first response training

FIRST AID MANUAL

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INTRODUCTION

First Response Training & Consultancy Services Ltd is an established organisation specialising in the provision of professional, friendly training and education in First Aid, Health & Safety, and much more.

Commitment & Expertise

We believe that health and safety is more than just legal compliance and that a properly trained workforce can add to productivity and reduce illness and downtime. We have an exceptional team of training and support staff that work closely together with our clients to ensure that they receive a first class training experience.

Our Trainers

We have an extensive team of highly experienced, qualified trainers who are skilled at delivering informative, interesting and dynamic training sessions. As a national provider, our trainers are based throughout the UK and are able to deliver in-house courses at your premises or venue of your choice, offering total convenience and flexibility.

Experience

Established in 1997, First Response Training now offers over 200 different course types to over 70,000 learners annually. We provide first class training for health and social care, early years, childcare and schools and all industry sectors

This Manual

The purpose of the First Aid Manual is to provide an authoritative collection of information for delegates on First Aid courses. It is yours to keep - providing a reminder of the information taught on the course, as well as a reference point for the future. First aid is the immediate care or the 'first aid that is given to a casualty as soon as possible after an illness or injury has occurred'. Although first aid has its limitations, it plays an essential part in the overall care and management of the sick and injured.

It is important to remember the need for interaction between Ambulance control, the first aider or bystander, and the early deployment of a defibrillator.

ROLE OF A FIRST AIDER

- Protect yourself
- Assess the scene
- Decide who is in danger and who to help first
- Warn bystanders of dangers
- To call the emergency services
- Give treatment to those who need it
- Use all available equipment
- Prevent cross infection
- Record all incidents and actions

INFECTION PREVENTION

- Remember to wash your hands
- Wear gloves
- Avoid touching blood or vomit without gloves
- Dispose of clinical waste safely
- Clean the area after the incident

PRIORITIES OF FIRST AID

- Preserve life
- Prevent the condition worsening
- Promote recovery

In order to manage situations appropriately and fulfil the aims of first aid, it is important to understand the concept of priorities of treatment. This can be easily remembered by 'Doctor ABC' or 'D.R.A.B.C.'

Check Danger, then Response, then Airway, then Breathing. Maintaining Airway and Breathing will go a long way to preserving life.

Once you are satisfied that a casualty has adequate Airway and Breathing, your priorities move to treating other injuries and aiming to prevent their condition from deteriorating.

Remember AMAGA:

1. Assess what has happened
2. Make the area safe
3. Administer emergency first aid
4. Get help 999 or hospital
5. Aftermath: handover and report

The priorities of first aid are:

Life threatening bleeding

Breathing

Bleeding

Burns

Breaks (fractures)

DANGERS

Chemical Incidents

Incidents involving hazardous substances.

Incidents Involving Fire

Fire spreads faster than we appreciate, but smoke is the main killer. Sound the alarm, evacuate the building and then call the emergency services.

Clothing On Fire

Aim to safely get the casualty to the ground. If possible, wrap the casualty in something non-flammable. Rolling on the floor will help put the flames out.

Domestic Electricity

Isolate the power supply by switching it off at the mains and disconnecting the plug from the outlet.

High Voltage

It is essential that everyone is kept a minimum distance of 20 metres away until it is guaranteed that the electricity company has isolated the supply.

Carbon Monoxide

Colourless and odourless, it is quickly absorbed into the bloodstream. It is essential that you do not put yourself at risk.

MENTAL HEALTH

After a first aid needs assessment, it is important to understand if someone might be experiencing a mental health issue.

Signs: Low mood, withdrawn, negative thoughts, emotional outbursts, anxiety, fear or panic.

Ways you can support: Reassure them, do not force it, offer your time to listen, make sure they are safe and not a risk to themselves, if they are at immediate risk to themselves call 999.

AFTERMATH

Dealing with an emergency can be an emotional experience. After handing over the patient and ensuring the scene is clear, take time to process the experience. Discuss it with someone, perhaps over coffee, or seek formal counselling, which your employer may arrange for you. Don’t bottle up your feelings.

Bystanders and witnesses may also need support.

PRIMARY SURVEY: DRABC

D - DANGER

Ensure that it is safe to help the casualty. Approach with care and ensure that there is no continuing danger.

SAFE

NOT SAFE

Remove any danger if possible.

R - RESPONSE

Speak loudly and clearly ask a question, such as "Can you hear me?"
Gently tap the casualty's collarbone. An unresponsive casualty will not respond.

NO RESPONSE

Call for help from bystanders.

RESPONSE

Ensure Airway and Breathing are maintained. If safe, do not move the casualty. Check for obvious injuries and treat as appropriate.

LIFE THREATENING BLEEDING

Take immediate action. Apply pressure to the wound and use additional treatments as needed (page 16).

A - AIRWAY

Is the Airway clear and open? The Airway is the route from the mouth and nose down to the lungs. A casualty who is unresponsive is at risk of their Airway becoming obstructed. This could be by: the tongue, saliva vomit, food, loose dentures, etc.

CLEAR

NOT CLEAR

Head tilt and chin lift or jaw thrust (page 7).

B - BREATHING

Check for normal Breathing: Look for movement of the chest, listen by placing your cheek near the casualty's mouth, feel for breaths on your cheek. Checking for Breathing should take no more than 10 seconds. Check for Agonal breathing (irregular, short gasps) which is common in the first minutes after a cardiac arrest and should not be mistaken for normal breathing.

NOT BREATHING

C - CPR

Call 999 and inform them the casualty is not Breathing. Ask bystanders for help unless you are alone. Use speakerphone.

Begin CPR (page 6).

BREATHING

Place in the recovery position (see page 8).

CPR

Chest Compressions: Kneel by casualty's side, place heel of your hand in centre of chest, do not apply pressure to ribs, bottom of breastbone or abdomen, place heel of your other hand on top of the other and interlock fingers, straighten your arms vertically above chest, press down 5-6cm and release, allow chest to recoil completely, repeat at the rate of 100-120 compressions per minute.

Rescue Breaths: There may be face shields or packet masks in the first aid kit; use these to reduce cross contamination. Tilt head and lift chin or jaw thrust (page 7), pinch nostrils and place your lips around mouth, ensure a good seal, blow steadily for 1 second, repeat at the ratio of 30 compressions to 2 breaths.

Continue until help arrives to take over. If you become exhausted, ask bystanders to take over. If the casualty begins to breathe on their own, place them in the recovery position and monitor Airway and Breathing. Be prepared to resume CPR.

If Airway is not clear: Use only compressions and continue to check Airway.

