



What is first aid?

The immediate care given to a person who has been injured, or who has become ill prior to the arrival of qualified medical assistance

The aims of first aid (3 P's)

- P Preserve Life
- Prevent Worsening
- Promote Recovery



http:smartt.me.uk 2

First aid equipment

A basic first aid kit may contain:







First aid equipment

- eplasters in a variety of different sizes and shapes (hypoallergenic)
- estable small, medium and large sterile gauze dressings
- sterile eye dressings
- triangular bandages
- crêpe rolled bandages
- safety pins
- disposable sterile gloves
- 🔑 tweezers
- scissors
- alcohol-free cleansing wipes
- esticky tape (hypoallergenic)

First aid equipment

- thermometer (preferably digital)
- eskin rash cream, such as hydrocortisone or calendula
- eream or spray to relieve insect bites and stings
- antiseptic cream
- epainkillers such as paracetamol (or infant paracetamol for children), aspirin (not to be given to children under 16), or ibuprofen
- e cough medicine
- antihistamine cream or tablets
- distilled water for cleaning wounds
- 🔑 eye wash



Contact the emergency services

Contact the emergency services at the earliest is vital



The number for contacting the Emergency Services is:

999/112

112 is in fact a genuine emergency number, which provides the same purpose as **999**.

The only **difference** is that **112** works throughout the EU. Calls to both **999 and 112** can work when you have no signal



Minimising the risk of infection



It is important you do not transmit infections or indeed contract infections yourself. To help minimising the risk of infection and cross-contamination there actions we can be take such as:

- eg good personal hygiene
- ege Ensuring that barrier devices are used
- **Covering any open cuts or sores**
- Minimising contact with blood or bodily fluids
- Changing gloves between casualties
- Washing hands thoroughly after removing gloves.





The Primary Survey

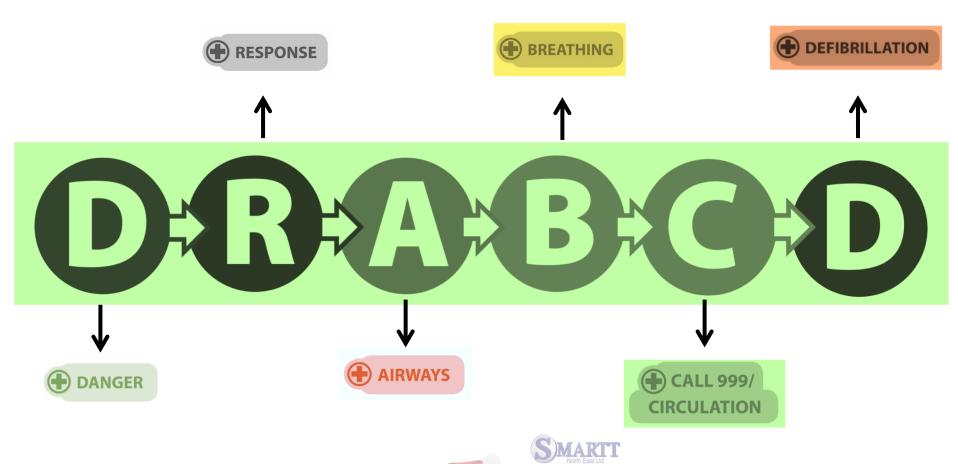
The *primary survey* is a quick way to find out how to treat any life threating conditions a casualty may have in order of priority

Doing the Primary survey can be remembered by the acronym *DRABCD*

Remember *Doctor ABCD*)



Doctor ABCD







Ensure the scene is safe by removing or eliminating any danger.



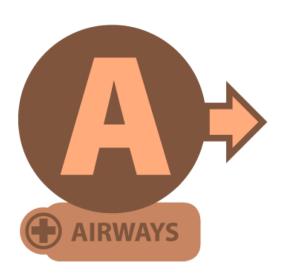




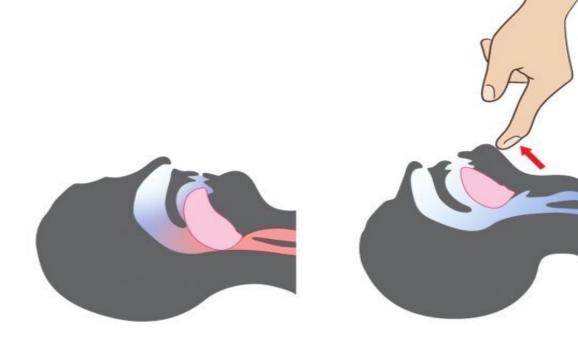
Try and get some kind of response from the casualty so the casualty can tell you what is wrong with them. If possible, approach the casualty from their feet as this prevents hyperextension of the neck







Open the airway using the head-tilt/chin-lift method







When the airway is open; lookout for any signs of normal breathing for 10 seconds. Look out for if the casualty looks to be breathing abnormally, infrequently or not at all. Slow noisy gasps, know as agonal gasps







Compression-only CPR. If you are untrained or unable to do rescue breaths for a casualty who is not breathing, give chest compression-only CPR. These should be continuous at a rate of 100-120 compressions per minute and to a depth of 5-6cm.

'Call (999/112). Ask a helper to call otherwise call yourself, stay with the casualty when making the call if possible, and activate the speaker function on the phone to aid communication with ambulance service.

Commence CPR (30 compressions 2 breaths)'







Automated External Defibrillator (AED)

If an AED arrives, switch it on and follow the spoken or visual prompts. An AED is used in conjunction with CPR.





