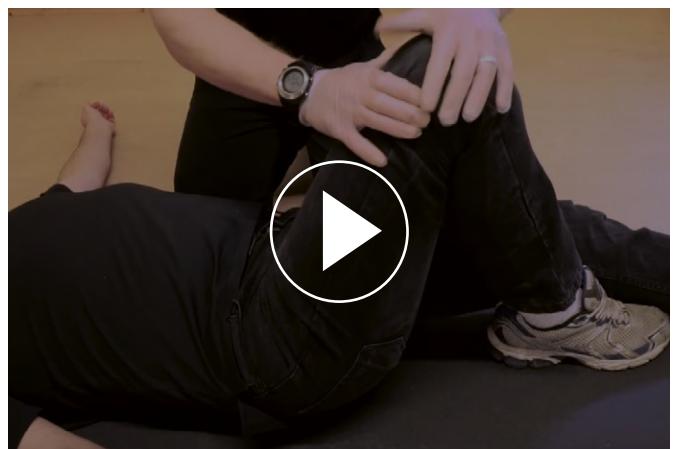
The **Recovery Position** is a safe airway position. For a non-alert casualty it maintains an open airway and promotes normal breathing. It helps fluids (saliva, vomit, mucus) drain from the casualty's airway. Never leave an unconscious breathing casualty on their back, it risks obstructing their airway.

Sequence	Action
• Preparation	<ul style="list-style-type: none"> Remove glasses, obstructions in pockets, loosen tight clothing. Check ground for obstructions.
• Initial position	<ul style="list-style-type: none"> Kneel beside the casualty, move their nearest arm out to the side, hold their far knee and lift it up, bring the casualty's far arm across to the side of their cheek.
• Head support	<ul style="list-style-type: none"> Bring their hand under their head and use your hand to support the head in preparation for the roll.
• Roll casualty towards you	<ul style="list-style-type: none"> Pull the casualty's lifted knee towards you; support their head as they roll onto their side. Ensure they are stable, roll their shoulder over too if necessary.
• Re-check breathing	<ul style="list-style-type: none"> Tilt the casualty's head back and pull chin forward to reopen the airway, keep the face tilted down to allow draining. Re-check their breathing.



On uneven ground or in enclosed spaces it may not be possible to use the technique as described above. Try and move the casualty as carefully as you can to give them a **Safe Open Draining Airway**.

[Watch the Video](#)



After 30 minutes you should roll the casualty onto their other side, unless they have an injury that prevents this.

Pregnant women should be rolled onto their left hand side if possible.

Casualty Vital Signs and Monitoring

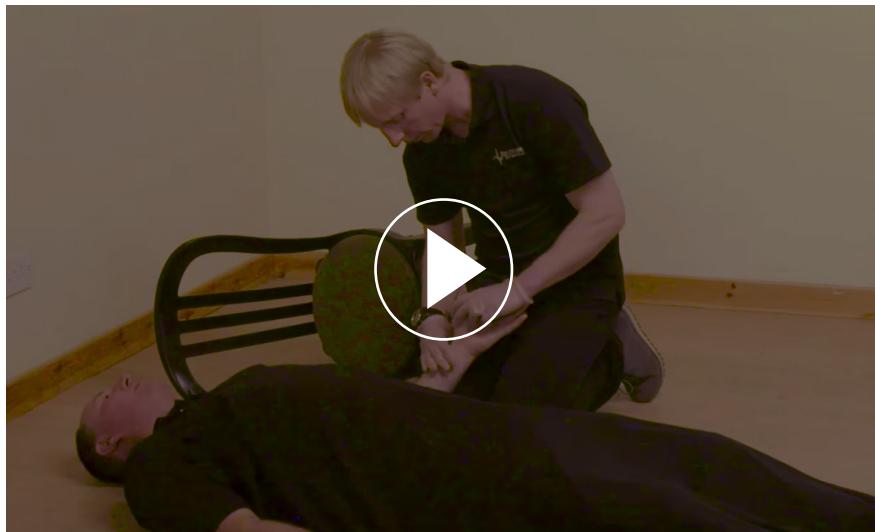


Vital Signs and Monitoring. If you are with the casualty for some time before the emergency services arrive, monitoring the casualty is essential. This information should be recorded and handed to emergency services on their arrival. Changes to vital signs will help inform your decision-making.

Colour of the blood is an indication of oxygen levels in the body. Red / pink blood is well oxygenated, blue blood or pale skin may indicate low oxygen levels. Look

under eyelids and at gums to check colour.

Temperature can be taken by using your hand on a casualty's skin. Take a core temperature in the casualty's armpit or under their collar. Normal temperature is warm on dry skin. Cold skin may indicate hypothermia (dry skin) or shock (clammy skin). Hot skin may indicate heat stroke (dry skin) or infection (wet skin).



Breathing rate and quality are important. An average adult breathes between 12 – 18 breaths per minute. To measure breathing, look, listen and feel. Place your cheek next to the casualty's mouth, feel and listen for breathing. Look down the line of the body for abdominal movement.

Pulse is a measure of the heartbeat. Take it at the wrist (radial) and neck (carotid) using your fingers, not thumb, pressing lightly on the skin. As well as recording a rate, feel for strength (strong or weak) and rhythm (regular or irregular). An average adult pulse is 60-90 beat per minute.

Level of Consciousness

A – Alert, “Can answer questions sensibly”

V – Responds to verbal commands

P – Responds to a pressure or pain stimulus

U – Unresponsive to any stimulus

A

V

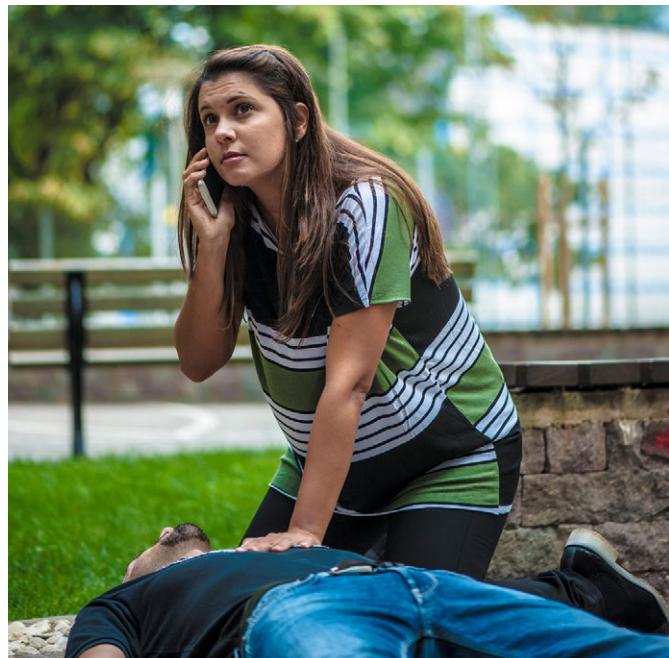
P

U

Seizures

Seizures are caused by sudden abnormal brain activity. They are not always caused by Epilepsy. They can be caused by electric shock, head injuries and some illnesses. Major seizure can cause convulsions which can be frightening for bystanders.

Sequence	Action
• A casualty having convulsion/seizure	<ul style="list-style-type: none"> Do not move casualty unless they are in danger. Protect them with cushions and by moving objects out of the way if possible.
• What time is it?	<ul style="list-style-type: none"> Note the time. If the seizure lasts longer than 5 minutes call an ambulance.
• When the seizure finishes	<ul style="list-style-type: none"> Place the casualty in the recovery position. If they regain consciousness, reassure and find out history.
• What should I ask?	<ul style="list-style-type: none"> Do you know what happened? Has it happened before? Is this normal for you?
• Bystanders	<ul style="list-style-type: none"> Reassure and move them away from the scene. Think about casualty dignity.



Absence Seizure

Some seizures are relatively minor. Casualties may present as if daydreaming or be clothes picking or similar. There is little you can do apart from reassure and make sure the casualty is safe from harm. Logging the incident may be useful.

Call an ambulance for a casualty who's seizure is abnormal to them: If it is their first seizure, if the seizure is repeated, continues for longer than 5 minutes or if there is associated damage or injury.

- Do not restrain casualty
- Do not place anything in their mouth

Adult Cardiac Arrest CPR (Non-Breathing Adult)

A collapsed or unresponsive adult who is not breathing and has no history of illness or injury, can be assumed to have suffered a Cardiac Arrest. Non breathing casualties run out of oxygen quickly and brain cells can only live a few minutes without oxygen. CPR – Cardio Pulmonary Resuscitation is designed to keep blood flowing and oxygen moving around the casualty's body until a [defibrillator \(AED\)](#) arrives on scene.

Sequence	Action
A - Assess for danger	<ul style="list-style-type: none"> Stop and look, is it safe to approach? Think cross contamination.
A - Alert response	<ul style="list-style-type: none"> Ask a question, shout command and touch shoulders. If no response, shout for 'Help!'
A - Open airway	<ul style="list-style-type: none"> Head tilt and chin lift. Check mouth. Keep head tilted and chin lifted.
B - Check breathing	<ul style="list-style-type: none"> Look. Listen. Feel. (up to 10 seconds) Is breathing effective? BREATHING IS NOT EFFECTIVE. Phone for help, request AED if available. Return and ensure safety for all.
C - CPR	<ul style="list-style-type: none"> Kneel by the side. Heel of hand in centre of chest. Fingers interlocked or hands crossed. Arms straight & vertical. Press down to a depth of 5 – 6 cm. 30 compressions at a rate of 100 – 120 per minute. Head tilt. Lift chin. Pinch nose. Open mouth. Chin lift maintained. Perform 2 breaths, 1 second between breaths. 30 compressions. 2 breaths. Continuously (30:2).

Chain of Survival

To give casualty the best chance of survival, the following **Chain of Survival** is essential:

- An early call to the emergency services
- Prompt and effective CPR
- AED (defibrillator) used promptly
- Professional medical intervention

You can use a face shield or face mask to help prevent cross contamination.