CPR IN CHILDREN	Infants Under 1 year old	Children 1 year - puberty	Adult
Head tilt	Minimum tilt	Head tilt and chin lift or jaw thrust	
Chin lift	1 finger	2 fingers	
Compression landmark	Centre of chest		
Compression method	2 fingers	1 or 2 hands (based on size of child)	2 hands
Compression depth	1/3 depth of chest		5-6 cm
Compression rate	100-120 per minute		
Rescue breaths	Mouth to mouth and nose	Mouth to mouth	
Initial breath	5 initial breaths with air from cheeks	5 initial breaths	None
Breathing rate	Every 1 second		
Ratio	30 compressions to 2 breaths		

HEAD TILT AND CHIN LIFT OR JAW THRUST

Head tilt: Place one hand on the casualty's forehead. Gently tilt the casualty's head back.

Chin lift: Place the fingertips of the other hand under the point of the casualty's chin. Lift the chin.

Jaw thrust: If you suspect the casualty has a neck or spinal injury, avoid extending the neck. Place your fingers under the jawbone and tilt slightly upwards.

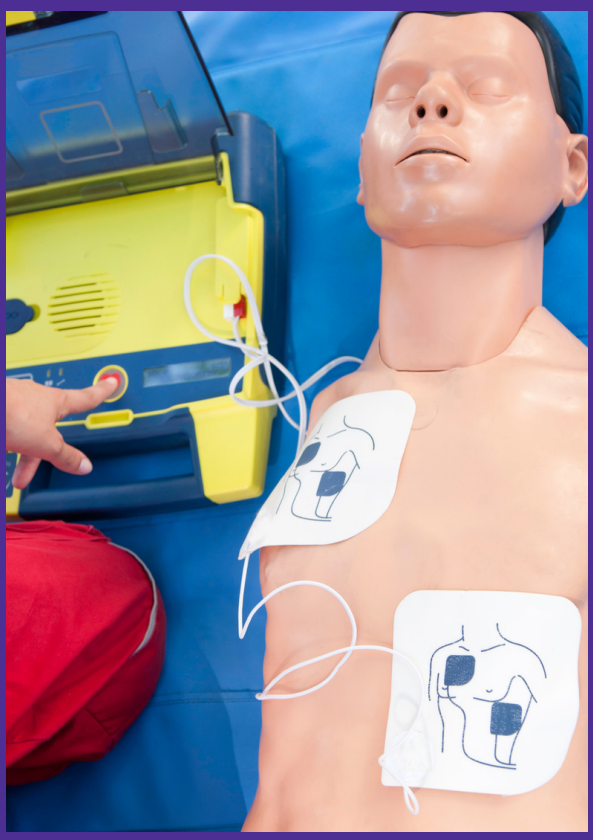
Remember the airway may become obstructed again.

CARDIAC ARREST: CHAIN OF SURVIVAL

Early Recognition 999 → Early CPR → Early Defibrillation → Early Advanced Care

The most common cause of a cardiac arrest is disordered electrical activity in the heart (ventricular fibrillation). A defibrillator is required to resolve the electrical problem in the heart. CPR keeps the body oxygenated until a defibrillator arrives. The quicker the casualty moves through the chain of survival, the better their chances of recovery.

AUTOMATED EXTERNAL DEFIBRILLATOR



AEDs administer an electric shock to correct the heart rhythm. They can be used on adults and children over the age of 1. When you call 999, they will tell you where the nearest AED is. The machine analyses the heart rhythm and then tells you what to do. It will not administer a shock to a casualty who is not in cardiac arrest.

- Switch AED on if required, as some will automatically turn on when opened
- Remove pads from packaging
- Remove/cut clothing, wipe sweat, shave excess chest hair from pads location
- Remove pads from back paper, place under their right collarbone and left armpit
- Pause CPR as instructed by machine, ensure no one is touching the casualty
- Follow the voice/visual prompts until help arrives, ensure no one is touching the casualty

The AED may say a shock is advised - ensure everyone is clear and press the button as prompted. It may say no shock is advised and ask you to commence CPR. It will reanalyse every 2 minutes. You may need to perform CPR between shocks.

UNRESPONSIVE

Use the ACVPU scale to assess the casualty's level of responsiveness.

ALERT - Are they able to hold a conversation?
CONFUSION - Confused, but awake
VOICE - Do they respond to simple questions/commands (e.g. "move your finger")?
PAIN - When stimulated with pain, does the casualty respond (e.g. move eyes or fingers)?
UNRESPONSIVE - Casualty is unresponsive

RECOVERY POSITION

This helps a casualty maintain an open Airway. There is a modified recovery position for spinal injuries (see page 9).

1. Ensure they have an open Airway
2. Remove glasses/bulky items from pockets
3. Kneel by their left side (if possible), place arm nearest to you at a right angle from the body - never force arm to lie flat
4. Bring arm farthest from you across the chest, hold back of hand against their cheek
5. Grasp leg furthest from you just above the knee with your other hand and pull into a bent position
6. Pull leg, their body will turn
7. Adjust leg so hip and knee are at right angles
8. Tilt head back gently, ensure hand is placed under their cheek
9. Ensure ambulance has been called, observe the casualty, check breathing regularly, consider recording observations

SECONDARY SURVEY

The secondary survey is a rapid but thorough head-to-toe examination assessment to identify all potentially significant injuries. It should be performed after the primary survey. You may not have time to complete a secondary survey before advanced help arrives. Remember SAMPLE:

SIGNS & SYMPTOMS - Look, listen, feel. Do they have any signs of swelling/deformity/ bleeding? Ask the casualty simple questions about how they are feeling. Do you have pain? Where is the pain? Is the pain getting worse?

ALLERGY - Does the casualty have any allergies to medication or anything else?

MEDICATION - Do they take any regular medication (e.g. asthma inhalers) or have they recently been prescribed something new?

PREVIOUS MEDICAL HISTORY - Do they have any previous medical conditions? Are they wearing a medical alert tag or bracelet?

LAST MEAL - When did they last eat or drink?

EVENT HISTORY - What and where? Was the incident due to an accident or illness? Can any witnesses help with clues as to what happened?

VITAL SIGNS

- Body temperature
- Pulse rate
- Respiration rate
- Blood pressure
- Glasgow coma scale

HEAD TO TOE EXAMINATION

- Head and face
- Neck
- Chest - Equal rise and fall
- Abdomen - Rigid or soft (gently press
- Extremeties - Difference in arms, shoulders or legs
- Pelvis - Gently press (if you suspect a pelvic injury, do not press)
- Skin - Needle marks

There should be an indication that an injury has occurred to justify the secondary survey before you touch a casualty's body. You should maintain dignity and avoid exposing their skin unless necessary. You can also carry out a secondary survey of a responsive casualty with their consent. Always wear protective gloves when examining the head, face and neck.