Placing the casualty in the recovery position helps to:

- Maintain a clear airway
- Assist with natural breathing
- Clear the airway of excretions such as vomit if the casualty is breathing, but unresponsive



When placing a pregnant woman into the recovery position she should be placed onto her left hand side, as this prevents compression of the inferior vena cava.



Place the arm nearest to you at a right angle to the casualty's body (allow it to rest in a natural position)





Bring the other arm across the casualty's chest and secure the back of their hand onto their nearest cheek with your hand.





Bring the arm furthest away from you across the chest and hold the back of the hand against the nearest cheek.





Bring the arm furthest away from you across the chest and hold the back of the hand against the nearest cheek.





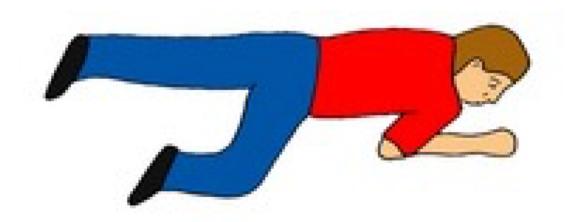
Adjust the casualty's upper leg so that the knee and lower leg are at right angles to the hip making a stable base.





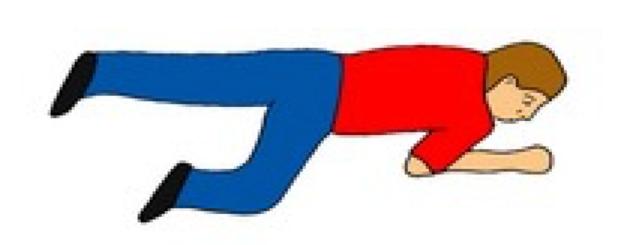
Keeping the casualty's hand on their cheek to control the head movement, pull their leg towards you so the casualty turns onto their side.





Check that the airway is open and adjust the hand under the cheek to maintain the airway.





Check
breathing
regularly, and
be prepared
to carry out
CPR.



Cardiopulmonary Resuscitation (CPR)

If you reach this point and the casualty isn't breathing you need to start The principles of resuscitation

Airway maintenance and breathing

Cardiopulmonary Resuscitation (CPR) and Automated External Defibrillation (AED).



Cardiopulmonary Resuscitation (CPR)









Cardiopulmonary Resuscitation (CPR)

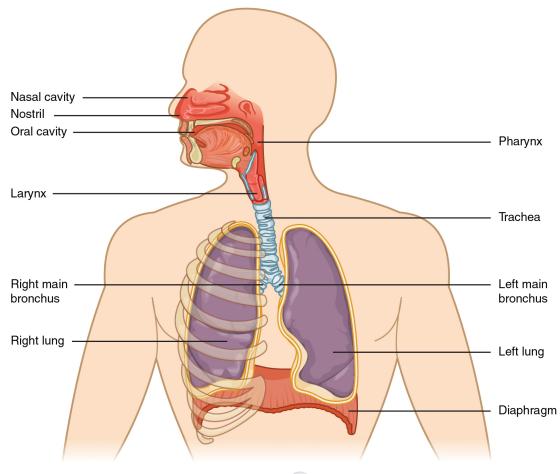
If you reach this point and the casualty isn't breathing you need to start The principles of resuscitation

Airway maintenance and breathing

Cardiopulmonary Resuscitation (CPR) and Automated External Defibrillation (AED).



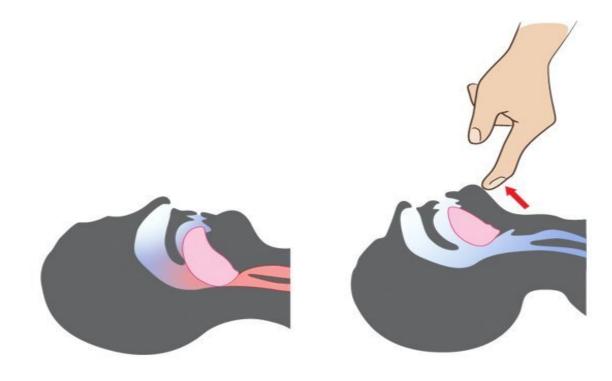
The respiratory system







It is important that the airway remains open as previous





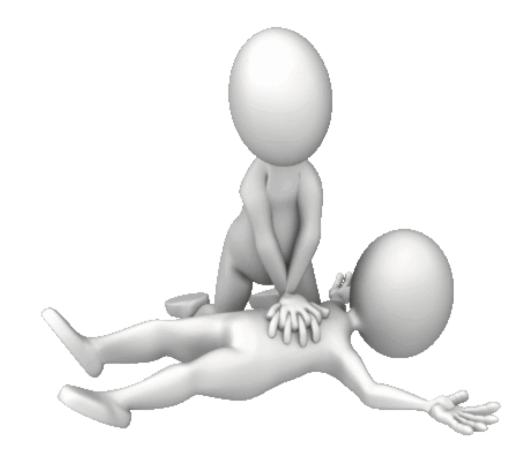
Chest compressions must only be administered to a casualty who is not breathing normally





Place yourself vertically above the casualty's chest with your arms straight, press down on the sternum approx. 5-6 cm.

Repeat this at a rate of 100 - 120 compressions per minute 30 times.