If there is more than 1 first aider, change over every 2 minutes.

WATCH THE
VIDEO

AED (Defibrillator) Use

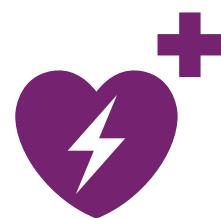


A casualty suffering from **Cardiac Arrest** is very unlikely to survive without an **Automatic External Defibrillator** (AED). However if defibrillation is delivered promptly, survival rates can be as high as 74%. Optimal conditions for defibrillation are present only for the first few minutes after the cardiac arrest. Success rates decrease thereafter by at least 10% per minute of delay.

An AED is a computer and battery with two self-adhesive pads that attach to the casualty's chest. These receive heart signals from the casualty to indicate if an electric shock is required to reset the heart. The AED will only shock a heart that is not working effectively and in conjunction with electronic voice prompts, an AED will tell you what to do.



**NEVER HESITATE
TO USE AN AED,
EVEN IF YOU
HAVEN'T BEEN
TRAINED TO USE
ONE**



A E D

Remember

- Cut away clothing or jewellery that might interfere with the pads
- Shave chest hair if necessary where pads are going to be placed
- Dry the casualty's skin if it is moist, before attaching the pads
- Make sure you don't touch the casualty as the shock is delivered
- Casualty may appear to jump when they are shocked, this is normal
- AED's are now available in many public spaces and increasingly in rural areas
- If pads are reversed, leave them in place

Heart Attack

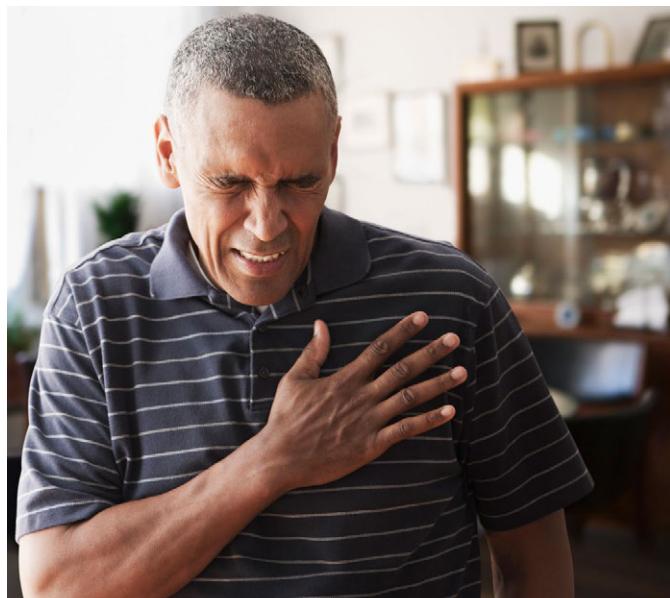
A heart attack is usually caused by a clot in one of the blood vessels feeding the heart with blood (oxygen). The signs of a heart attack do vary but some are included on the list below. Don't forget to ask the casualty if they have angina and let them take their medication if they have it.

What you see	What you do
<p>Some or all of the following:</p> <ul style="list-style-type: none"> • Tight pain in the chest • Pain can move down the arm/s, neck or shoulder • Pale, cold, clammy skin. Grey/blueness around the lips • Casualty may have 'an impending sense of doom' • Dizziness, shortness of breath 	<ul style="list-style-type: none"> • Sit casualty down and reassure. • Place in the lazy W position, leaning back against the wall with knees raised. • Call 999/112 immediately, prepare to resuscitate if necessary. • If they are not allergic and consent to doing so, they can take an 'Aspirin' chewed slowly in the mouth. • Reassure, reassure, reassure.

Angina

Often found in older people this is a narrowing of the blood vessels that feed the heart with blood. Symptoms are similar to those of a heart attack. Most people with angina know they have the illness and have medication. If they have their medication, let them take it. Often it is a spray, which is administered under the tongue. Placing in the lazy W position may make them more comfortable.

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BLOG



If the symptoms do not diminish quickly, assume a heart attack and follow instructions above.

VISIT THE
BLOG

CPR for Drowning

If the incident indicates a history of drowning, an alternative CPR protocol is used. Drowning essentially means the body is being denied oxygen. Therefore the protocol requires you to help the casualty by delivering oxygen into their blood stream. This may be enough to bring them round immediately.

Action for drowning	
A - Assess for danger	<ul style="list-style-type: none"> Stop and look, is it safe to approach? Think cross contamination.
A - Alert response	<ul style="list-style-type: none"> Ask a question, shout command and touch shoulders. If no response, shout for 'Help!'
A - Open airway	<ul style="list-style-type: none"> Head tilt and chin lift. Keep head tilted and chin lifted.
B - Check breathing	<ul style="list-style-type: none"> Look. Listen. Feel (up to 10 seconds). Is breathing effective? Breathing not effective. Perform emergency breathing. Pinch nose. Open mouth. Chin lift maintained. Perform 5 breaths of 1 second, letting chest fall between breaths.
C - CPR	<ul style="list-style-type: none"> CPR for approximately 1 minute: 30 compressions. 2 breaths. 30 compressions. 2 breaths. 30 compressions. For compressions - Kneel by the side. Heel of hand in centre of chest. Fingers interlocked or hands crossed. Arms straight and vertical. Press down to a depth of 5 – 6 cm. Rate 100 – 120 per minute. Phone for HELP. Request AED if available. Return and ensure safety for all. Continue with efficient CPR (30:2).



Fluid in the airway?

To clear any fluid from the airway, put the casualty into the [recovery position](#). This will help to drain fluid from the airway.

Secondary (dry) Drowning occurs when water enters the lungs in small quantities, usually following a near drowning incident. Over time (hours), the lungs become irritated and are less efficient at oxygen transfer. Watch for difficulty breathing, coughing, chest pain, blue lips or pale skin. The casualty may vomit. If you suspect secondary drowning, call the emergency services.

Child and Infant CPR

A child or infant who is not breathing is likely to be asphyxiating, causing a lack of oxygen in their blood. As children are smaller, use less force to compress their chest. Aim to compress the chest by 1/3 of its normal size.

Action for children/infants	
A - Assess for danger	<ul style="list-style-type: none"> Stop and look, is it safe to approach? Think cross contamination.
A - Alert response	<ul style="list-style-type: none"> Ask a question, shout command and touch shoulders. If no response, shout for 'Help!'
A - Open airway	<ul style="list-style-type: none"> Head tilt and chin lift. Keep head tilted and chin lifted.
B - Check breathing	<ul style="list-style-type: none"> Look. Listen. Feel (up to 10 seconds). Is breathing effective? Breathing not effective. Perform emergency breathing. Pinch nose. Open mouth. Chin lift maintained. Perform 5 breaths of 1 second letting chest fall between breaths.
C - CPR	<ul style="list-style-type: none"> CPR for approximately 1 minute: 30 compressions. 2 breaths. 30 compressions. 2 breaths. 30 compressions. For compressions - Kneel by the side. Heel of hand in centre of chest. Press down to a depth of 1/3 of the chest volume. This can be done with 1 hand for small child or two fingers for an infant. Rate 100 – 120 per minute. Phone for HELP. Get AED if available. Return and ensure safety for all. Continue with efficient CPR (30:2).

In first aid, individuals who have not yet reached puberty are considered to be children. If the casualty is a large child, treat them as an adult: 'Treat as you See'. Compressions need to be done on a hard surface.

For infants (less than 1 year old) you may need to give ventilations by making a seal with your mouth over their nose and mouth. Additionally, make sure you support the head to maintain the airway. How To Perform CPR on an Infant

**WATCH THE VIDEO
OF CHILD CPR**

**WATCH THE VIDEO
OF INFANT CPR**

Dealing with Choking (in Adults)

Choking occurs when a foreign object blocks the airway. Coughing can clear mild obstructions, indicated by the casualty's ability to speak. Severe obstructions (full choke) require your physical intervention.

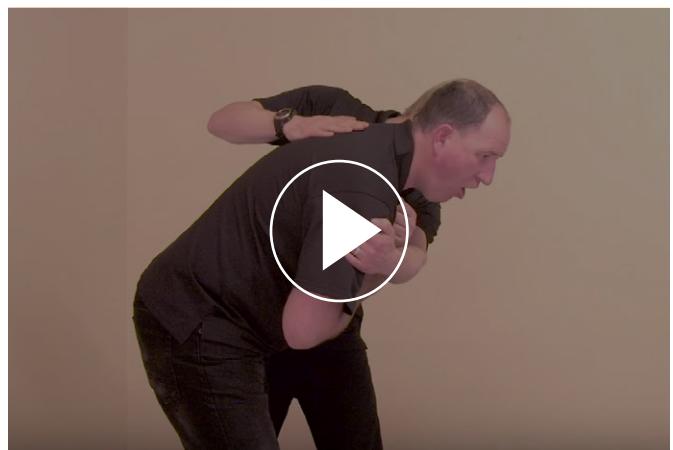
Sequence of increasing intervention for a full choke

- Seek permission to help the casualty.
- Ask the casualty to cough.
- If they cannot cough, support them and try a firm backslap, followed by 4 more if the object is not dislodged, continually checking if the casualty can cough or speak.
- Attempt an abdominal thrust. Try a further 4 thrusts, continually checking if the casualty can cough or speak.
- Continue with 5 back slaps followed by 5 thrusts until the object is dislodged
- If the casualty collapses and stops breathing, call 999/112 and start CPR.

Where an abdominal thrust is not possible, e.g. a pregnant women or an obese casualty, a chest thrust can be given as an alternative. This is a firm compression on the ribcage against a hard surface.

If you have attempted an abdominal thrust, advise the casualty to go to hospital for a check up, as internal damage may have occurred.