SPINAL INJURY

SIGNS

- Pain or tenderness in the neck or back - sometimes the pain may be masked by pain from other injuries
- Signs of a fracture
- Abnormal sensations in the limbs, e.g. burning, tingling, pins and needles
- Limbs may feel heavy and stiff
- Loss of sensation or feeling in the limbs
- Inability to move arms or legs (paralysis)
- Casualties feel they “have been cut in half”
- Loss of bladder/bowel control
- Unnatural posture or shape of the spine.
- Shock
- Breathing difficulties

TREATMENT IF RESPONSIVE

- Leave the casualty in the position you found them, even if it looks uncomfortable
- Do NOT move them unless in EXTREME danger
- Call an ambulance
- Advise them to keep still
- Offer plenty of reassurance
- Support their head with your hands and aim to maintain the head, neck and spine in a straight line (neutral alignment)
- Maintain this position until medical assistance arrives
- Keep the casualty warm

TREATMENT IF UNRESPONSIVE

- Call an ambulance
- Leave them in the position you found them
- Where possible, support their head with your hands, aiming to maintain their head, neck and spine in a straight line, until medical assistance arrives

If the casualty's Airway or Breathing is affected, use the jaw thrust technique to clear the Airway (page 7). If you cannot maintain an open Airway, place them in the recovery position. The following methods can be used if assistance is available:

SPINAL RECOVERY POSITION

SPINAL LOG ROLL

If no assistance is available and the Airway is at risk then the casualty must be placed in the recovery position in the normal manner. Use padding such as clothing to support the casualty's head when they are on their side.

CAUSES OF UNRESPONSIVENESS

Remember:
"Fish Shaped"

- Fainting
- Infantile convulsions Imbalance of heat (page 28, 34)
- Shock: hypovolaemic shock due to life threatening bleeding (page 19)
- Head injury (page 20)
- Stroke (page 26)
- Heart attack (page 25)
- Asphyxia (choking) (page 11)
- Poisons (page 27)
- Epilepsy (seizures) (page 30)
- Diabetes (page 33)

FAINTING

A faint is a brief loss of responsiveness, resulting from a temporary reduction in the flow of blood to the brain. This usually only lasts a few seconds and is followed by a full recovery.

CAUSES

- Pain
- Standing for a long time, particularly in a warm environment
- Standing quickly from a seated or lying position
- Exhaustion
- Fear - this may include phobias
- Emotional events and stress
- Lack of food
- Pressure on the neck, such as a tight collar
- Internal bleeding

SIGNS

- Brief loss of responsiveness
- Possible fall
- Slow pulse
- Pale, cold clammy skin with signs of sweating

Before faint:

- Nausea
- Blurred vision and dizziness
- Ringing in ears
- Stomach pains

If they feel faint, suggest that they lie down.

TREATMENT

- Maintain Airway and Breathing
- Raise the legs in the air to return the blood to the vital organs
- Allow them plenty of fresh air by opening windows and doors
- Remove any bystanders and the cause of the faint, if possible
- Reassure the casualty as they recover
- Ensure they have not sustained any injuries
- Gradually sit them up after they have regained responsiveness
- If they feel faint, lie them back down
- If the casualty does not regain responsiveness quickly proceed with the treatment of an unresponsive casualty
- If you have any suspicion that it is not a faint, or you are unsure of the cause, then summon medical assistance

CHOKING

1. ASSESS THE SEVERITY

Ask “Are you choking?”

THEY CAN NOT ANSWER

THEY CAN ANSWER

Encourage to keep coughing and monitor for deterioration.

2. ARE THEY RESPONSIVE?

Assess using the ACVPU Scale (page 8).

RESPONSE

NO RESPONSE

Follow primary survey (page 5).

3. BACK BLOWS

Deliver back blows (page 12).

OBSTRUCTION CLEARED

No further treatment required, monitor for deterioration.

NOT CLEARED

4. ABDOMINAL THRUSTS

Deliver abdominal thrusts (page 12).

OBSTRUCTION CLEARED

No further treatment required. Monitor for deterioration. Be aware abdominal thrusts can damage the diaphragm.

NOT CLEARED

5. GET HELP

Repeat steps 3 and 4 up to 3 times. If the obstruction is still not cleared, call an ambulance. Continue to repeat steps 3 and 4 until help arrives.

If the casualty becomes unresponsive at any time, immediately call an ambulance and begin CPR.

BACK BLOWS

Deliver back blows:

- Support the chest
- Lean casualty forward
- Give up to 5 sharp blows between the shoulder blades with the heel of your hand, whilst pushing in an upward motion
- Check to see if each back blow has relieved the Airway obstruction

ABDOMINAL THRUSTS

Deliver abdominal thrusts:

- Stand behind the casualty
- Put both arms around their waist
- Make a fist and place it over the abdomen, between the navel and the bottom of the breastbone, with knuckles facing the ceiling
- Grasp your fist with your other hand
- Thrust sharply inwards and upwards taking care not to damage the end of the breastbone
- Repeat up to 5 times
- Check to see if each abdominal thrust has relieved the Airway obstruction

ANAPHYLACTIC SHOCK

Allergies are sensitivities to specific substances, which may be swallowed, inhaled, injected or contracted through the skin. The effects of allergies are generally mild. However, anaphylaxis (severe allergic reaction) can result in rapid and serious reactions of various parts of the body. This may rapidly prove fatal unless recognised and treated promptly.

Examples of allergens include:

- Bee stings
- Various foods, such as fish and peanuts
- Medications, such as penicillin
- Pollens

SIGNS

- Difficulty Breathing, wheezing sounds, tightness in the chest
- Anxiety, fear of impending doom
- Confusion, slurring of speech
- Abdominal pain, stomach cramps, diarrhoea
- Swelling of the skin, particularly eyelids, lips, neck
- Cyanosis
- A hoarse voice, swelling of tongue and throat
- Dizziness, faintness
- Nausea, vomiting
- Increased pulse rate
- Itchy skin with red blotchy eruptions, like a rash
- Deterioration in their level of responsiveness

TREATMENT

- Maintain Airway and Breathing
- Call an ambulance and tell them you suspect anaphylactic shock
- Assist the casualty into the most comfortable position to aid Breathing
- Be prepared for deterioration in the casualty's condition and respond to these changes

Auto-injectors:

- A casualty who has suffered previously from anaphylaxis should carry 2 auto-injectors
- These contain adrenaline to counteract the effects of anaphylaxis
- Assist in locating and preparing the drug for the casualty to administer themselves

ASTHMA

Asthma is a condition that affects the airways of the lungs. An asthma attack is when these air passages go into spasm resulting in them narrowing.