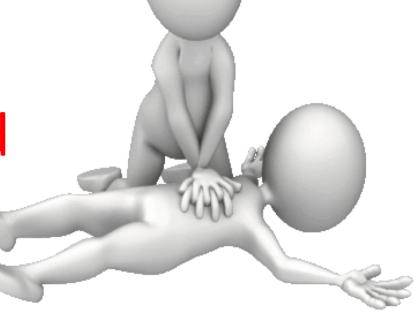
Depth of compression should be 5-6cm

Rate of compression should be 100-120 compressions per minute

Approx depth of a credit card







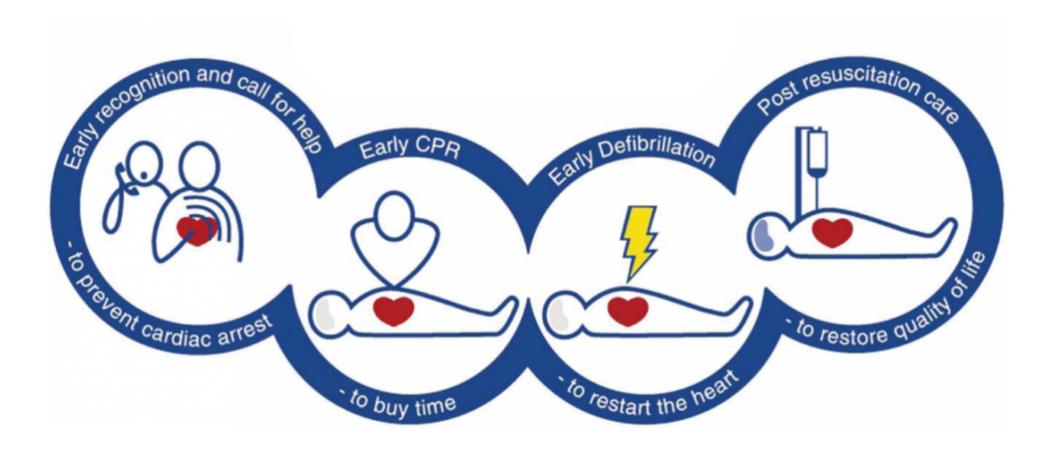
After completing 30 chest compressions the emergency first aider should administe effective rescue breaths

Administering the 2 breaths should not take more than 5 seconds





Chain of Survival





Chain of Survival

To prevent cardiac arrest

call for help



To buy time



Early CPR

To restart the heart

Early defibrillation





To restore quality of life



Post-resuscitation care



Automated External Defibrillator (AED)

If an AED arrives, switch it on and follow the spoken or visual prompts. An AED is used in conjunction with CPR.



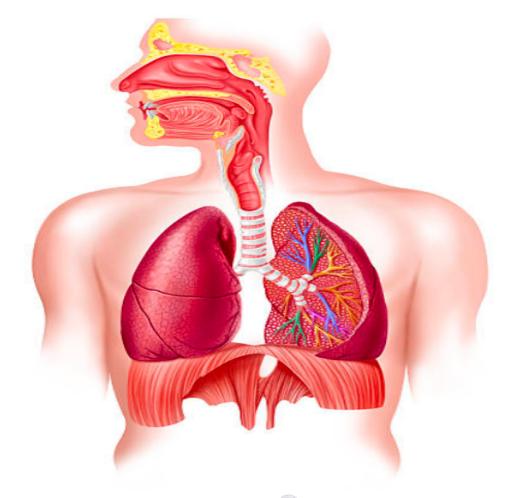




37

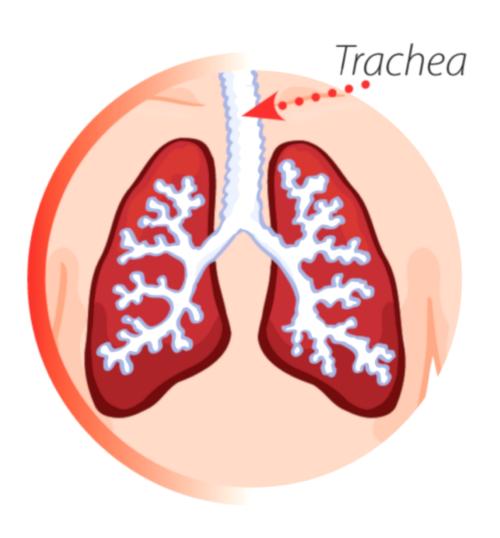


Respiratory System





Obstructed Airway (Choking)



obstruction of the airway can have different causes for example:

- foods
- allergic reactions
- asthma
- blood
- vomit
- infection



Obstructed Airway (Choking)