Watch the Video



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BLOG

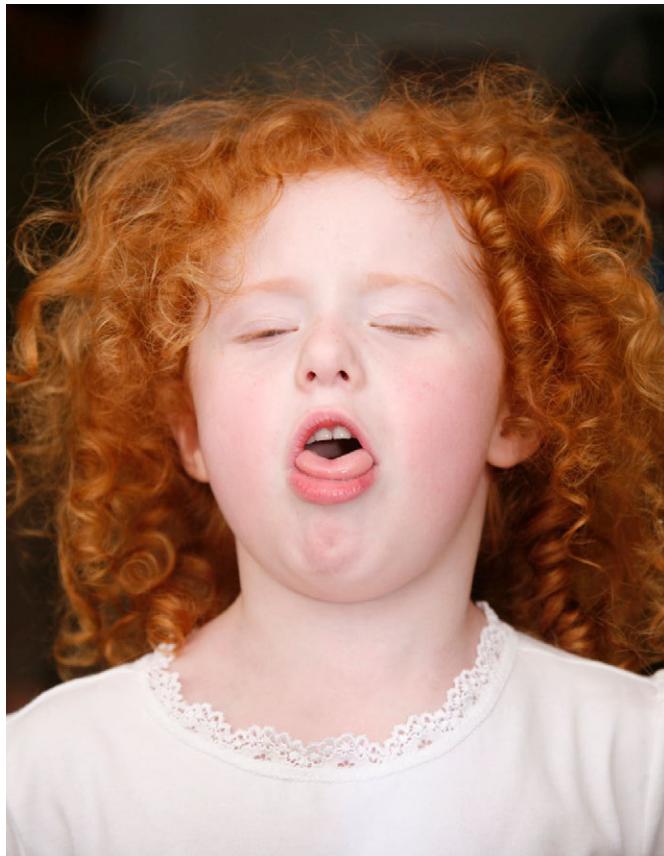
Dealing with Choking (Children and Infants)

Choking occurs when a foreign object blocks the airway. In first aid, individuals who have not yet reached puberty are considered to be children.

Sequence of increasing intervention for a choking child or infant

- Encourage the child to cough.
- If they cannot cough, try a firm backslap; leaning the child over your knee, with their head below their chest.
- Followed by 4 more backslaps if the object is not dislodged, continually checking if the casualty can breath or speak (cry).
- Attempt an abdominal thrust. This can be achieved by kneeling behind the child.
- Try a further 4 thrusts, continually checking if the casualty can breath or speak (cry).
- Continue with 5 back slaps followed by 5 thrusts until the object is dislodged.
- If the casualty collapses and stops breathing, call 999/112 and start CPR.

[Watch the Video](#)



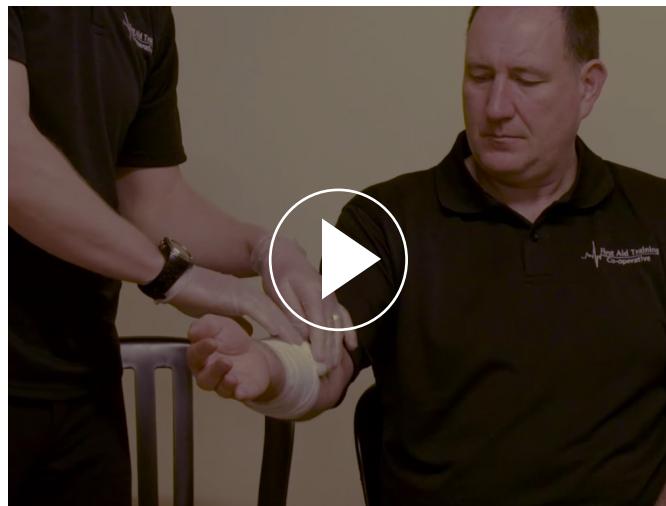
For infants (less than 12 months old) lay the baby face down over your thigh to perform backslaps. For chest thrusts lay them face up across your thigh, with head below shoulders. Perform chest thrusts using two fingers.

Do not attempt Abdominal Thrusts on an Infant (<12 months).

Bleeding Management

Bleeds can be caused by an abrasion (friction grazes), amputation, incision (a cut with clean edges), laceration (a cut with jagged edges) or a puncture (object passes through or becomes impaled in the skin). Do not remove impaled objects, [bandage around them](#).

How to manage a bleed	
C - Check the wound	<ul style="list-style-type: none"> Visually inspect the wound for impaled objects. Clean the wound with water to remove soil and dirt. Ensure safety, wear nitrile gloves.
A - Apply pressure. 10 minutes of direct pressure stops most bleeds	<ul style="list-style-type: none"> Direct pressure with an absorbent, non-adherent dressing. <u>If there is an impaled object use indirect pressure.</u>
R - Raise limb above level of the heart	<ul style="list-style-type: none"> This will reduce blood flow and promote clotting.
E - Ensure bandage is effective	<ul style="list-style-type: none"> Check if too loose, or too tight by checking capillary refill beyond the injury. If bleeding continues, add an additional bandage. If the second bandage is ineffective, remove both and reassess injury.



Nose bleeds - Lean the casualty forward, pinching the fleshy lower part of the nose. If bleeding has not stopped after 10 minutes, seek medical advice.

Remember C.A.R.E.

C – Check the wound for impaled object

A – Apply pressure

R – Raise limb

E – Ensure bandage is effective

Plasters should be used to cover small cuts and grazes. This helps to prevent infection and aid healing. [HSE Advice on plasters](#).

Internal Bleeding

Internal bleeding can result from injuries to chest, abdomen, upper leg and pelvis. Significant volumes of blood can be lost but still remain within the casualty's body, therefore internal bleeding can be difficult to recognise but should still be considered a life threatening emergency.

What do you see	What do you do
<ul style="list-style-type: none"> • Swelling, tenderness, distended (swollen) muscles • Discolouration of the skin • Guarding of the injury • Signs of <u>SHOCK</u> 	<ul style="list-style-type: none"> • Suspect internal bleeding. • Treat for SHOCK. • Do not elevate legs if this may compromise the injury. • Call 999 / 112 and report suspected internal injury.

Crushing injuries need special care. Release the pressure quickly if possible and inform the emergency services. Do not release a casualty who has been crushed by a heavy object for more than 15 minutes as toxins may have built up in the blood.

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Minor Amputation – Control blood loss first, do not let casualty eat or drink. Put the severed part in a plastic bag and wrap in a dressing or small towel. Cool the part by placing it in a bag of ice or bottle of water. Take the casualty to hospital urgently.

Shock and Major Bleeds

Shock is lack of oxygen to our vital organs, in particular the brain, caused by blood loss or a major burn. Shock is a life threatening emergency and a life saving priority. If in doubt, treat for shock in the case of any significant bleed or burn, even before you see signs or symptoms.

What do you see	What do you do
<ul style="list-style-type: none"> Pale, cold, clammy skin Fast shallow breathing Worried, anxious casualty Fast weak pulse Dizziness 	<ul style="list-style-type: none"> Lie down a conscious casualty, elevate legs and keep warm. Put unconscious casualty in recovery position. Call 999/112. Reassure the casualty and try not to leave alone. Monitor casualty vital signs.

Watch the Videos



Major bleeds must be treated quickly, think **shock**. We may need to improvise bandages with clothing. In extreme cases we may need to consider emergency bandages, tourniquets or clotting bandages.



Serious burns can lead to shock. [Follow burns advice](#). For serious burns call 999/112 immediately. Cool with clean water. Do not break blisters; do not remove bitumen from skin. Do remove tight objects (e.g. rings). Remove clothing unless it is sticking to the skin.

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Minor Injuries (cut/bruise/minor burn/splinter)

Minor Injuries are often treated in the workplace or home and do not require a visit to the hospital. As with all first aid cases it is important to talk to the casualty, build rapport and trust.

What do you see	What do you do
• Small cut	• Clean the wound, dry and cover with a sterile dressing (plaster).
• Splinter	• Clean the area. Use clean tweezers to remove the object carefully. Allow wound to bleed a little to flush dirt. Clean and cover the wound.
• Minor burn	• Run under tepid water for a minimum of 10 minutes or until the pain stops. Remove jewellery, cover with a sterile dressing.
• Bruise	• Apply a cold compress to the bruise, this helps reduce swelling.



With all of these injuries if you are not sure what to do, seek medical advice. In the UK, DIAL 111 for the NHS 24 helpline for free.

The helpline is open 24 hours a day, 7 days a week. NHS 111 also offers a video relay service that allows you to make a video call to a British Sign Language (BSL) interpreter.

Incident Reporting



First Aid incidents should be recorded in an **Accident Book** within 24 hours of the incident occurring. Anyone with knowledge of the incident (including the casualty) can complete the form but it is often your job as the first aider to do so.

Serious accidents at work (e.g. result in death, major injury, injuries lasting more than 7 days) must be reported directly to the HSE in line with the [RIDDOR regulations](#).

Employers can use information from the accident report to identify risks and improvements that may need to be made to provision or systems within the workplace. The reports are also legal documents and may be used for insurance or investigative purposes. These documents should be saved for at least 3 years.



Post Traumatic Stress

After an incident it is important to put some time aside for yourself. It is common for the first aider to feel they didn't do enough or worry that they made mistakes. Often just talking through the incident will allow you to clear your head. If feelings persist or return in the future it is important to seek counselling.

Accident Form should include as a minimum

- Date, time and place of incident
- Name and job of injured person
- Details of illness or injury and treatment or advice given
- What happened immediately afterwards (hospital, went home, etc)
- Name and signature of person dealing with the incident
- Name and signature of witness

First Aid Kits



All employers and sole traders should have access to a first aid kit; this includes all works vehicles. Sufficient stock should be kept at hand to cover your workplaces' requirements.

In the outdoor context this first aid kit needs to be 'fit for purpose'. Each activity has its own hazards and dangers. You know what injuries are likely to happen in your specialism and your first aid kit should be put

together with this in mind. It is appropriate to make specific first aid kits for different types of activity.