There are certain recognised triggers that may cause this spasm and lead to an attack:

- Exposure to known allergies e.g. dust, pollen, pets
- Viral infections
- Exposure to irritants, e.g. perfumes or smoke
- Certain drugs e.g. aspirin
- Exercise
- Emotional upset or stress

When an asthma attack occurs:

1. The Airway lining starts to swell
2. Mucus is secreted
3. The muscles surrounding the Airway tighten

This causes leads to narrowing of the air passages, making it difficult to breathe. The casualty needs their medication to relieve the symptoms.

SIGNS OF AN ASTHMA ATTACK

- Shortness of breath, difficulty Breathing
- Feeling of a tight chest
- Wheezing sound from the chest
- Difficulty speaking
- Use of muscles other than those normally we used during Breathing (e.g. neck and upper chest)
- Pale, cold, clammy skin
- Increased pulse rate.
- Anxiety, distress, panic
- In severe cases: silent chest, cyanosis, exhaustion, collapse, Breathing may stop

TREATMENT

- Maintain Airway and Breathing
- Reassure the casualty
- Encourage to sit comfortably, preferably upright, leaning forwards, possibly leaning on a table or chair
- Encourage to relax, breathe slowly and deeply
- Encourage to use inhaler every 2 minutes, 1 or 2 puffs, for up to 10 puffs
- If the inhaler has no effect after 15 minutes, or the attack is severe, call an ambulance
- After 15 minutes, if there is no change and no ambulance has arrived, administer another round of treatment
- If unresponsive, see pages 5 and 8

HYPERVENTILATION

Hyperventilation is usually a response that individuals have to certain situations. For example: during panic and anxiety attacks, following a sudden fright, or following an emotional experience.

SIGNS

- Unnaturally deep/ rapid Breathing
- The patient may feel that they are unable to breathe
- Feeling the pressure or tightness in the chest
- Anxiety and possibly attention seeking behaviour
- Dizziness, faintness and possibly blurred vision
- Flushed skin
- Pins and needles and sometimes trembling, usually in the hands
- Increased pulse rate

TREATMENT

Your main aim is to restore a normal breathing pattern:

- Speak calmly but firmly to the casualty and offer reassurance
- Establish a quiet environment for the casualty
- Encourage the casualty to slow the rate of their Breathing
- Advise the casualty to speak to their General Practitioner for advice on ways to prevent and control panic attacks in the future

LIFE THREATENING BLEEDING

Generally, life threatening bleeding is sufficient blood loss to result in a rapid collapse, unconsciousness and death, if left untreated. Immediate action is required. If in doubt, it is better to manage aggressively to save a life. Life threatening bleeding is part of the primary survey (page 5).

TYPES OF BLEEDING

Capillary: Comes from capillaries (small blood vessels), sometimes described as a trickle
Venous: Comes from veins, blood pools, looks darker in colour
Arterial: Comes from arteries, blood spurts or gushes, looks bright red

INTERNAL BLEEDING

The casualty will look very unwell with no sign of external life threatening bleeding. Examples:
Chest: Stab wound or significant blunt trauma leading to bleeding in and around the lungs - manage as a chest injury (page 18)
Abdomen: Stab wound or significant blunt trauma damaging the liver or spleen
Pelvis: Fall from height or road traffic collision

EQUIPMENT

When direct pressure (see page 17) isn't effective in stopping the blood flow further techniques and equipment will need to be used.

HAEMOSTATIC DRESSINGS

Dressing that contains an agent to promote blood clotting
Always inform the emergency services which haemostatics have been used
The point of bleeding must be in contact with the gauze - pack it into the wound, not on top or around it
Do not blindly pack into the wound - first locate the bottom of the wound

WOUND PACKING

Packing dressing into a wound can promote clotting and control bleeding
Dressing must be tightly packed to apply pressure down to the bottom of the wound
Do not blindly pack into the wound - first locate the bottom of the wound
Use dressings, gauze, bandages or haemostatic gauze
Beware of sharp foreign bodies or bone fragments within the wound
Application:

- Scoop out clotted blood and soak up pooled blood
- Insert appropriate dressing and wound packing materials
- Apply firm pressure and add additional materials
- Repeat until the wound is fully packed to above skin level
- Apply pressure dressing to wound
- Maintain firm pressure until bleeding stops
- If bleeding does not stop, consider a tourniquet

TOURNIQUET

A tight band used on limbs
Place 2-3cm above the wound edge between the location of the heart and the wound
Be aware application is extremely painful for the casualty
Avoid applying over a joint if possible
Application:

- Use hook and look system to tightly apply around the limb
- Secure in place
- Tighten until bleeding stops
- Reassess and repeat until bleeding stops - you may need to apply an additional tourniquet above the original
- Record time applied

You can improvise a tourniquet using a triangular bandage or belt if necessary
Do not remove the tourniquet

WOUNDS AND BLEEDING

Wounds and bleeding can look dramatic, this should not however distract from checking the Airway and Breathing. Always conduct the primary survey first (see page 5). Remember to wear gloves!

TYPES OF WOUNDS

Incision
Clean cut by sharp object

Laceration
Rip or tear to skin

Abrasion
Top layers of skin scraped off - graze

Contusion
Bleeding under skin - bruise

Puncture
Stab wounds, dog bites, etc

Gunshot
Entry and larger exit wound

MINOR WOUNDS

E.g. abrasions and minor incisions.

- If dirty, rinse under running water, pat the dry using a gauze swab
- Check for particles, such as grit
- Clean around wound with soap and water using gauze swabs
- Use clean swab for every stroke, working from the centre outwards
- Apply non-stick dressing or a light, dry dressing for grazes and an adhesive dressing for cuts

Seek medical aid if:

- The bleeding will not stop
- There are particles remaining in the wound
- The casualty has not had a tetanus injection in the last 10 years

Don't waste time looking for dressings if a casualty is bleeding: ask them to use their own hand, use a non-fluffy clean pad, or wear gloves and use your hand.

PROTRUDING OBJECT

- Maintain Airway and Breathing
- Build up padding using sterile dressings around the protruding object
- Apply pressure on either side of the object and support it in position
- Maintain the pressure to control bleeding
- If necessary bandage the padding in place, ensuring that the pressure is applied on either side of the object and not directly onto it
- Support in a raised position
- Arrange for medical assistance
- Constantly monitor and record your observations
- Never remove the object

EXTERNAL BLEEDING

Remembered SIP:
S - Sit or Lie Down: Sit or lie the casualty down, aim to lie the casualty down, even if this cannot be done immediately, once the bleeding is controlled, raise their legs to treat shock
I - Inspect: Expose the wound and see if there are any objects embedded in the wound
P - Pressure: Apply pressure directly over the wound

NO PROTRUDING OBJECT

- Maintain Airway and Breathing
- Use a dressing large enough to cover the wound
- Apply dressing to put pressure directly over the wound
- Apply firmly enough to maintain pressure but not too tight that it impairs circulation
- Check the colour and temperature of the limb beyond the wound, if it is cold or blue the bandage is too tight
- Press the nail beds, if they do not regain colour immediately the dressing is too tight
- When applied correctly a dressing will stop bleeding from most wounds
- If bleeding comes through, remove the dressing and reapply a new dressing, ensuring that pressure is applied at the point of bleeding
- Support the limb in a raised position
- Treat for shock
- Arrange for medical assistance
- Constantly monitor and record your observations

CONTUSION (BRUISE)

- Use a cold compress, this can be made by wrapping ice in a cloth (take care not to let ice touch the skin)
- Apply cold compress for at least 5 minutes
- Be aware a bruise may be a sign of internal bleeding

NOSEBLEEDS

Nosebleeds can be caused by trauma to the nose, sneezing/, high blood pressure, fractured skull (if blood is watery), etc.

