First Aid in General Practice.

First Aid is the provision of immediate medical assistance to an ill or injured person until definitive medical treatment can be accessed, or until the illness or injury is fully dealt with.

It generally consists of a series of simple, potentially life-saving, steps that an individual can be trained to perform with minimal equipment:

* The principle of first aid is immediate action.
* Any action taken needs to be careful and deliberate and the first-aider should remain calm at all times.
* The first priority is to yourself and other bystanders. Assess for danger and think before you act. There may be gas - risk of explosion or asphyxiation; electricity - the pool of water around the faulty washing machine may be live; fire - opening a hot door may be the last thing you should do; assault - the assailant with a knife or a gun may be behind the door awaiting their next victim or a hostage; blood - avoid unnecessary contact with bodily fluids by wearing gloves and a face shield if available.
* It is important to assess the situation quickly, to appreciate the limitations of your own actions, and to seek expert assistance - eg, by calling 999/112/911 for ambulance, police or fire service help as soon as possible.

Severe bleeding

* Put on sterile disposable gloves and a face shield if available.
* Calm and reassure the person.
* Lay the person down.
* Apply firm, direct pressure using a clean pad (or sterile dressing if available) over the wound. The person's own hand can be used to apply pressure whilst getting a suitable dressing/putting on your gloves.
* Whilst applying the direct pressure, elevate and support the injured area above the level of the heart.
* Firmly wrap a bandage around the pad or dressing to hold it in place, but not so firmly that it cuts off the circulation extremities.
* If blood soaks through the pad and bandage, do not remove but cover with another pad and bandage, continuing to apply pressure to the wound until bleeding is controlled.
* Monitor for symptoms of shock: pale, cold or clammy skin; rapid breathing; rapid or weak pulse; reduced level of consciousness.

Objects embedded in a wound

* If a large object is embedded in a wound, do not try to remove it.
* If there is associated severe bleeding, lay the person down, apply firm pressure on either side of the object and elevate the injured part.
* To maintain pressure on either side of the object, build up padding around the object so that the padding is higher than the object. A bandage can then be applied around the injured part to keep this padding in place without putting any direct pressure on top of the object.
* Monitor for, and treat for, shock as needed.
* Call 999 for an ambulance as needed.

Nosebleeds

Nosebleeds are extremely common. They are usually benign, self-limiting and spontaneous. Trauma to the nose, especially nose picking, is the most common underlying cause.

If the person is haemodynamically unstable, call 999 and resuscitate/apply First Aid measures whilst waiting for the ambulance to arrive. Wear disposable gloves and a face shield if available.

**If the person is haemodynamically stable**

* Sit them down, ensure they are leaning slightly forward and tell them to pinch the soft, fleshy part of their nose firmly for 10-15 minutes.
* Their mouth should be open so that they can breathe through their mouth and can spit out any blood from their mouth into a sink, bowl or container in front of them.
* Monitor their pulse and their blood pressure.
* After 10-15 minutes, they can gently release the pressure to see if the bleeding is controlled. If it is not controlled, tell them to pinch again.
* If the bleeding does not stop after 10-15 minutes of pressure, and cautery or packing are not possible in primary care due to lack of facilities or expertise, send the person to Accident and Emergency.

**Determine whether an underlying cause is likely**  
**Ask about:**

* Recent surgery or trauma.
* Current medications including aspirin and warfarin (check INR if on warfarin).
* Haemophilia, leukaemia, family history of bleeding disorders.
* Possible signs of tumour (nasal obstruction, facial pain, rhinorrhoea, cranial neuropathy), allergens or other environmental factors.

Consider a topical antiseptic such as Naseptin® cream if the bleeding settles with first aid measures.

Consider possible referral to an ear, nose and throat specialist if nosebleeds are recurrent and an underlying cause is suspected.

Burns and scalds

* Ensure your own safety. Wear protective clothing as needed. Approach with care.Call for help as needed.
* Assess Airway, Breathing and Circulation and look for other injuries.
* Remove clothing and any jewellery (unless clothing is stuck to the skin).
* Cool the area that has been burnt, using running, cool/tepid water for 10-30 minutes.
* Watch that you do not over-cool the person if a large area has been burnt. Keep the person warm.
* For chemical burns, wear protective gloves, remove any contaminated clothing, brush any powder chemical off the skin and irrigate the area for 60 minutes.
* Once cooling is completed, cover the burn to protect the skin, help relieve pain from exposed nerve endings and keep the area clean.[[4](http://patient.info/doctor/first-aid-in-general-practice#ref-4)] Cling film makes a good burn cover. Cover the burn lengthways with the cling film. Do not wrap tightly around a limb. Clean plastic bags can be considered to cover hands and feet.
* Provide pain relief.
* Elevate the affected area if oedema and swelling are present.

Assessment of the extent and depth of the burn will determine if the burn can be managed in primary care.

Seizures

## **For a tonic-clonic seizure**

* Make sure that the person is safe and protect them from danger by lowering them to the ground as needed, placing a cushion under their head, and removing any nearby objects.
* Look for any card or jewellery indicating a history of epilepsy.
* Do not try to hold the person down or put anything in their mouth.
* When the seizure has stopped, opening the person's airway, check for breathing and, provided that they are breathing, put them into the recovery position.
* Keep monitoring the person until they are fully recovered.
* If this is their first seizure, they should be admitted to hospital as an emergency.