Contents of the kit should be checked regularly by a responsible person. They will ensure that there are sufficient quantities of items and that none of the items use-by dates have expired.



An outdoor first aid kit could end up being quite bulky which can be impractical. Often we use pieces of equipment to improvise treatment in the outdoors. Items like 'gaffer tape' and spare clothing can be ideal for this purpose.

Clean Up

- **Clean up the scene and any equipment used**
- **Bag up any wastes (body fluids, used dressings etc.) or sharps and dispose of in accordance with current standards**
- **Restock the first aid kit**
- **Complete and file documentation**

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S.A.M.P.L.E.



The acronym **SAMPLE** is used in the assessment of casualties. It is a way to help first aiders remember the correct information to gather at the incident scene, it often referred to 'Taking a SAMPLE history'.

Signs and symptoms - A sign is something you observe. A symptom is something the casualty feels and tells you about.

Allergies, age, athleticism - Ask if the casualty has ever had any allergic reactions to any medications or foods. Ask them their age. Do they look athletic? This will affect their baseline vital signs.

Medications - Ask if the casualty takes any prescription medicines or is taking any other drugs.

Past medical history - Ask about relevant medical history.

Last oral intake - Ask about the casualty's last intake of food and drink, this is especially important if the condition could be caused by food or drink.

Events leading up to the illness or injury – Ask what happened in the time leading up to the injury or illness?



SAMPLE is taught on a wide variety of first aid courses and can be performed by paramedics or first responders during an emergency. This information along with vital signs information is important to hand over to medical staff once they arrive on scene. It will give great assistance to the medical staff that take over casualty care. Ensure that information is kept confidential.

SAMPLE

S – Signs and symptoms

A – Age, athleticism, allergies

M – Medication

P – Past history

L – Last oral intake

E – Events leading up to incident

Sprains and Strains

Commonly caused by trips, slips and falls or by sporting activities. Sprains and strains affect joints and surrounding soft tissues which can be overstretched or torn. If in doubt, treat the injury as a fracture. The casualty may want to move ('walk it off') but this may cause further damage.

What do you see	What do you do
<ul style="list-style-type: none"> Pain and tenderness at injury site Swelling and discolouration Loss of movement 	<ul style="list-style-type: none"> Rest – Sit down and support the injury. Ice – Apply a cold compress to reduce pain and swelling. Compression or comfort bandage - Use an elasticated bandage to support injury and help reduce swelling. Bandages should not be left on overnight. Elevation – Raise the injury above the level of the heart if possible.



Cooling should be applied in cycles of 10 minutes on and 10 minutes off the injury. In the outdoors this can be achieved with a cold compress from clothing, soaked with water from a stream or the sea.

Evacuation is a concern in the outdoors if the casualty is immobile. Unless the situation is dangerous, insulate and protect the casualty and call for help.

Treatment

R – Rest

I – Ice

C – Compression or comfort bandage

E – Elevate

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Lower Leg Injury

Often called a ‘boot top’ fracture these often will show deformity and obvious damage. The first aider should immobilise the injury in a remote setting. Lower leg injuries may require re-alignment if professional help is delayed by over 30 minutes.

For ankle and lower leg injuries the first aider **MUST** remove the boot to assess for damage and colour, sensation and movement (CSM) at the end of the limb.

What do you see	What do you do
<ul style="list-style-type: none"> Pain at site of injury, deformity Possible protruding bone Swelling and bruising Loss of power or movement in limb Nausea and/or signs of shock 	<ul style="list-style-type: none"> Immobilise the affected limb. Monitor the casualty. If the bone is exposed, control bleeding. Do not apply pressure directly to the bone. Evacuate to hospital. If removal to hospital is delayed, improvise a splint to immobilise the limb.

Lower leg re-alignment

Deformity should be corrected by manual traction (gentle pulling) as early as possible. Once pulled the foot can be rotated back into its correct anatomical position and immobilised. It may be necessary for a second person to hold the limb above the injury to keep it stable.

Watch the Video



Collar Bone and Arm Injuries

Arm and collar bone injuries are common impact injuries. These will require a sling in order to stabilise. You must ensure that any support given by the casualty is replicated by the sling. One memory aide for this is to 'Bind as you find'.

What do you see	What do you do
Collar Bone	<ul style="list-style-type: none"> Pain at site of injury May notice an obvious step, skin may be stretched over bone (tenting) Nausea and/or signs of shock <ul style="list-style-type: none"> Immobilise the affected limb. If the bone is exposed, control bleeding. Do not apply pressure directly to the bone. Evacuate to hospital.
Arm and Elbow	<ul style="list-style-type: none"> Pain at site of injury, deformity Possible protruding bone Swelling and bruising Loss of power or movement in limb <ul style="list-style-type: none"> Immobilise the affected limb. If the bone is exposed, control bleeding. Do not apply pressure directly to the bone. Evacuate to hospital.

Circulation checks

Regularly check for circulation and sensation at the wrist. If casualty loses circulation or sensation, evacuate immediately if possible or call emergency services.

Hand, finger and thumb injuries

Immobilise. Put a pad between fingers/thumb and lightly strap together. Place in elevated sling. Swelling will occur, loosen strapping when required.

Watch the Video

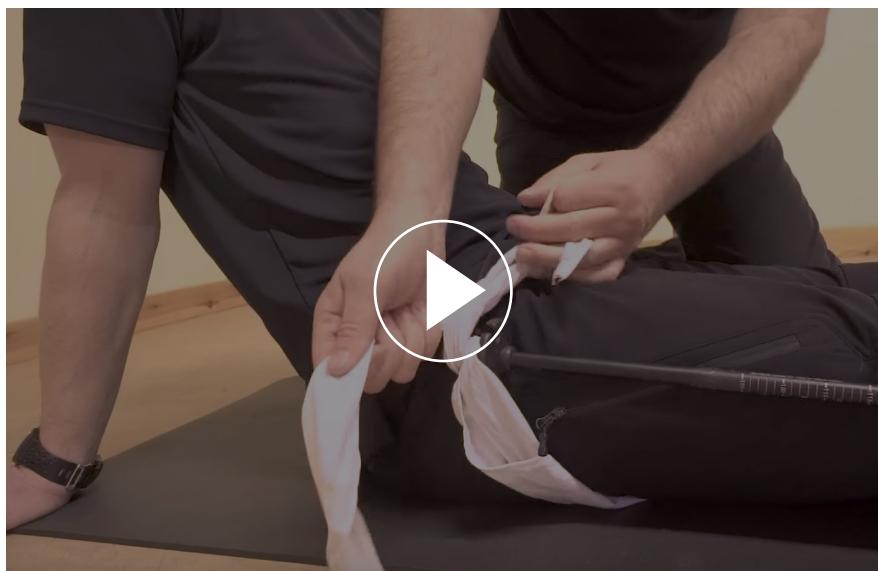


Fractures



Fractures can be open, closed or complicated (involving other organs or tissues) and can be caused by direct, indirect or twisting forces. Your aim is to stabilise the injury. It can be hard to determine if an injury is a fracture, a sprain or a dislocation. Therefore it is safest to assume a fracture.

Dislocations are hard to diagnose and as a general rule should only be re-located by someone trained to do so. A badly re-located dislocation will simply cause more pain and future problems. Immobilise the injury in the position you find it.



Femur Splint - A broken femur can be potentially life threatening; try to immobilise the whole body. The casualty's leg may appear shortened. In a remote setting or when emergency services are significantly delayed, consider a traction splint.

Pelvis Splint - Move the pelvis as little as possible. Do not press or 'spring'. If possible immobilise the legs by padding between them and bringing knees together. Gently tie a broad bandage around the widest part of the pelvis a 'happy' if you need to move the casualty.

Remember for serious fractures

- ABC - Don't be distracted by the casualty's pain or an obvious fracture.
- If the casualty loses Colour, Sensation or Movement in the limb below the sight of injury, this is a medical emergency.
- Shock is a significant risk with these injuries.
- Do not move casualty unless they have an airway problem.

Head Injury

The brain is a soft vulnerable organ protected by the hard skull. You should watch out for signs of concussion, compression and skull fractures. In the outdoor setting, time is crucial, evacuate early before signs of compression occur. If the casualty has sustained a head injury, always suspect a spinal injury too.

What do you see	What do you do
<ul style="list-style-type: none"> • Changing level of consciousness • Brain affected. Signs – nausea, vomiting, persistent headache, unusually sleepy or drowsy, blurred vision • Strong bounding pulse • Face flushed • Bleeding or bruising around eyes, mouth, ears 	<ul style="list-style-type: none"> • Lie casualty down, elevate head and shoulders. • Do not stop bleeding from nose or ears. • Call 999/112. • Monitor vital signs carefully. • Place unconscious casualty in recovery position.

Concussion is a temporary deviation from normal alertness caused by a blow to the head. The effects are usually temporary and need time and rest to heal properly. If symptoms are seen, evacuate and monitor the casualty.

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Cerebral compression occurs when there is a build-up of pressure on the brain caused by bleeding or swelling inside the skull – this is a life-threatening condition and you should call the emergency services immediately.

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Remember P.E.A.R.L.

P – Pupils

E – Equal

A – And

R – Reactive to

L – Light

Spinal Injury

Spinal injuries can involve the back or neck bones (vertebrae), intervertebral discs or spinal cord. These can be difficult injuries to manage, especially injuries to the neck. One key indicator for spinal injury is the mechanism of injury which usually involves a fall or impact.

What do you see	What do you do
<ul style="list-style-type: none"> • Loss of limb control • Casualty complains of pain in the neck or back • Loss of feeling or a tingling sensation in limbs • Loss of bladder or bowel control 	<ul style="list-style-type: none"> • Call 999/112 immediately. • Reassure casualty and maintain an open airway. • Take care to keep casualties head in line with the rest of their body – ‘Spine in Line’. • If the casualty loses consciousness, place in recovery position.