- Sit the casualty down and tilt their head forwards
- Ask them to pinch the soft part of the nose
- Instruct them to breathe through their mouth and not to speak, cough or sniff Release every 10 minutes to see if the bleeding has stopped
- If the bleeding persists for more than 30 minutes arrange for the casualty to receive medical attention

Do not tilt the head back. The blood will run to the back of the throat and may cause the casualty to vomit

INTERNAL BLEEDING

Internal bleeding is a serious condition, especially as it can go unnoticed for several hours. It requires urgent medical attention.

It is difficult to diagnose, as the bleeding is not always evident. Internal bleeding can occur as a result of an injury, a stomach ulcer, a rupture (e.g. appendix), an ectopic pregnancy, etc.

Signs of internal bleeding:

- Trauma to the body
- Recent illness, e.g. an ulcer
- Previous internal bleeding
- Shock
- Pain or discomfort
- Bruising
- Bleeding from body orifices
- Fainting

Treatment

- Arrange for urgent medical assistance
- Maintain Airway and Breathing
- Treat any other injuries
- Treat for shock
- Monitor and record observations

SPLINTERS

- Clean area around splinter with soap and water
- Remove splinter if possible
- Make the wound bleed after removing splinter
- Clean and cover
- If splinter is below skin, do not attempt to remove - seek medical advice/assistance

PENETRATING CHEST INJURY

There may be:

- A history of the incident
- An object still embedded or protruding
- A wound or fracture in the chest area
- Increased pain when breathing or coughing
- Signs of shock
- Bright red
- Frothy blood coughed up
- Sounds of air being sucked in through the wound as the casualty breathes in

If the wound is obviously bleeding, control bleeding with direct pressure using the casualty's hand or your hand (with gloves on). Apply a dressing if necessary.

Call an ambulance. Maintain, monitor and record vital signs: Airway and Breathing.

Treat any other injuries. If the casualty becomes or is unresponsive place in the recovery position on the injured side so that the healthy lung can work effectively.

AMPUTATION

When a limb is either partially or completely severed:

- Maintain Airway and Breathing
- Control bleeding with a dressing
- Call an ambulance
- Treat any other injuries and shock
- Wrap severed limb in a plastic bag then wrap in a soft material, e.g. towel
- Place in a container full of ice or packaged frozen foods - the severed body part must not touch ice or frozen food directly
- Label the container with the name of the casualty and the time the injury occurred

CRUSH INJURIES

When a casualty is trapped by a compressing force, restricting blood flow and building up toxins.

Crushed for less than 15 minutes:

- Release the casualty quickly
- Ensure safety
- Maintain Airway and Breathing
- Call an ambulance
- Treat any injuries and shock
- Monitor and record your observations

Crushed for more than 15 minutes:

- DO NOT RELEASE THE CASUALTY
- Ensure safety
- Maintain Airway and Breathing
- Call an ambulance
- Give clear details of the incident as rescue services will need to be arranged
- Treat any obvious, accessible injuries
- Monitor and record your observations

HYPOVOLAEMIC SHOCK

Hypo'-low, Vol'-volume, 'Aemic-blood
Hypovolaemia refers to a loss of body fluids, resulting in the tissues not being provided with an adequate supply of oxygen. Therefore, this condition is known as hypovolaemic shock. This type of shock is one of the most common.

Typical causes of hypovolaemic shock include:

- Internal bleeding
- External bleeding
- Excessive sweating
- Burns and scalds
- Severe diarrhoea and vomiting

SIGNS

Signs and symptoms of hypovolameic shock vary as the condition deteriorates.

Initial response:

- An increase in the pulse rate
- Pale, cold and clammy skin
- Sweating

As the condition deteriorates:

- Pulse becomes weaker and faster
- Cyanosis, particularly inside the lips
- If the fingernails are pressed they do not regain colour immediately
- Breathing rate increases and becomes shallow
- Nausea, vomiting
- Weakness, dizziness
- Yawning, gasping for air
- Restlessness, anxiety, confusion, aggression
- Unresponsiveness
- Cardiac arrest

Do:

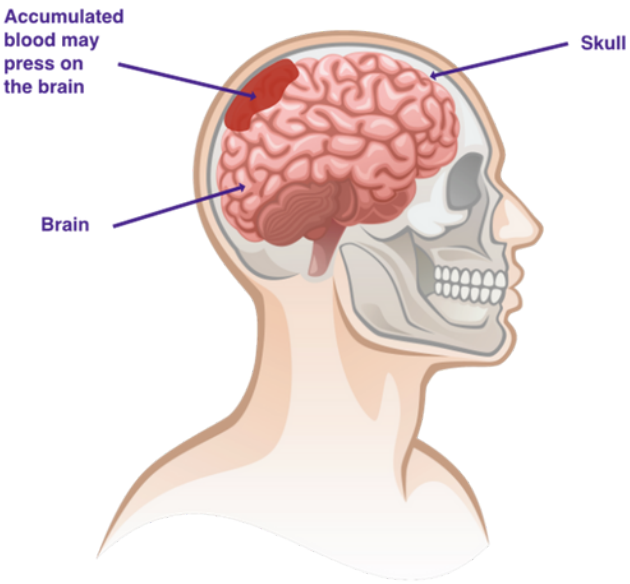
- Maintain Airway and Breathing
- Treat any obvious cause of the shock, such as severe bleeding or burns
- Call an ambulance
- Treat any other injuries
- If the condition allows, lie the casualty down and raise their legs - this will return blood to the vital organs, but may not be possible if there are other injuries such as leg fractures, or injuries to the chest, where Breathing will be made worse if the casualty is lying on their back
- Maintain a normal temperature
- Lie the casualty on something that will insulate them from the cold ground -clothing or blankets may be useful
- Loosen constricting clothing
- Continually give reassurance
- Monitor and record your observations
- Prepared for deterioration in the casualty's condition and respond to changes accordingly

Do NOT:

- Do not use hot water bottles or any form of direct heat
- Do not allow the casualty to eat or drink -if the casualty complains of a dry mouth and thirst, moisten their lips with a little water
- Do not allow the casualty to smoke
- Do not allow the casualty to move unnecessarily
- Do not leave the casualty, except to call for an ambulance

HEAD INJURIES

COMPRESSION

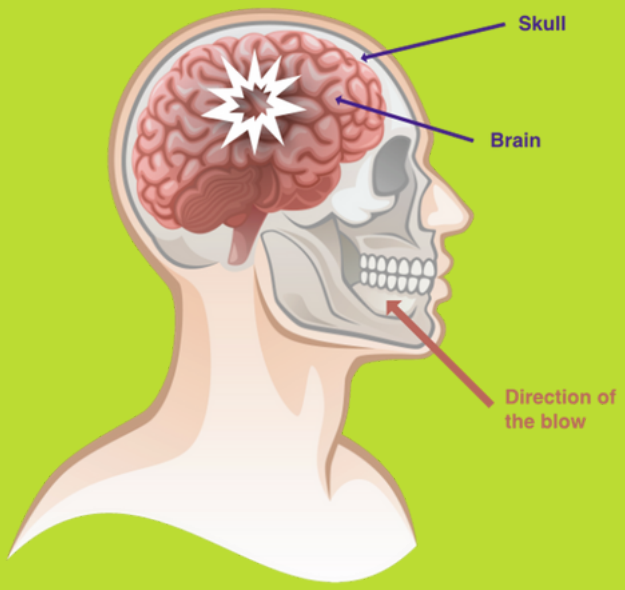


Bleeding within the skull, swollen brain tissue or tumours can cause build-up of pressure on the brain, known as compression.

SIGNS

- Deterioration in the level of responsiveness, either immediately or over hours or days
- Often blow to the head or injury
- Drowsiness
- Irritability
- May complain of an intense headache
- Flushed, dry skin
- Slow, deep, noisy breathing
- Slow and strong pulse
- One or both pupils may dilate
- Possible seizures
- Weakness or paralysis on one side of the face or body

CONCUSSION



A shaking of the brain within its surrounding fluid causes concussion. This shaking disturbs the normal activity and functions of the brain.

SIGNS

- Brief or partial loss of responsiveness followed by a gradual improvement
- Often blow to the head or injury
- Short-term memory loss
- Confusion
- Unsteady on feet
- Blurred vision
- May complain of a mild headache
- Pale and clammy skin
- Rapid and weak pulse
- Nausea and vomiting

TREATMENT

- Maintain Airway and Breathing
- Always suspect a possible spinal injury
- Call an ambulance
- Control bleeding, and be aware of discharges from the ear
- Treat any other obvious injury
- Monitor the casualty

EYE INJURIES

Eye injuries can be particularly distressing to the casualty mainly through fear of permanent damage and loss of sight. Injuries to the eye should receive expert medical attention.

CHEMICAL BURNS

These can be caused by splashes from chemicals and can lead to permanent damage unless treated quickly and effectively:

- Lean the casualty to the side affected by the burn
- Run cold water over the casualty's affected eye for at least 10 minutes
- Use a clean glass or jug to pour the water if this is easier
- In workplaces that use chemicals, there should be 'eyewash stations' where sterile water should be available for use
- Ensure that the water runs away from the face to prevent the other eye becoming contaminated
- Make sure that you do not come into direct contact with the chemical or the water running from the eye
- Loosely cover the affected eye with a sterile dressing
- Arrange medical attention
- Do NOT touch or allow the casualty to touch or rub the eye

EMBEDDED OBJECT

Minor particles in the eye, such as a speck of dust or a loose eyelash, can usually be rinsed off with clean water. However, larger objects or anything embedded should be left and referred for medical attention.

- Make sure the casualty is comfortable, either sit or lie them down
- Lightly apply a sterile dressing, usually an eye pad
- A dressing can be applied to both eyes if it is necessary to prevent eye movement
- Offer plenty of reassurance and guidance to the casualty
- Call an ambulance if you consider the injury to be serious
- Do not attempt to remove an embedded object

BURNS

Burns can be caused by electricity, chemicals, dry heat, wet heat, radiation and cold (frostbite).

CLASSIFICATION

Superficial, 1st degree:

- Outer layer of the skin (epidermis) is damaged
- Skin is red, slightly swollen and painful
- No blisters

Partial thickness, 2nd degree:

- Epidermis and the layer beneath (dermis) are damaged
- Skin is blotchy and will become swollen and blistered
- Can be very painful or painless

Full thickness, 3rd degree:

- Epidermis, dermis and the deeper layer of fat and tissue (subcutis) are damaged
- Skin can be burned away or dry, white, brown or black with no blisters
- It may be painless

GENERAL TREATMENT

Do:

- Maintain Airway and Breathing
- Prioritise and treat any other serious injuries, such as bleeding
- Cool the burn area with cold, preferably running water, for 20 minutes to stop the burning and provide pain relief
- The time may be extended if further pain relief is required, but ensure that the casualty is not overcooled
- Arrange for medical assistance
- Carefully remove anything constricting, such as jewellery, rings or watches before swelling occurs
- Once the burn is cooled, cover it to prevent infection
- Use either a sterile dressing, a clean sheet of cling film, or a clean plastic bag to cover a hand or foot
- Reassure the casualty and make them comfortable
- Constantly monitor and record your observations

Do NOT:

- Do not remove anything that is sticking to the wound, such as clothing
- Do not touch the area
- Do not burst blisters
- Do not apply creams or lotions
- Do not use adhesive tape directly on the skin
- Do not use cling film until the area of the burn has been cooled

Burns should receive hospital treatment if:

- The burn affects the face, neck, hands, feet or genital area
- The burn extends all around a limb
- It is a full-thickness burn
- A partial-thickness burn covers more 1% of the body surface (equal to size of palm of casualty's hand)
- A superficial burn covers more than 5% of the body surface
- A burn involves varying depths

Seek medical advice if you are unsure.