Recognition

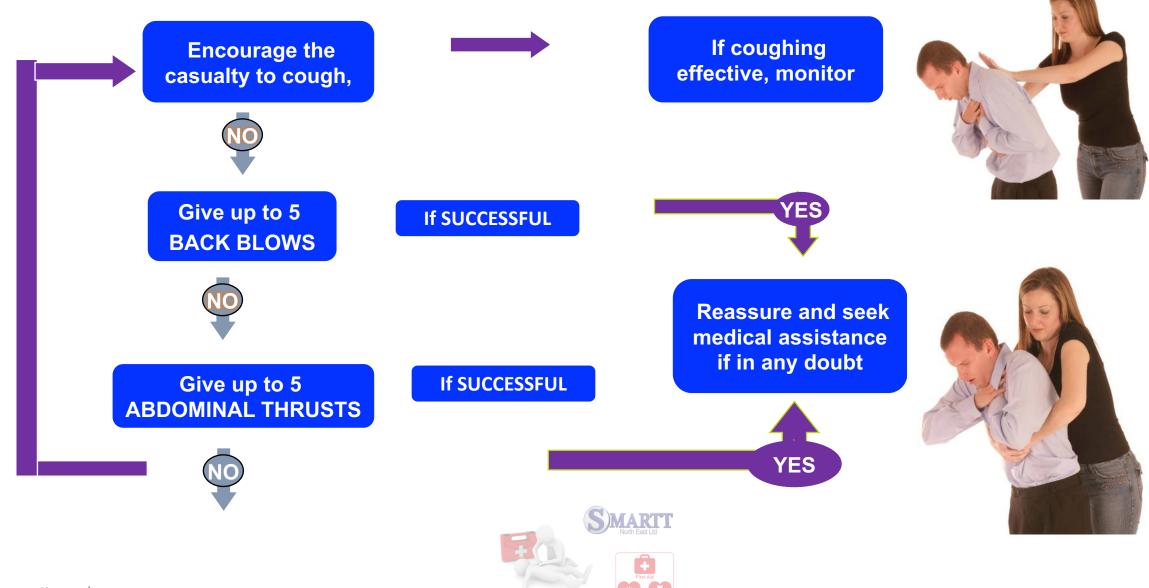


Grasping at the throat area
Difficulty in breathing and speaking
Cyanosis of the face

Eyes enlarged distress



Dealing with a choking adult



Back Blows

- Stand to the side and slightly behind the casualty
- Support the chest with one hand
- lean the casualty forward and give five sharp blows
- lf ineffective give up to 5 abdominal thrusts





ABDOMINAL THRUSTS

- eput both arms round the upper part of the abdomen
- when the hand clench your fist and place between the naval and the ribcage
- Grasp this hand with your other hand and pull sharply inwards and upwards
- lf ineffective give up to 5 abdominal thrusts





After successful choking treatment, seek immediate medical attention if the casualty:

- Has received abdominal thrusts;
- Has difficulty swallowing;
- Has a persistent cough; OR
- Feels like 'an object is still stuck in the throat'



Hypoxia

Recognition

- Pale clammy skin(for dark skin look at the colour of the skin inside the lips)
- Blue tinges to the skin and lips (cyanosis)
- Increase in pulse rate
- Nausea or vomiting
- Increased breathing rate(if the brain detects low oxygen)
- Lowered breathing rate (indicates a brain problem)
- Distressed breathing or gasping
- Confusion or dizziness.



Hypoxia

Treatment

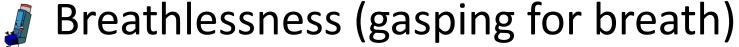
- Maintain the airway.
- Call for an ambulance (999/112) immediately.
- Calm and reassure.
- Monitor constantly and be prepared to carry out basic life support.





Asthma

Recognition



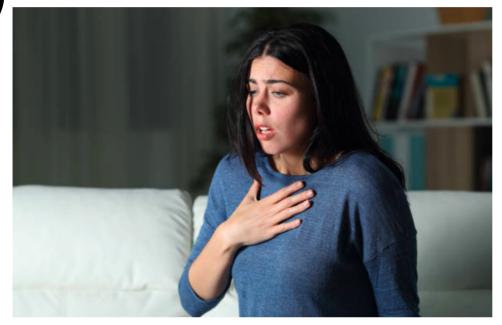






Cyanosis (grey/blue lips and skin)

May become unconscious.





Asthma

Treatment















The circulatory system

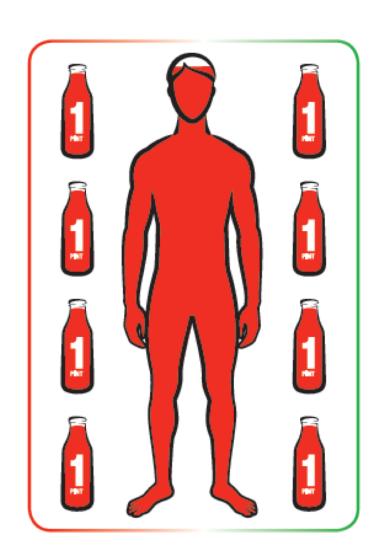
The circulatory system in its basic form consists of the heart, blood vessels and blood. Problems or malfunctions with the circulatory system can lead to major

life-threatening conditions and cause health issues such as angina, heart attacks, strokes and blood clots





The circulatory system



On average a adult heart beats continuously at a rate of 60-100 beats per minute. On average A adult human body holds 8-10 pints of blood. The body struggles to operate if one third of its blood has been lost, blood pressure will fall quickly and the situation becomes critical.



Types of bleeding

Internal bleeding

This is when blood escapes from the circulatory system but remains inside the body. Sometimes signs of internal bleeding can be visible such as when the casualty coughs up blood or vomits blood

External bleeding

This is where blood escapes from the circulatory system to the outside of the body for example, from a wound.



Types of bleeding (continued)

Arterial bleeding

This is a bleed from an artery and will be bright red in colour (oxygenated blood); the blood will pump from the wound in time with the casualty's heartbeat

Venous bleeding

This is a bleed from a vein, the blood will be a dark red in colour (deoxygenated blood) and will gush or flow from the wound

Capillary bleeding

This is a bleed that is red in colour and slowly oozes from the wound or from underneath the skin, e.g. bruising.