Place an unconscious casualty with a spinal injury in [the recovery position](#) to maintain an open airway. This is a higher lifesaving priority although care must be taken to maintain spinal alignment as much as possible.

Watch the Video



Spinal Log Roll. A group of people can roll a casualty safely using a spinal roll which includes the use of a jaw thrust.

Chest Injury

A chest injury is any form of physical injury to the chest including the ribs, heart and lungs.

What do you see	What do you do
Broken rib <ul style="list-style-type: none"> Pain when taking a breath Tenderness to chest or back over area of ribs A “crunchy” feeling under the skin Shortness of breath 	<ul style="list-style-type: none"> Very little you can do for it. Take to hospital.
Penetrating (sucking) chest wound <ul style="list-style-type: none"> Assume all penetrating wounds are sucking chest wounds. It can be difficult to identify when a penetrating wound is sucking air or not. They don't always make noise. 	<ul style="list-style-type: none"> Seal the wound with plastic over the hole and tape it down on all sides. Sit the conscious casualty down leaning towards the injured side. Unconscious casualties should be put into the recovery position and rolled onto the injury. Evacuate immediately.
Flail chest <ul style="list-style-type: none"> One or more broken ribs that are broken in more than one place each. Paradoxical breathing 	<ul style="list-style-type: none"> Press a hard pad to put pressure on the flail segment. Sit the conscious casualty down leaning towards the injured side. Unconscious casualties should be put into the recovery position and rolled onto the injury. Evacuate immediately.

Monitoring

Chest injuries are complex to diagnose and treat. Deterioration is indicated by:

- Unequal chest (one side looks bigger than the other)
- Tracheal movement to the uninjured lung
- Blue lips and neck

Subcutaneous emphysema is when air is in the layer under the skin. This has a crackling feel to the touch, a sensation that has been described as similar to touching Rice Krispies. This can be a symptom of an underlying chest injury.

Abdomen/Pelvis Injury

Abdominal and pelvic injuries can cause internal bleeding which may lead to [shock](#). The initial injury can be difficult to detect but there may be a history of impact to the abdomen. If casualty becomes unconscious, carefully place in recovery position.

What do you see	What do you do
Abdomen	<ul style="list-style-type: none"> • Bruising, tenderness, swelling • Hardness of abdomen near injury • May be confused or aggressive • May be blood in urine • Think SHOCK <ul style="list-style-type: none"> • Find out history. • Call 999/112 and keep them calm. • Lie down and support legs if possible. • Do not remove penetrating objects. • Cover any wound but DO NOT push any protruding organs back into stomach.
Pelvis	<ul style="list-style-type: none"> • Casualty unable to walk or stand • Pain around groin, hips or back Increasing with movement • Difficulty in passing urine or priapism in men • Think SHOCK <ul style="list-style-type: none"> • Find out history. • Do not move unless in an emergency. • Immobilise legs by tying together. • Call 999/112 and reassure and keep warm.

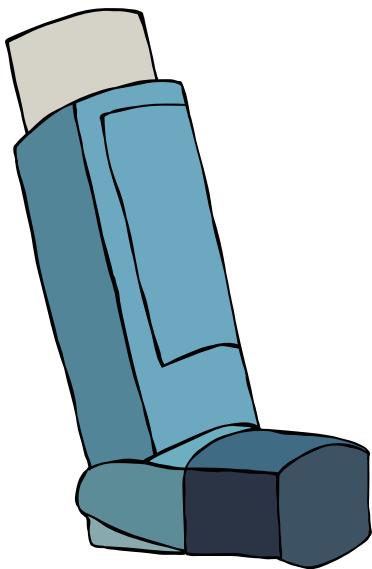


Internal Bleeding is often caused by impact (car crash) or fall from height. Blood (oxygen) can fill spaces between organs or drain from body (anus, ear, nose, mouth). Casualty may start to show signs of [shock](#) (cold, pale, clammy, anxious, fast shallow breathing) and require immediate evacuation.

Asthma

Asthma is an allergic reaction that causes the tubes in the lungs to narrow. The amount of air (oxygen) leaving the lungs is reduced meaning less fresh air can enter. This reduces the supply of oxygen to the body. Irritation to the lungs can be caused by; cat hair, pollen, cold air, stress or exertion.

What do you see	What do you do
<ul style="list-style-type: none"> • Difficulty breathing (mainly out) • Wheezing • Tightness in chest • Worried and anxious • Difficulty speaking • Blueness around lips • Veins become prominent on neck 	<ul style="list-style-type: none"> • Make them comfortable, possibly by sitting them down and leaning forwards. • Assist them with the use of their inhaler. • Reassure the casualty. • Remove the factor causing the asthma. • If it doesn't improve in 5 minutes, call 999/112. • If they collapse place in recovery position. • If they stop breathing begin CPR.



[Watch the Video](#)



Inhalers and spacers

Asthma sufferers will often have their inhaler with them. Assist them to use it. If a casualty has forgotten to bring their inhaler it is reasonable to ask bystanders if they have one the casualty can use.

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Diabetes

Diabetes results in an imbalance of the levels of sugar in the blood. Commonly we see hypoglycemia (low blood sugar levels) and occasionally we may see hyperglycemia (high blood sugar levels). Non-diabetics can also experience low blood sugar levels in certain circumstances.

What do you see	What do you do
Hypoglycemia – Low Blood Sugar Levels	
<ul style="list-style-type: none"> One or more of feeling tired, weak, hungry, dizzy Change in personality, becoming irrational You may find a Medi-tag on the casualty 	<ul style="list-style-type: none"> Sit casualty down and give sugar in form of a drink or glucose (sweets or biscuits). Assist casualty to locate and use their glucose testing kit. If casualty collapses call 999/112, try rubbing sugary gel into their gums (e.g.jam or syrup).
Hyperglycemia – High Blood Sugar Levels	
<ul style="list-style-type: none"> Thirst, breathless, nausea Fruity sweet breath You may find a Medi-tag on the casualty Bleeding or bruising around eyes, mouth, ears 	<ul style="list-style-type: none"> Call 999/112 immediately. If casualty collapses place in recovery position. Place unconscious casualty in recovery position.



Sugar Highs – Hyperglycemia is less likely for most casualties as it develops slowly. Medical assistance is required immediately if you suspect this.

Glucose. The brain exclusively uses glucose for energy. Hence the brain is very sensitive to changes in blood sugar level. A casualty with a poor blood sugar balance will have a disordered brain.

Stroke

Strokes are more common in later life and affect the brain. A stroke can be a blood clot or burst blood vessel in the brain. It may be possible to break up a clot with drugs in hospital. The quicker the casualty reaches hospital the better their chance of rehabilitation and recovery.

What do you see	What do you do
F – Facial weakness. Casualty can't smile properly or may put their tongue to the side when they stick it out	
A - Arm weakness. Casualty can only raise one arm or has uneven strength in their hands	<ul style="list-style-type: none"> • Don't waste time – if you suspect a stroke, call for the emergency services.
S – Speech problems. Unable to speak clearly or understand	<ul style="list-style-type: none"> • Reassure the casualty. • If conscious keep them supported in a comfortable position, possibly the lazy W.
T - Time to call 999/112	<ul style="list-style-type: none"> • If the casualty becomes unconscious, place in the recovery position.

A Mini Stroke (TIA) is similar to a stroke but symptoms may only last a few minutes and may improve. A TIA may be the pre cursor to a full stroke.

If in doubt think STROKE and seek medical advice as soon as possible.

Time. It is important to note the time that the casualty was last known to be OK. This is vital information for the emergency services and may influence their decisions.

Stroke - Think F.A.S.T.

F – Face

A – Arm

S – Speech

T – Time to phone 999

Suspension Trauma

Advice for first-aiders responding to harness suspension incidents

In 2008 the Health and Safety Executive produced an evidence-based review of published medical literature, which clarified guidance on the first aid management of a person falling into suspension in a harness who may develop 'suspension trauma'.

HSE key recommendations

- No change should be made to the standard first aid guidance for the post recovery of a semi-conscious or unconscious person in a horizontal position, even if they have been subject to prior harness suspension.
- No change should be made to the standard UK first aid guidance of ABC management, even if the casualty has been subject to prior harness suspension.
- A casualty who is experiencing dizziness, lightheadedness, blurry or narrowed vision (tunnel vision), nausea (feeling sick) and / or vomiting (being sick), headache, sweating, heart palpitations (faster, heavier, or irregular heartbeat felt by the person) or who is unconscious whilst suspended in a harness should be rescued as soon as is safely possible.
- If the rescuer is unable to immediately release a conscious casualty from a suspended position, elevation of the legs by the casualty or rescuer, where safely possible, may prolong tolerance of suspension.



"The term "suspension trauma" is one that has developed as a parlance amongst many who work in the fall protection industry and training sector. It is used to describe the situation of a person falling into suspension in a harness and then becoming unconscious. In this scenario the loss of consciousness is not due to any physical injury, but rather, it is thought that orthostasis, motionless vertical suspension, is responsible. "Trauma" is therefore an inappropriate term which may be better replaced by the descriptive term "syncope" which is the sudden transient loss of consciousness with spontaneous recovery, as may occur with a simple faint." - [HSE 2008](#)

Burns and Scalds

A range of things can cause burns such as; sunburn, electricity, hot water or chemicals. Fortunately the treatment is the same for each – cooling the affected area. If the skin is broken, take extra care, as the body's natural infection barrier is not effective. Serious burns lead to fluid loss and [shock](#).

What do you see	What do you do
Minor	<ul style="list-style-type: none"> • Redness on skin, painful <ul style="list-style-type: none"> • Remove heat source. • Irrigate with tepid/cool water for at least 10 minutes. • Remove constrictions (jewellery). • Prevent infection with a sterile dressing.
Major	<ul style="list-style-type: none"> • Skin broken (partial thickness) • Skin gone, can see fat, tendons, bone (full thickness) <ul style="list-style-type: none"> • Cool quickly with cool water. • Remove clothing if loose, if clothing is stuck, leave in place. • Remove constrictions (jewellery). • Cover with sterile dressing. • Consider calling 999/112. • Lay down and treat for SHOCK.