CHEMICAL BURNS

- Ensure that the area is safe and that you are protected from contact with the chemical
- If indoors, ventilate the area affected by the substance only if it is safe to do so
- Flood the burn area for at least 20 minutes, preferably with running water
- Ensure that the water runs away from the area and does not come into contact with you or the casualty
- Remove contaminated clothing while flooding the area, making sure your skin does not come into direct contact with the chemical
- Obtain information regarding the chemical such as COSHH data sheets, to pass on to the emergency services

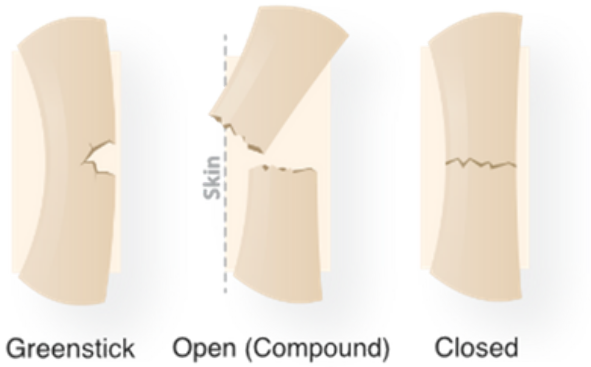
FRACTURES

CAUSES

A fracture is a break or a crack in a bone. There are five main ways in which a fracture can be caused:

- Direct force - The fracture results from a force being directly applied to a bone, such as a kick, or being struck by a car
- Indirect force - A fracture occurs away from the point where the force was applied, such as a fractured collarbone resulting from a fall where the casualty has put their hand out and the force is applied at the hand, and then transmitted through the arm to the collarbone
- Pathological - The elderly or those with diseases of the bone are more vulnerable to sustaining fractures
- Twisting
- Violent movement

TYPES



Greenstick fractures occur in children.

A fracture is described as 'open' when a broken end of bone has pierced the skin or if there is a wound near the point where the fracture has occurred. Where the wound has been caused by the bone, it may, or may not, still be protruding from the wound. As this type of fracture has a wound site the risk of infection is high.

A closed fracture is where a bone is broken but the skin remains intact. These can be difficult to spot.

Both open and closed fractures can create further complications by damaging blood vessels, nerves or underlying organs.

Complicated fractures involve vessels, nerves or internal organs.

SIGNS

- Pain and tenderness at the site of the injury which is made worse with movement
- Difficulty or inability to move the affected area
- Swelling and bruising
- Crepitus: grating of ends of bones against each other which can be heard or felt
- Abnormal lumps under the skin where bones overlap
- Limb appears bent or has an abnormal shape
- Limb twisting, shortening or appearing in the wrong place
- Shock
- A wound which may have a bone protruding

RIB FRACTURES

- A history of trauma to the chest
- Pain at the site of the fracture.
- Increased pain when Breathing or coughing
- Shallow Breathing
- 'Guarding' or protecting the area from being touched
- Pale, cold and clammy

TREATMENT

- Maintain Airway and Breathing
- Control any bleeding
- Reassure the casualty and aim to keep them as still as possible
- Steady and support a fracture to prevent movement using your hands, a pillow, blankets, etc - be guided by what the casualty finds comfortable and provides relief of pain
- Do NOT move the casualty unless they are in danger
- Do NOT allow the casualty to eat or drink

RIB FRACTURES

- Maintain Airway and Breathing
- Assist the casualty to find the most comfortable position: this will usually be in a half-sitting position
- Place the arm on the injured side in an arm sling if further support is required
- Treat any other injuries

DISLOCATIONS

A dislocation occurs when a bone becomes dislodged from its original location at a joint.

SIGNS

- Swelling, bruising and obvious abnormality at the joint affected - compare the opposite joint
- Severe pain that makes the casualty feel nauseous
- Tenderness
- Difficulty and increased pain in moving the area
- Bending or twisting at the joint

TREATMENT

Dislocations should be dealt with in a similar way to fractures:

- DO NOT attempt to put back in place
- Advise the casualty to remain still
- Steady and support the injured part using your hands, pillows, blankets, etc. - be guided by what the casualty finds comfortable and provides relief of pain
- Apply bandages only if further support is required

If in doubt, treat it as a fracture.

SPRAINS AND STRAINS

SPRAINS

Sprains involve injury to a ligament at, or near a joint due to it being wrenched or torn. A common injury is a sprained ankle, which results from a wrenching motion, pulling bones too far apart at a joint, and so tearing a ligament.

STRAINS

A strain involves injury of a muscle or tendon resulting from being overstretched or torn by a violent or sudden movement.

TREATMENT

Remember RICE:
Rest
Ice (or a cold compression) for max. 20 minutes
Comfortable support
Elevate

CHEST PAIN

Generally, a person who suffers from angina knows what brings on the pain and how to deal with it. If an angina sufferer asks for help - it probably is not angina.

	Angina	Heart Attack
Cause	Narrowing of a coronary artery	Partial or total blockage of a coronary artery by a blood clot
Damage to heart muscle	Does not usually result in permanent damage	Permanent damage occurs, unless the blockage can be removed quickly by appropriate medication
Onset of pain	Usually during exercise or excitement Stress and cold weather can also cause angina to start	Sudden, can occur at any time
Type of pain	Squashing pain, often described as "like a vice tightening around the chest" or "a heavy load on the chest", the pain can vary in intensity and can occasionally be mistaken for indigestion	
Location of pain	Centre of the chest, may radiate into the arms (usually the left), the neck, jaw and back	
Other signs and symptoms	Clutching of chest Rapid and weak pulse, which may be irregular Shortness of breath Anxiety Weakness Pale and may be sweating	Clutching of chest Rapid and weak pulse, which may be irregular Shortness of breath Nausea and vomiting A fear that they may be dying Pale, grey colour Profuse sweating Collapse without warning

TREATMENT

Heart attack:

- Reassure the casualty
- Maintain Airway and Breathing
- Call an ambulance
- Assist the casualty into the most comfortable position for them, a half-sitting position with the shoulders well supported may be beneficial for suspected heart attacks
- Loosen any constricting clothing to ease Breathing
- Constantly monitor and record your observations
- Be prepared for deterioration in the casualty's condition and respond to these changes accordingly
- If possible assist the casualty to take 300mg of aspirin and advise them to chew it, not swallow, ensuring that the casualty is not allergic to Aspirin

Angina:

- Reassure the casualty
- Assist to sit on a chair
- Suggest they take their medication

The attack should ease in a few minutes. If the pain does not ease:

- Call an ambulance
- Monitor

STROKES

A stroke is when the supply of blood to the brain is either blocked or interrupted. It usually occurs as a result of a clot or a ruptured blood vessel. Many of the signs and symptoms of a stroke are a direct result of the brain's inability to function normally due to a lack of oxygen. These will vary according to the area of the brain affected.

FAST

The FAST test assesses three specific symptoms of stroke.