Signs & Symptoms	10% Blood Loss	20% Blood Loss	30% Blood Loss	40% Blood Loss
Response level	Normal	Nausea	Lowered levels of response, signs of shock	Possibly unresponsive
Skin colour/texture	Normal	Pale/cool to the touch	Cyanosis (blue/grey tinges to the lips and extremities) cold and clammy	Extremely pale, cold and clammy
Breathing	Normal	Slightly raised	Rapid	Gasping for breath
Pulse rate	Normal	Slightly raised	Rapid weak pulse (hard to detect)	Undetectable





Treatment of bleeding

Treatment

- Examine the wound
- Apply direct pressure onto the wound to try and stem the bleeding
- Apply a sterile dressing and elevate the injured part if possible
- If blood seeps through the first dressing apply a second
- Support and elevate the wound be prepared to treat for shock
- Do not allow smoking, eating or drinking, contact Emergency Services and monitor

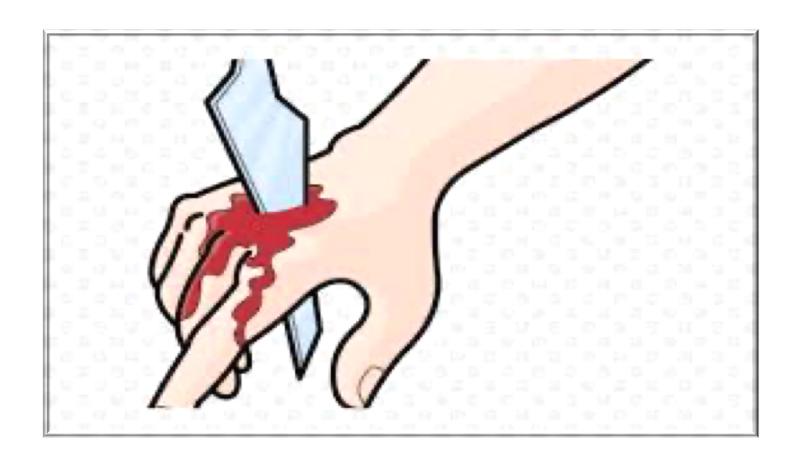




- If the blood seeps through the second dressing then remove both dressings and start again.
- Support and elevate the wound part and be prepared to treat the casualty for shock
- A triangular base can be folded into a broad fold bandage to help support a limb. It can also be used to help to apply pressure over a sterile dressing

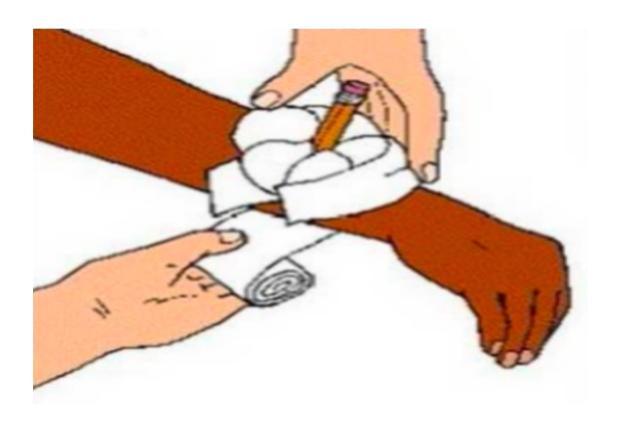


Wounds with an embedded foreign object





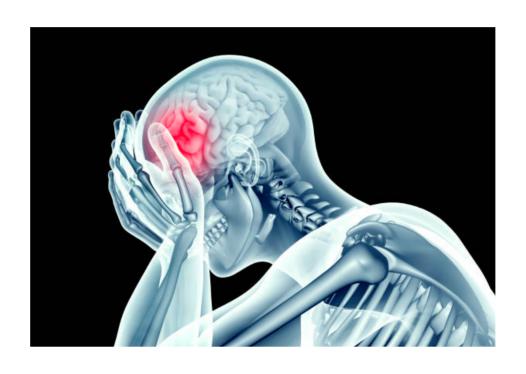
Use a rolled cloth or triangular bandage to make a donut ring





Physiological shock

Recognition

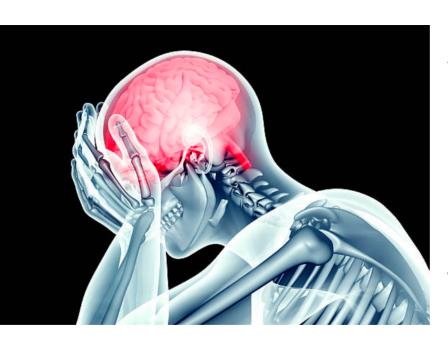


Physiological Shock can be caused by:

- Severe bleeding (internal and external)
- Severe diarrhoea and vomiting (D and V)
- Poisoning
- Spinal trauma or injury
- 😉 Head trauma
- Heart attack.



Physiological shock



A life-threatening condition that occurs when the body is deprived of blood flow. Lack of blood flow means the cells and organs do not get enough oxygen to function. Most organs can be damaged as a result. Shock requires immediate treatment and become worse very rapidly.



Physiological Shock can be caused by:

- Severe bleeding (internal and external)
- Severe diarrhoea and vomiting (D and V)
- Poisoning
- Spinal trauma or injury
- Head trauma
- Heart attack.



How To Recognise

- A visible associated wound
- Pale, blue/grey, cold, clammy skin
- A rapid weak pulse
- Rapid shallow breathing
- Nausea and thirst.



Treatment

- Lay the casualty on a flat surface and raise their leg, ensure the legs are above the level of the heart
- Loosen any tight clothing
- Keep the casualty warm
- Monitor the casualty's ABC
- Do not give food or drink (may induce vomiting)
- Call emergency services (999/112).