The following burns should be treated in hospital:

- Burns to face and mouth, hands, feet and genitals
- Burns which completely circle a digit or limb
- Minor burns larger than 5 times the size of the casualty's palm
- Partial thickness burns larger than the size of the casualty's palm
- Any full thickness (third degree) burn

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Poisoning

Poisoning occurs when a substance harmful to the body enters the system. This can be injected, inhaled, absorbed through skin, swallowed or eaten. Children are especially susceptible to objects that can be mistaken for sweets, such as washing machine tablets.

What do you see	What do you do
General Poisoning	
<ul style="list-style-type: none"> Take a history from the casualty, (What have they come into contact with?) 	<ul style="list-style-type: none"> Do not induce vomiting and seek medical advice.
<ul style="list-style-type: none"> Unconscious casualty 	<ul style="list-style-type: none"> Place in the Recovery Position.
Special Cases	
<ul style="list-style-type: none"> Absorbed poison 	<ul style="list-style-type: none"> Irrigate the skin with water.
<ul style="list-style-type: none"> Swallowed poison 	<ul style="list-style-type: none"> Keep warm, reassure and monitor.
<ul style="list-style-type: none"> Inhaled poison 	<ul style="list-style-type: none"> Think 'Airway'. If they stop breathing begin CPR. Provide a source of fresh air.
<ul style="list-style-type: none"> Injected poison 	<ul style="list-style-type: none"> Stay safe. Look for needles and sharps.



DO - Attempt to collect or identify the poison. You can collect a sample of the vomit if you have no sample of the poison.

In the workplace COSHH cards should be available.

DO NOT INDUCE VOMITING

Anaphylaxis

Anaphylaxis is an extreme allergic reaction to a substance that is introduced to the casualty's body. The body releases histamine as a natural defence mechanism and this causes swelling. If the swelling is in the mouth or throat, airway management becomes critical.

What do you see	What do you do
<ul style="list-style-type: none"> • Swelling of face, lips, neck, eyes • Red blotchy patches on skin • Difficulty in breathing • Anxiety 	<ul style="list-style-type: none"> • Call 999/112 immediately. • Make the casualty comfortable. • Use their auto-injector if they have one. • If the casualty becomes unconscious put them in <u>Recovery Position</u>. • If the casualty stops breathing, start <u>CPR</u>.



Can a first aider give an auto-injector? – YES. In the UK, a first aider should help the casualty use their auto-injector (Epi-pen, Amerade, Jext), even if the casualty is unconscious. Instructions are written on the side of the pen. Remove cap, press into thigh (through clothing), hold for 10-15 seconds, remove and rub the thigh. Use a second pen if symptoms don't improve.

Common causes of anaphylaxis include bee stings, latex, nuts, seafood and many fruits.

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Eye Injury

Eye injuries are painful and troubling. They can cause permanent sight loss or severe damage to sight. Prevention is better than cure and correct personal protective equipment should be worn when needed. Chemicals, wind blown particles, impaled objects and bright light injuries are all of concern.

What do you see	What do you do
<ul style="list-style-type: none"> • Chemical burn • Grit, sand, or dust in eye • Impaled objects • Sunlight (ultra violet exposure) and flash burn (glare from welders torch). Gritty feeling in eyes. Redness and watering of eyes. Symptoms may develop slowly 	<ul style="list-style-type: none"> • Irrigate with copious amounts of water. Ensure water drains away from good eye. Seek medical assistance if required. • Lay the casualty flat, irrigate, then cover the affected eye with a non fluffy dressing. If possible cover both eyes. Take to hospital. • Reassure, cover eyes with light, moist bandages and take to hospital. Do not try and remove contact lenses. Protect from further brightness.



Eye protection – sunglasses

Look for sunglasses that protect you from 99 to 100% of both UVA and UVB light. This includes those labelled as “UV 400”. Consider wrap-around sunglasses to prevent harmful UV rays from entering around the frame. Some contact lenses provide UV protection but they don't cover the whole eye and protection will still be required.

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Sea Sickness

Sea (or motion) sickness is a term that describes an unpleasant combination of symptoms, such as dizziness, nausea and vomiting, that can occur when you're travelling or at sea. In most cases, the symptoms of motion sickness will start to improve as your body adapts to the conditions causing the problem.

What do you see	What do you do
<ul style="list-style-type: none"> • Pale, cold sweaty skin • Dizziness • An increase in saliva • Nausea and vomiting • Drowsiness or extreme tiredness 	<ul style="list-style-type: none"> • Keep still – if possible in the middle of a boat, this is where you'll experience the least movement. • Look at a stable object – the horizon. • Fresh air – go outside and avoid getting too hot. • Stay hydrated and avoid alcohol. • Stay calm – keep calm about the journey. You're more likely to get sea sickness if you worry about it.



Motion sickness is thought to occur when there's a conflict between what your eyes see and what your inner ears sense. Your brain holds details about where you are and how you're moving. The nerves in your inner ear give your brain a sense of motion and balance. If there's a mismatch of information between these two systems, your brain can't update your current status and the resulting confusion will lead to symptoms of sea sickness.

Animal Bites

Insect bites

Prevention of insect bites is better than cure. Wear long sleeves tops and trousers, use repellents and avoid swarming bees or wasps.

What do you see	What do you do
<ul style="list-style-type: none"> Honey bees leave their sting inside the wound. It's important to remove the barb to stop infection setting in. Area around sting will become painful, red, itchy and swollen. 	<ul style="list-style-type: none"> Scrape the sting out sideways with something with a hard edge, such as a bankcard or your fingernails, if you don't have anything else to hand. Don't pinch the sting with your fingers.
<ul style="list-style-type: none"> Wasps – around the sting site will become painful, red, itchy and swollen Stings from wasps cause the most allergic reactions in the UK. 	<ul style="list-style-type: none"> Reassure casualty. Wash the area, avoid scratching, apply cold compress.
<ul style="list-style-type: none"> Scottish Midge - scourge of trips to the Scottish Highlands. Bites are painful, itch intensely and can swell up alarmingly! 	<ul style="list-style-type: none"> Prevent midge bites: Protective gear, such as mesh covers for your face. Reassure casualty. Wash the area, avoid scratching, apply cold compress.

Adder bites

Adder bites are scary but not life threatening for adults. Keep the casualty calm; keep the bite lower than their heart. Avoid excessive movement and evacuate them to hospital as soon as possible.

Dog, horse, human bites

Serious animal and human bites can get infected if they are not checked and treated quickly. Always seek medical advice if you have been bitten and the bite has broken the skin. Infections are rarely serious if treated quickly.

VISIT THE
BLOG

Facial Injury

Immediate problems concern breathing issues. Maintaining the airway is a priority for facial issues. Always monitor the airway and casualties level of consciousness.

Problem area	What do you see and do
• Scalp wound	• Can bleed heavily. Help the casualty apply direct pressure with their hand to stem the blood loss.
• Gum shield	• Are typically removed (in conscious and unconscious casualties) as blood can accumulate behind the shield.
• Jaw	• Stepped appearance in teeth or unable to bite normally. Casualty can hold their jaw for support.
• Nose bleed	• Lean forward and pinch fleshy part of nose. Should stop within 10 minutes.
• Nose fracture	• Pain and deformity around nose. Do not touch, or blow nose. Go to hospital.
• Cheek fracture	• Try not to cough, sneeze or blow nose. Go to hospital.
• Teeth	• If tooth is still attached, leave in situ. If tooth is loose take to dentist with tooth in milk or saline solution.



Seek Medical Advice

If in doubt, especially injuries involving the face and a potentially compromised airway, seek medical advice.

Lightning Strike

How Far Away Is It? Count how many seconds pass between the flash of the lightning and sound of the thunder. Divide the number of seconds by 5 to find the distance in miles (divide by 3 for kilometres) from you to the lightning (5 seconds = 1 mile).

Use the 30/30 Rule. If the time between seeing the flash of lightning and hearing the thunder is less than 30 seconds, take shelter. You are in a strike area.

Remain in shelter for 30 minutes after the last flash of lightning as you are still in a potential strike area.

Good advice

- **Do not seek shelter under a picnic shelter, lone tree or other object to keep you dry. It will attract lightning. The rain won't kill.**
- **Avoid standing near tall objects.**
- **Cars are very safe places to be during lightning storms.**
- **If you are not able to get to any shelter, you need to become a small target and cross your fingers. Minimise your contact with the ground and minimise your height.**
- **If you are above the treeline, seek shelter in the lowest area you can reach.**
- **Your group should not huddle together. Instead have each person find shelter about 30 metres apart.**
- **If there are multiple casualties, prioritize care needed. A victim that is not breathing is highest priority. There is a relatively good chance of reviving a lightning casualty with CPR.**



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BLOG

Avalanche

Even small avalanches are a serious danger to life, even with properly trained and equipped companions who avoid the avalanche. Searches should be started immediately, if safe to do so. Victims ideally need rescuing within 15 minutes of being avalanched.

Issues	What do you do
<ul style="list-style-type: none"> • Asphyxia due to burial in snow • Traumatic injuries • Hypothermia is a significant complication of avalanche 	<ul style="list-style-type: none"> • Check airway for snow and spindrift. • If not breathing and it is safe to do so, start CPR and continue for at least 30 minutes. • Traumatic injuries are extremely common in avalanched casualties. Spinal injuries should be suspected and patients should be carefully moved.



Multiple casualty burials are difficult to manage. Avalanche triage is beyond the scope of this manual. In principle rescue those with the greater chance of survival. Partially buried first, then deeper buried and less accessible casualties.