Vasovagal syncope

Syncope is a transient loss of consciousness caused by transient global cerebral hypoperfusion characterised by rapid onset, short duration, and spontaneous complete recovery.

Vasovagal syncope (or the common faint) is a type of neurally mediated syncope (also called reflex syncope). Prolonged standing or being in hot, crowded places may precipitate an episode.

**First aid procedure. This includes:**

* Laying the person flat.
* Opening their airway and assessing for breathing.
* Provided that they are breathing, raising the person's legs above the level of their heart.
* Loosening any restrictive clothing around their neck or their waist.
* Consciousness is usually quickly regained with these first aid measures.
* If the person remains unconscious, check for breathing again and, provided that they are breathing, put them into the recovery position. Look for another cause. Call an ambulance and refer for further assessment as needed.

Avulsed tooth

Rapid re-implantation of the tooth can help to preserve the periodontal ligament. Avulsed primary teeth should not be replaced.

**For an avulsed permanent tooth**

* Wear sterile, disposable gloves.
* Do not touch the root of the tooth; handle it by the crown only.
* If it is dirty, rinse the tooth with milk or saline.
* Attempt to re-implant the tooth.
* When the tooth is back in place, ask the person to bite down on to a clean piece of gauze to hold it in place.
* If re-implantation is not possible, milk can be a good carrier medium. Saline or a specialised tooth preserving solution are alternatives.
* In either case, refer the person to a dentist urgently.

Fractures

* Keep the person still and support the injured area using soft padding.
* Do not move the person or the injured part unnecessarily.
* Do not allow the person to eat or drink. They may need surgery.
* An ambulance may be needed if the person is in a lot of pain and cannot safely be transported to hospital.
* If an ambulance will take some time to arrive, you are in a remote area, or it is a suspected upper limb fracture and the person can be safely transported to hospital, immobilise the injured area using a splint.
* A broad arm sling can be used to support and immobilise an injured arm. An injured leg can be splinted to the uninjured leg using bandages around the knees, ankles and above and below the fracture site. Ensure that any immobilisation does not restrict blood supply to an extremity.
* Open fractures need special care. The fracture should be covered with a sterile dressing whilst awaiting arrival of the ambulance.

Sprains and strains

A sprain is an injury to a ligament. It occurs when excessive or abnormal forces are applied around a joint. The ankle and knee are commonly affected. Tenderness, swelling, bruising, loss of function, and joint instability (if it is a severe sprain) can occur. The sprain can be simply graded into:

* Grade 1: mild stretching of the ligament; no joint instability.
* Grade 2: partial ligament rupture; no joint instability.
* Grade 3: complete ligament rupture; joint instability.

A strain is when a muscle is stretched or torn. It occurs if a muscle is over-stretched or has had forced strong contraction.

* A first-degree strain is when just a few muscle fibres are injured. There is tenderness and pain but normal muscle strength.
* A second-degree strain is when a greater number of muscle fibres are injured with more severe pain and tenderness and possible bruising. Mild swelling and loss of muscle strength will also be present.
* A third-degree strain is when the muscle tears all the way through, leading to total loss of muscle function.

Assessment of the injury

* Ask about the mechanism of injury, degree of pain and any self-treatment measures already applied.
* Assess the severity of the injury by examining for deformity, swelling, bruising, range of movement and ability to bear weight.
* Check for bony tenderness. It can be difficult to distinguish between a severe sprain and a fracture. For ankle injuries, the Ottawa Rules can be applied to help guide as to who may need an X-ray.
* Check for any nerve or circulatory disturbance.
* Ask about past medical history and current medication (including anticoagulants).

First aid

The person should be encouraged to use the principles of 'paying the PRICE' and 'avoiding HARM' for the first 48-72 hours after the injury.

* **P**rotection:from further injury.
* **R**est: for the first 48-72 hours after injury, activity should be avoided. The use of crutches can be considered for lower limb injuries.
* **I**ce: a specialised ice pack (or a bag of frozen peas) wrapped in a cloth can be applied for 15-20 minutes every 2-3 hours for the first 48-72 hours after injury.
* **C**ompression: helps to reduce swelling. An elastic bandage can be applied around the affected limb. Remove at night. Ensure that the bandage is not too tight.
* **E**levation: as far as possible, elevate the injured area above the level of the heart for the first 48-72 hours, ensuring that it is comfortably supported.

Avoid HARM for the first 72 hours after the injury:

* **H**eat: including heat packs, hot baths, saunas.
* **A**lcohol: this can increase swelling and bleeding.
* **R**unning: or other forms of exercise.
* **M**assage: this can increase swelling and bleeding.

The person can take analgesia as needed. However, it is generally suggested that oral non-steroidal anti-inflammatory drugs (NSAIDs) be avoided for the first 48 hours after injury as there is some evidence that they may delay healing

Rehabilitation

* After a sprain, flexibility exercises can be started as soon as pain allows.
* After a strain, active mobilisation can start after a few days if there is pain-free basic muscle movement.