Anaphylaxis Shock

Anaphylaxis is extreme and potentially life-threatening allergic reaction, which results in rapid chemical changes in the body. Anaphylaxis can be caused by an insect stings, foods (e.g. nuts and shellfish) and medicines such as penicillin



The three main characteristics of Anaphylaxis Schock

- 1. A rare movement disorder, casualty usually becomes very ill, very quickly.
- 2. Life-threatening Airway, Breathing or Circulation problem (or all 3).
- 3. A skin rash, flushing and/or swelling



How To Recognise

- Swelling in the mouth, tongue, neck and face
- Difficulty in breathing
- Red, blotchy skin
- Nausea
- Anxiety.





Treatment

Call for the emergency service (999/112)

Administrate their medication if applicable (antihistamine or auto

injector)

• Sit the casualty down, if possible

- Remove the trigger if possible
- Monitor the casualty (ABC)





Epileptic seizure

An epileptic seizure is caused by a sudden burst of excessive, electrical activity in the brain causing a temporary disruption to signals passing between brain cells. There are many different forms of epilepsy. To keep the recognition and treatment on a generalised level we have placed these differing forms of epilepsy into two main groups: partial seizures and generalised seizures.

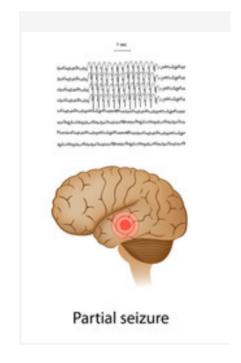


A partial seizure is a brief loss of responsiveness for a few seconds/minutes

Partial seizures

Recognition

Staring blankly
Mood swings
The feeling of déjà vu
Tingling sensations (pins and needles)
Twitching (face/body)



Treatment

- Ensure the casualty's safety (make sure people or objects are kept away)
- See if the casualty can be seated
- Stay with the casualty and time the episode
- If it is the first time refer the casualty to a doctor immediately.



Generalised seizures

The most common and widely recognised generalised seizures is called a tonic-clonic seizure, this affects the body in progressive ways. A tonic-clonic seizure is sometimes referred to as a grand mal and occurs in stages. Prior to suffering a tonic-clonic seizure a casualty may have confusing thoughts, headaches and undergo strange tastes and smells; this is called an 'aura'.



Generalised seizures

Recognition – Tonic Phase



Convulsions



Muscles become rigid



Arching back



Blue or purple coloration to the skin (cyanosis)





The limbs make violent jerking movements



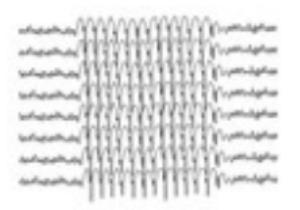
Rolling eyes and crying out



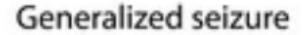
Clenched teeth



Possible loss of bladder and bowel control Lack of consciousness.







Generalised seizures

Treatment

- Ensure the casualty's safety by removing dangerous items from within the vicinity where possible
- Remove any spectacles and loosen clothing around the neck
- Do not restrain the casualty
- Record the time and duration of the seizure
- If the seizure continues (timings dependent on local policy), or there are multiple seizures then contact the Emergency Services (999/112)
- When the seizure stops clear any excess saliva and check airways and breathing
- Place the casualty into the recovery position
- Be conscious of the casualty's embarrassment
- Reassure the casualty
- If it is their first seizure call for an ambulance (999/112)



Minor injuries

Minor injuries are not life-threatening conditions; however, if they are left untreated they may lead to infection and other complications.



Contusions (bruises)

A bruise is caused by damaged capillaries bleeding under the skin. A bruise will often be caused by a trauma to the part of the body where the bruise appears, often caused by a blow or fall, often a bruise will be visible, appearing as a blue/purple or purple/black colouration

Treatment



- R est the injured part
- apply ce or a cold compress
 - ompress the injury
 - levate the injured part.



Minor cuts and grazes

Minor Cuts

Minor cuts may hardly bleed at all; however,
 they can be painful for the casualty

Grazes

• The top layer of the skin (epidermis) is rubbed away and the nerve endings are exposed capillary bleeding may occur at the site of the graze and blood will ooze from the wound.



Minor cuts and grazes



Treatment

- Look at the wound for any embedded foreign objects
- Wear disposable gloves
- Clean the affected area with a sterile cleansing wipe
- If required, apply direct pressure to the wound
- Apply a dry, sterile dressing to the wound.



Human skin is made up of three layers, the outer layer (epidermis), the middle layer (dermis) and the innermost layer (subcutaneous).

Burns and scalds

(1st degree burn)

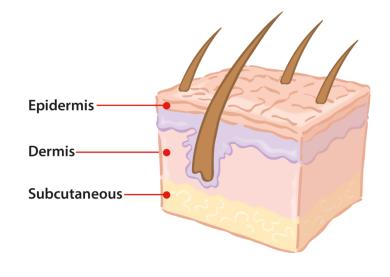


Partial-thickness burn (2nd degree burn)



Full-thickness
burn (3rd degree
burn)







Burn management – Superficial burn (1st degree burn)

Recognition

Pain at the site of the injury

Redness, tenderness and swelling

Possible blistering.





Burn management – Superficial burn (1st degree burn)

Treatment

- Remove from the source of the burn if necessary
- Place on your disposable gloves
- Cool the area of the burn with water for a minimum of 10 minutes
- Remove restrictive clothing or jewellery in case of swelling
- Do not remove anything that is stuck to the burnt skin
- Dress the burn with a loose sterile dressing or if unavailable then place a layer of cling film over the burn**
- Seek medical attention immediately if the burn covers more than 5% of the body or it is effecting the airway and breathing.