European Resuscitation Council Avalanche Guidelines 2015:

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GUIDELINES**

Altitude Issues

As altitude increases, barometric pressure decreases and the density of oxygen molecules decreases. At altitude our bodies have less access to oxygen than at sea level. Our bodies can acclimatise to this but it takes time to do so. Generally affecting people travelling to an altitude of >3500m.

What do you see	What do you do
Acute mountain sickness (AMS) - Common	
<ul style="list-style-type: none"> • Throbbing headache • Nausea or vomiting • Anorexia • Fatigue or weakness • Dizziness • Difficulty sleeping 	<ul style="list-style-type: none"> • Stop further ascent, rest. • Oral fluids. • Simple analgesics (Paracetamol). • Wait and see. If no better DESCEND.
High altitude pulmonary oedema (HAPE) - 1-10% of those ascending above 4500m	
<ul style="list-style-type: none"> • Normally preceded by AMS • Breathless at rest • Cough, dry and annoying • Cough, wet, bubbly and blood stained • Needs to sleep upright 	<ul style="list-style-type: none"> • DESCEND immediately • Keep casualty upright. • Oxygen produces immediate and dramatic improvement. • Keep warm.
High altitude cerebral oedema (HACE) - 1-2% of those ascending above 4500m	
<ul style="list-style-type: none"> • AMS • Quiet, Sleepy, Lethargic • Confused • Clumsy • Seizures 	<ul style="list-style-type: none"> • DESCEND immediately

If in doubt descend – you can always go back up later. Assume altitude illness until you descend. If symptoms don't disappear, altitude sickness is not the cause of the illness.

Safe rates of ascent - Above 3000m, sleeping altitude should not increase by more than 300m per night. For every 1000m further ascent, you should spend a second night at the same altitude. 'Climb high, sleep low'.

Weil's Disease and Leptospirosis

90% of cases are mild but in its most severe form, leptospirosis is also known as Weil's disease. Symptoms of mild form Leptospirosis can be seen up to a month after infection. Symptoms of Weil's Disease develop one to three days after the mild symptoms have passed.

Carriers of leptospirosis in the UK are cattle and small mammals such as rats.

What do you see	What do you do
Mild form leptospirosis <ul style="list-style-type: none"> • High temperature 38°C and 40°C • Chills • Sudden headaches, nausea and vomiting • Loss of appetite • Muscle pain, particularly the calves and lower back • Conjunctivitis (irritation and redness of the eyes) • Coughing • A short-lived rash 	<ul style="list-style-type: none"> • These symptoms usually resolve within five to seven days. • Seek advice from your GP – see below.
Weil's disease - Severe form of leptospirosis - 10% of cases <ul style="list-style-type: none"> • Jaundice (yellowing of the skin and the whites of the eyes) • Swollen ankles, feet or hands • Chest pain • Headaches, vomiting and seizures • Shortness of breath • Coughing up blood 	<ul style="list-style-type: none"> • Seek advice from your GP – see below.

The Casualty should see a GP if they have:

- Been exposed to a freshwater source, such as a river or lake
- Been exposed to animal urine or animal blood
- Travelled to parts of the world where leptospirosis is widespread

Can leptospirosis be prevented?

The risk of contracting leptospirosis in the UK is very low. If you work with animals or are in regular contact with freshwater sources, wear appropriate protective clothing, and ensure to clean and dress wounds properly.

Ticks and Lyme Disease

Lyme Disease is a bacterial infection spread by ticks. Once thought to be rare it has now been shown to be common and widespread in the UK. Symptoms can be seen up to a month after infection.

To avoid being bitten, 'tuck in' long trousers and tops, use insect repellents, and carry out regular tick checks when walking through areas of long vegetation.

What do you see	What do you do
<ul style="list-style-type: none"> • Circular bull's-eye rash • Tiredness (fatigue) • Muscle pain • Joint pain • Headaches • A high temperature (fever) • Neck stiffness 	<ul style="list-style-type: none"> • Ticks should be removed as soon as possible (see below). • If you have been bitten by a tick and suffer from symptoms listed, go and see your GP. • Give the GP a history.



Tick Removal

Ticks should be removed with tweezers or tick tweezers as soon as possible. Do not try and pull the tick out with your fingers or smear it in a liquid or gel to kill it. Don't risk the tick's internal contents being pushed into the bite site.

VISIT THE
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Giant Hogweed

Giant hogweed can grow up to five metres tall, often along footpaths and riverbanks. If the toxic sap of the plant comes into contact with your skin, this increases sensitivity to UV rays causing severe, painful burns. Can cause blindness if in contact with eyes.

What do you see	What do you do
<ul style="list-style-type: none"> Sap can get onto your skin through touching any part of the plant, the sap causes your skin to react to ultraviolet light 	<ul style="list-style-type: none"> Do not touch Giant Hogweed, avoid it. If you do come into contact, immediately wash the area with copious soap and water.
<ul style="list-style-type: none"> On a sunny day burning, inflammation and blisters can be very severe and lead to scarring 	<ul style="list-style-type: none"> Stay out of any sunlight for at least 48 hours, whilst monitoring for any delayed reaction.
<ul style="list-style-type: none"> Contact with the eyes can be very damaging 	<ul style="list-style-type: none"> Flushing the eyes with copious fresh water as a precautionary measure is also advisable.



Cow Parsley - For some people, Cow Parsley can also be an irritant, although typically with much milder effects. Treat in the same way as Giant Hogweed. If in doubt, contact a medical professional and tell them the situation.

Stinging Nettles - Nettle leaves are covered in tiny, needle-like hairs. When you brush against a nettle, the hairs break off, penetrate your skin and sting you, producing the familiar burning sensation and rash. The dock leaf or a cold compress are effective natural remedies for nettle rash.

VISIT THE
BLOG

Hypothermia

Hypothermia is caused by the cooling of the body's core organs when cold blood from the body's surface reaches the body core. This affects the function of the heart and brain. It can occur in the outdoors in cold temperatures or on warm days if casualties have been active e.g. road cyclists on mountain descents.

What do you see	What do you do
Mild Hypothermia	<ul style="list-style-type: none"> Prevent further heat loss. Get the casualty into shelter and insulate from the ground. Remove and replace wet clothing. Rewarm slowly, give warm drinks and high energy food if available.
Severe Hypothermia - Casualty may be unconscious but is breathing	<ul style="list-style-type: none"> If conscious, as above. Slow warming required. Call 999/112 and evacuate to hospital as quickly as possible.
Severe Hypothermia - No vital signs	<ul style="list-style-type: none"> Carefully insulate and shelter the casualty. Very slow warming required. Call 999/112 and evacuate to hospital as quickly as possible.



Prevention of hypothermia is better than cure. Remind others to zip up coats and put on gloves and hats. If one person is cold and shivering it is a sign others may be close to becoming mildly hypothermic. Consider shortening the activity, refueling with warm drinks and food.

Immersion Hypothermia

The most common misunderstanding about cold water immersion is that it leads to immediate hypothermia.

Three phases of immersion hypothermia

1. **Cold shock** is the body's involuntary response to being suddenly immersed in cold water. It lasts for only about a minute. On entering the water the blood vessels in the skin constrict, a "gasp" as breathing rate increases, leading to a feeling of panic. Many casualties die due to this effect. Wearing a lifejacket or buoyancy aid greatly increases survival rates.
2. **Cold incapacitation** - Muscle and peripheral nerve cooling leads to weakness and drowning. This occurs within 5 – 15 minutes in cold water. Blood flow decreases to the extremities, to preserve warmth in the core & vital organs. Muscle and nerve fibres don't work well when cold, resulting in loss of meaningful movement in the hands and feet. Use of radio, flares etc. is difficult.
3. **Hypothermia** – leading to unconsciousness and drowning. While times vary with water temperature and body mass, it can take 30 minutes or more.



Treatment for a cold casualty who is removed from the water immediately is to warm them quickly. Put on dry clothes give warm drinks and food.

Frost Bite and Trench Foot

Frostbite is damage to skin and tissue caused by exposure to freezing temperatures – typically any temperature below 0°C. Frostbite can affect any part of your body. However, the extremities, such as the hands, feet, ears, nose and lips are most likely to be affected.

What do you see	What do you do
Frostnip (early stage)	<ul style="list-style-type: none"> • Skin becomes cold, numb and white • Tingling sensation, pins and needles • Throbbing or aching <ul style="list-style-type: none"> • Replace wet clothing with soft, dry clothing. • Warm the body, using warm hands or wrapping it in dry clothing. • Don't rub the affected area or apply direct heat because this can cause further injury.
Superficial frostbite	<ul style="list-style-type: none"> • Affects the top layers of skin and tissue, but treatment is needed to make sure there's no lasting damage • Affected area will feel hard and frozen • Swelling and itching • Once out of the cold and the tissue has thawed out, the skin will turn red and blister <ul style="list-style-type: none"> • The frostbitten areas need to be re-warmed. • Re-warming shouldn't be attempted until you're out of the cold. • Re-warming can be painful. • The affected area should be re-warmed slowly by immersing it in warm water (40-41C). • Repeat twice daily.
Deep frostbite	<ul style="list-style-type: none"> • Continued exposure to the cold • Skin becomes white, blue or blotchy and tissue underneath feels hard and cold to touch <ul style="list-style-type: none"> • Requires urgent medical attention. • As the skin thaws, blood-filled blisters form and turn into thick black scabs. • Tissue dies and affected tissue will be removed to prevent infection.

Trench Foot is caused by prolonged exposure to damp, unsanitary and cold conditions. Affected feet become numb, turn blue and may begin emanating a decaying odor, feet may begin to swell.

Feet need to be dried and warmed slowly.

Trench foot can be prevented by keeping the feet clean, warm and dry.

Heat Stroke

Core body temperature rises above 40°C and the bodies natural thermostat can't control body temperature. The cells in the body begin to break down, important functions cease, internal organs can fail and in extreme cases, death can occur.

Heatstroke is a medical emergency and you should summon immediate medical help (call 999/112 for an ambulance).

What do you see	What do you do
<ul style="list-style-type: none"> • Confused, vomiting • Unconscious • Hot dry skin • High temperature • Fast shallow breathing 	<ul style="list-style-type: none"> • Aggressive cooling, cover casualty in a wet sheet, fan or sponge with cold water. • Evacuate to medical help



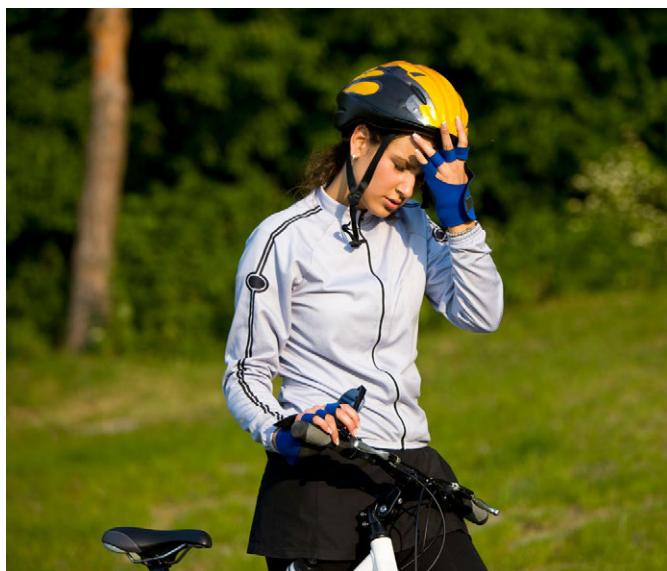
Prevention

- Wear lightweight, light-colored, loose-fitting clothing and a wide-brimmed hat.
- Use a sunscreen with an SPF of 30 or more.
- Drink extra fluids. Especially before, during and after activity.
- Avoid fluids containing either caffeine or alcohol, these will cause further dehydration.

Heat Exhaustion

Heat exhaustion is a heat-related illness that can occur after exposure to high temperatures and is often accompanied by dehydration. This occurs when the core body temperature rises to up to 40°C. If untreated, heat exhaustion can progress to [heat stroke](#). Heat exhaustion can occur on cold days if the casualties have exerted themselves.

What do you see	What do you do
<ul style="list-style-type: none"> • Conscious • Weak and unwell • Thirsty • Headache, nausea • Moist warm skin 	<ul style="list-style-type: none"> • Move to a cool area. • Shade. • Fluids to drink. • Oral rehydration solution will help.



Dehydration occurs when the amount of fluid lost from the body is not replaced quickly. As well as fluid, essential salts are lost through sweating. Dehydration commonly occurs due to exercise on hot days, prolonged exposure to sun or illness such as diarrhea or vomiting.

Severe dehydration can cause muscle cramps.

Rehydrate with electrolyte solution to replace water and salt.

Call for Help - Mobile Phone and 999 VHF



General points to know in the UK, other countries will vary:

- To raise mountain rescue, you must first ask for police.
- In the absence of a signal on the phone's home network it may be possible to obtain a signal on another network.

- You can still dial 112/999 in the UK if there is network coverage without charge or call credit.
- You can send a text to 112/999 (you have to be pre-registered). You can only send a text from your [home network](#).
- Mobile phones can be located from mobile phone masts when 999/112 is called.



In an emergency at sea a mobile phone is a poor substitute for a VHF radio:

- Phone networks offer poor coverage at sea.
- You can only ring one number but with a radio, everyone hears your call for help.
- Lifeboats or rescue helicopters may be able to locate you with your radio signal and will find you more quickly.

VHF Mayday message

Say slowly and clearly:

“Mayday, Mayday, Mayday”

“This is (name of vessel)” [spoken three times]

“Mayday”

Your vessel’s name, call sign and MMSI number [spoken once]

Your position

The nature of distress [for example, “medical emergency”]

Immediate assistance required

How many people are on board

Any other information

“Over”

Multiple Casualties (Triage)



Triage is simply a method of quickly (< 1 minute each) categorising casualties to identify those which have immediately life-threatening injuries AND those with the best chance of surviving.

When additional rescuers arrive on scene, they are directed first to those patients. In triage, the first aider needs to divide resources to do the most good for the most people.



Don't forget the basics

- Who is in charge? Someone needs to make decisions and manage the incident.
- How many casualties are there?
- What scale of response do we need from emergency services?
- Walking wounded can help with casualty treatment.
- Write down information to help make decisions and hand over to emergency services.
- Once help arrives, reassess casualties to check for change.

Triage Categories

Casualties are divided in the following categories:

- Immediate treatment required.
Life-threatening.
- Serious but not life-threatening or will move to immediate in the next 20 minutes.
- Minor walking wounded.
- Dead and dying.



**IF IN DOUBT, IN AN EMERGENCY
CALL 999 OR 112**

FIRST AID INCIDENT PROCEDURE

A



B



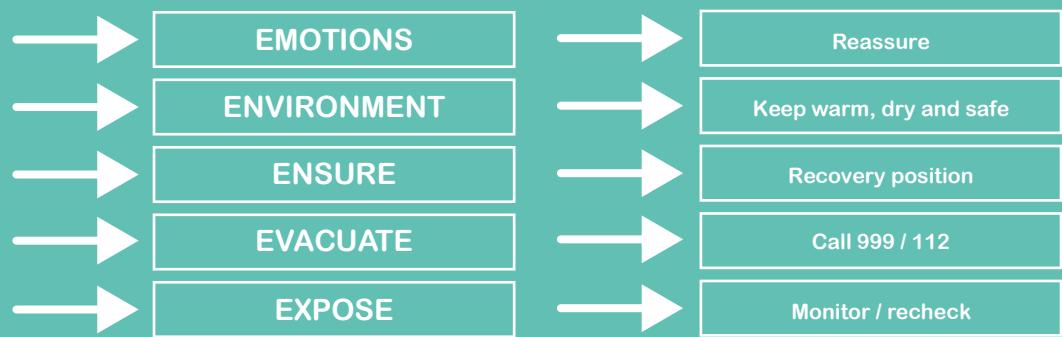
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D



E



What Next?

The Digital Manuals

First Aid Training Co-operative has researched, produced and developed a series of first aid manuals:

- First Aid at Work
- Sports First Aid
- Outdoor First Aid
- Paediatric First Aid

Demonstration Videos

The Co-operative has produced a series of videos that are used in this manual which are hosted on our YouTube Channel. The YouTube Channel also contains [more videos](#) that may be of interest to you.

First Aid Courses

The Co-operative delivers a range of specific first aid training courses. These include:

- [First Aid at Work](#)
- [Emergency First Aid at Work](#)
- [Outdoor First Aid](#)
- [Emergency First Aid at Work + Forestry](#)
- [First Aid for Sports Coaches and Exercise Professionals](#)
- [Sports and Pitchside First Aid](#)
- [Dentists and Doctors Basic Life Support](#)
- [Advanced Expedition First Aid](#)
- [Paediatric First Aid](#)
- [Defibrillator / AED Training](#)
- [Basic Life Support](#)

Become a First Aid Trainer

If you have an interest in delivering First Aid courses then contact us or take a look at our [website](#).

FIRST AID TRAINING CO-OPERATIVE

Web: www.firstaidtrainingcooperative.co.uk

Email: courses@firstaidtrainingcooperative.co.uk

Tel: 0333 4330 731

Resources

The First Aid Training Co-operative Video List

Primary survey (ABC)	https://youtu.be/NkQe_mN1880
Recovery position	https://youtu.be/7aiWIY6KKnE
Recovery position alternatives	https://youtu.be/au7jG_Ck5Ko
Secondary survey	https://youtu.be/exsqx3lRPAI
Insulate a casualty urban	https://youtu.be/DR9zGWBjO8E
Insulate and monitor a casualty outdoors	https://youtu.be/mOQn6kEjfK0
Monitoring a conscious casualty	https://youtu.be/xoJ47PIWY4k
Treating a face down collapsed casualty	https://youtu.be/loalX8-qHMA
Adult CPR for cardiac arrest	https://youtu.be/40fZ-1-LC9s
Child CPR	https://youtu.be/xZ_tCyCG3VM
Infant CPR	https://youtu.be/TulwKgXtPQc
Adult CPR with 2 people	https://youtu.be/2LxjKvioAHs
Adult CPR and AED	https://youtu.be/id53SW_2d24
Drowning CPR	https://youtu.be/74QiUtXcV5o
Full choking adult	https://youtu.be/zJf-Yzo_Ytw
Child and infant choking	https://youtu.be/XOI4Q1_YDeM
Helmet removal - full face and open face	https://youtu.be/obK-gKSi_jo
Using an asthma inhaler	https://youtu.be/CvOGp9L-FB4
Auto-injector use (Epi Pen demo)	https://youtu.be/ZJ0hrt9yMWk
Lower leg realignment	https://youtu.be/PDdu1X27qx0
Slings for arm injuries	https://youtu.be/HXN76nKHyFk
Improvised arm slings	https://youtu.be/8bKltc_A0o4
Improvised femur splint	https://youtu.be/sJajuiCYF5s
Treating a significant bleed	https://youtu.be/2yg1XNnpzU8
Bandaging impaled object	https://youtu.be/VoCQBhBNTLU
Bandaging minor amputation	https://youtu.be/E2fBNo8hGYE
Major bleeding incident	https://youtu.be/PB0Jwg_9HRw
Shock treatment	https://youtu.be/eeJDpSxWTv8
Collapse in an outdoor environment	https://youtu.be/BIPzZm2lfz0
2 person spinal roll	https://youtu.be/uHkOFHEN4Aw
Calling the Emergency Services in the outdoor environment	https://youtu.be/_bBGFTsVfR4
CPR for drowning outdoors	https://youtu.be/cOaVSu9VVn8
Assessing a sports injury - SALTAPS	https://youtu.be/G3GQHx5Y5bo