** Cling film is sterile if the first few inches are discarded. Also it does not stick to the skin and the condition of the burn can clearly be seen through it. Burn management – Partial-thickness burn (2nd degree burn)



Recognition

The skin will appear raw and swollen
The wound will be painful
Blisters may be present that omit a clear
fluid.



Burn management – Partial-thickness burn (2nd degree burn)

Treatment



- For electrical burns ensure that the source has been disconnected and there is no further danger to yourself, bystanders and the casualty
- Remove the source of the burn if possible
- Put on your disposable gloves
- Remove clothing then flush the area of the wound with water for a minimum of 10 minutes
- Remove restrictive clothing or jewellery in case of swelling however, do not remove anything that is stuck to the burnt skin
- Do not burst any blisters that may have formed
- Dress the burn with a loose sterile dressing or if unavailable then place a layer of cling film over the burn**.



Burn management – Full-thickness burn (3rd degree burn)

Recognition



- The injury appears a brown/black colour and often looks charred
- The texture is dry and leathery
- Limited movement (stiffness) around the injured area
- There may be pain at the site of the injury.



Burn management – Full-thickness burn (3rd degree burn)

Treatment

- For electrical burns ensure that the source has been disconnected and there is no further danger to yourself, bystanders and the casualty
- Remove the source of the burn if possible
- Put on your disposable gloves
- Remove clothing and then flush the area of the wound with water for a minimum of 10 minutes'
- Remove restrictive clothing or jewellery in case of swelling
- Do not remove anything that is stuck to the burnt skin
- Dress the burn with a loose sterile dressing or if unavailable then place a layer of clingfilm over the burn**
- Seek medical attention immediately.



Chemical burns to the eye

Treatment



- Irrigate the eye immediately using continuous large volumes of clean water
- Seek medical attention.



Small splinters

Recognition

- Possible pain at the site of the injury
- Visibility of the splinter
- Possible swelling at the site of the injury
- There may be an associated bleed

NOTE: For larger splinters and fully embedded splinters that cannot be drawn out please seek qualified medical attention.

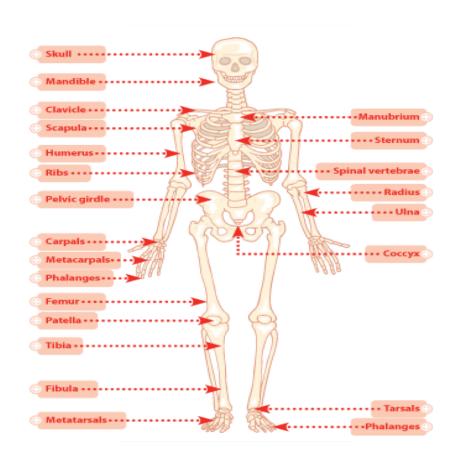
Treatment (partially embedded)

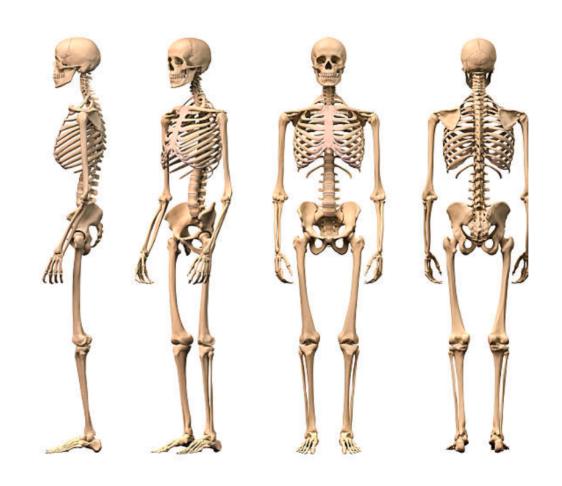
Small splinters

- Put on your disposable gloves
- Clean the surrounding area of the splinter
- Ensure that your tweezers are sterile
- Draw the splinter out in the direction of the entry route
- Clean the surrounding area
- Monitor for signs of infection.



The human skeleton







The human skeleton

There are three types of joints:

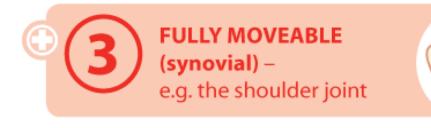


IMMOVABLE (fibrous) – e.g. the plates of the skull



PARTIALLY MOVEABLE (cartilaginous) –
e.g. where the ribs connect to the sternum

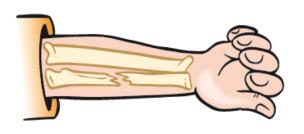




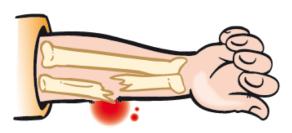


Fractures and dislocations

Three Types Of Fractures



Closed (no associated wound)



Open (the fracture has broken the skin)

Complicated (the fracture is causing a further injury to vessels or organs for example)



Recognition

- Pain, tenderness, bruising and swelling at the site of the injury
- In the case of an open fracture, associated bleeding
- Possible loss of mobility
- Deformity
- Nausea, pale, cold clammy skin (shock)

Treatment

Put on gloves
Treat bleeding if required
Immobilise in the position found (most comfortable for the casualty)
Call for an ambulance (999/112)



Recognition

Sprains

(SPRAIN) An injury to the joint caused by the ligaments being stretched

- Pain
- Swelling
- Bruising
- Lack of mobility.



Treatment

Sprains and strains

REST the area where the bruise occurs

Apply ICE (over a covering)

COMPRESS the area.

ELEVATE if possible.



Heart attack

A heart attack occurs when the coronary arteries, which supply the heart with oxygen enriched blood, become blocked

Recognition



- Tightness and/or pain in the chest (mild or severe)
- The casualty may be clutching the chest
- Possible spreading of pain to the arms, neck and back
- Dizziness or a light-headed feeling
- Possible shortness of breath
- May feel nauseous or be sick
- May have cold sweats.

Treatment

Heart attack



- Call for an ambulance (999/112) immediately
- Sit the casualty down with the legs drawn up or in a position which is comfortable
- Loosen any restrictive clothing
- Keep the casualty warm and comfortable
- Monitor the casualty's airway and breathing
- If casualty becomes unresponsive then carry our basic life support



Angina

Angina (angina pectoris) is caused by a build up of fatty deposits inside the coronary arteries causing them to narrow. This narrowing impedes the flow of blood to the heart and causes pain similar to that of a heart attack



Recognition

- Tightening or squeezing of the chest
- Pain radiating in the chest often spreading to the jaw, neck, arms and back
- Shortness of breath
- Anxiety and weakness.

Angina

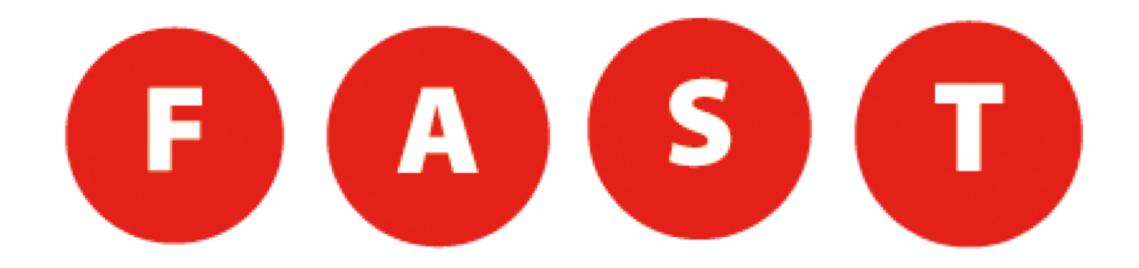
Treatment

An angina attack is similar to a heart attack; however an angina sufferer will recover with rest and the attack should only last between 1-15 minutes.

- Ascertain if this is the first attack or if they have previously been diagnosed
- Rest the casualty
- •Encourage them to take their medication if applicable usually GTN spray (Glyceryl trinitrate)
- •Seek medical attention if its the casualty's first attack or if you are unsure of the condition

Stroke

A stroke causes either short-term or permanent damage to the brain and/or body. If you suspect a stroke then you must act FAST.



Stroke

Recognition

Remember if you suspect a Stroke, act <u>FAST</u>. Call 999/112.

- Facial weakness
 - Can the person smile?
 - Has the face dropped on one side?
- Arm weakness
 - Can the person raise both arms?
- Speech problems
 - Can the person speak clearly and understand what you say?
- Time to call 999/112
 - By calling 999/112 early, treatment can be given which can prevent further damage.



Treatment

Stroke



- Call for an ambulance (999/112) immediately
- If responsive lay the casualty down with the head and shoulders raised or assist into a comfortable position
- If unconscious place into the recovery position, affected side down
- Loosen any restrictive clothing
- •If there are any secretions then wipe them away
- Monitor the airway and breathing
- Be prepared to carry out basic life support

Diabetes

A condition caused by the body's failure to regulate blood sugar levels. Insulin regulates blood sugar levels

Recognition

Hypoglycaemia - (Blood sugar content too low)



Hunger

Tiredness or lethargy

Lack of concentration

Increased heart rate

Headaches

Tingling sensations

Noticeable changes in personality

Feeling faint.



Hypoglycaemia

Treatment

- •Sit the casualty down, calm and reassure
- •For suspected hypoglycaemia, ask the casualty to take their glucose tablets equating to 15-20g of glucose. If glucose tablets are not available, use other dietary form of sugar (jelly babies/non-diet fizzy drink)
- •If there is no improvement in the casualty's condition then call for an ambulance (999/112)
- •Monitor the condition; if the casualty becomes unconscious carry out basic life support.

Recognition



Hyperglycaemia

- Sweet, fruity-smelling breath
- Increased need to urinate
- Increased thirst
- Dry mouth
- Loss of appetite
- Tiredness and lethargy.



Hyperglycaemia

Treatment

- Sit the casualty down
- Encourage the casualty to use their medication
- If they have not been previously diagnosed then call an ambulance (999/112)

• Monitor the condition; if the casualty becomes unconscious carry out basic life support.



A poison can be defined as a foreign substance that enters the body by means of ingestion, inhalation, absorption or injection which, in sufficient quantity, interferes with the normal body functions

Recognition (General)

- Pains in the stomach
- Impaired vision
- Increased/decreased heart rate
- Smell of fumes or chemicals
- Burns and rashes
- Nausea and vomiting
- Difficulty in breathing.



Poisons



Poisoning

Treatment (General)

- Call for an ambulance (999/112)
- Ensure the scene is safe
- Remove the cause or remove the casualty from the scene
- Identify the poison if possible and if safe to do so, provide the source to the medical team when they arrive
- Be prepared to carry out basic life support.





Poisons can include:

Poisons











For Free Resources Please Visit Here https://www.smartt.me.uk/free-resources/

For Health & Safety Resources Please Visit Here https://smartt.school.invanto.com/courses