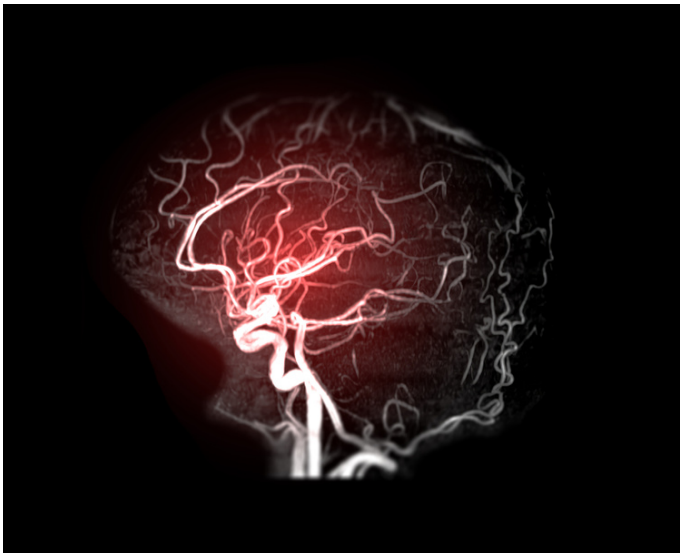
Facial weakness: Can the person smile? Has their mouth or eye drooped?
Arm weakness: Can the person raise both arms, and keep them raised for a few seconds?
Speech problems: Can the person speak clearly and understand what you say?
Time to call an ambulance

If the person has failed any one of these tests, you must call an ambulance

We acknowledge the Stroke Association for allowing us to include the FAST test. You can obtain further information on their website www.stroke.org.uk

Other signs and symptoms may include:

- Difficulty swallowing
- Difficulty maintaining balance
- Headache
- Dizziness
- Slow, strong pulse
- Slow, deep, noisy Breathing
- Unequal pupil size
- Warm, flushed, dry skin
- Vomiting
- Loss of bowel and/or bladder control
- Change in behaviour: confusion, agitation or aggression
- Crying
- Gradual or sudden loss of responsiveness
- Possible convulsion



TREATMENT

- Check Airway and Breathing
- Call an ambulance
- Place an unresponsive casualty in the recovery position
- Lay the responsive casualty down with the head and shoulders raised slightly
- Reassure the casualty
- Monitor

POISONS

How poisons can enter the body:

Instilled or Splashed
Poison enters through the eye.

Ingestion
Poison enters through the mouth (swallowing). This can be accidental (contaminated food) or intentional (overdose).

Injection
Poison is injected into the skin or blood vessels. This may be by a needle, bite or sting.

Inhalation
Poison is inhaled when Breathing in and passes through the respiratory tract to the lungs and then to the bloodstream.

Absorption
Poison makes contact with skin and is absorbed into the bloodstream.

CLASSIFICATION

Corrosive Poisons
These are usually poisons that burn. They destroy the tissues that they come into contact with. Examples include bleach, paint stripper, petrol, etc.

Non-Corrosive Poisons
These are usually poisons that do not burn. Examples include tablets, alcohol, food, poisonous plants, etc.

SIGNS

Signs and symptoms depend on the type of poison, route of entry, amount of poison, etc. Determining what has happened will help you deliver effective treatment. Pass any information on to the emergency services. Look for clues:

- Smells in the air, odour on the breath
- Cyanosis
- Difficulty breathing or speaking
- Burning pain the mouth or throat
- Information from bystanders
- Nearby tablets, medicine bottles, syringes, etc.

General signs and symptoms include retching, nausea, vomiting, diarrhoea, abdominal pains, hallucinations, drowsiness, unresponsiveness, and possible seizures. Lowering levels of responsiveness may lead to headaches blurred vision and confusion.

TREATMENT

Do not attempt to induce vomiting.

Corrosive substances:

- Ensure your own safety
- Identify the substance
- Maintain Airway and Breathing
- If CPR is required use a protective face mask
- If the substance is on the skin, treat it as a chemical burn (page 22)
- If the substance has been swallowed, instruct the casualty to rinse out their mouth and they may take frequent sips of water or milk
- Call an ambulance
- Monitor and record your observations

Non-corrosive substances:

- Maintain Airway and Breathing
- Identify the substance
- If CPR is required use a protective face mask
- Call an ambulance
- Monitor and record your observations

Useful information for the emergency services:

- Information about the substance, e.g. containers or information sheets
- The time that the substance was taken or the casualty was affected by the substance
- How much was taken
- How the poison entered the body

EFFECTS OF HEAT

HEAT EXHAUSTION

Heat exhaustion results from the loss of salt and water from the body, due to excessive sweating.

SIGNS

- Pale, cold, clammy skin
- Sweating
- Loss of appetite, nausea, vomiting
- Thirst
- Inability to produce urine
- Muscular cramps, particularly in the limbs and abdomen
- Increased Breathing rate
- Rapid, weak pulse
- Faintness, dizziness
- Lethargy, exhaustion

TREATMENT

- If possible, move the casualty to a cool place e.g. shade, ventilated building
- Lie them down
- Ask them to remove any excessive clothing, maintain dignity
- Give plenty of water, add rehydration salts if possible
- Arrange for medical advice, even if they recover quickly
- Call for an ambulance if their condition deteriorates

HEAT STROKE

If heat exhaustion is not treated rapidly it may lead to heat stroke, where the body is unable to regulate its temperature.

CAUSES

- Prolonged exposure to heat or extreme hot weather
- Untreated
- High fever
- Use of certain drugs, such as ecstasy

SIGNS

- Flushed, hot, dry skin
- Not sweating
- Strong pulse
- Nausea, vomiting
- Headache, dizziness
- Confusion, restlessness
- Rapid deterioration in responsiveness
- Possible seizures
- Body temperature above 40°C

TREATMENT

- Take immediate action
- Call an ambulance
- Maintain Airway and Breathing
- If possible, move the casualty to a cool place
- Remove any excessive clothing, maintain dignity
- Cool them down - sponge them down with cold water or wrap them in a damp sheet
- Be prepared for deterioration and respond accordingly
- Once a normal temperature has been achieved, attempt to maintain it
- Do not use excessive continued cooling to the extent they become hypothermic

HYPOTHERMIA

Hypothermia: low core body temperature.

CAUSES

- Wet clothing, following immersion in water or prolonged exposure to the rain
- Inadequate clothing, particularly outdoors, with prolonged exposure to cold air
- Poorly heated houses

SIGNS

- Pale skin, which is cold to touch
- Shivering initially
- Muscles appear stiff, rigid
- Slow, shallow respirations
- Slow, weak pulse, may be difficult to detect
- Speech becoming slow, slurred
- Confusion, disorientation
- Lowering level of responsiveness
- Pupils may not react
- May have a death-like appearance
- In severe cases, they may suffer a cardiac arrest

TREATMENT

If the casualty is responsive and indoors:

- Replace damp and wet clothing with something dry and warm
- Pay particular attention to covering the head
- Wrap the casualty in warm blankets
- Give them warm drinks and food
- Arrange medical assistance

If the casualty is responsive and outdoors:

- Move to shelter if possible

If this is not possible:

- Protect them from the ground and environment - use newspaper, blankets, clothing, etc
- Provide shelter from wind and rain - improvise with what you have at the time
- Share your body heat with them by keeping close
- Give them warm drinks and food if possible
- Arrange medical assistance

SEIZURES

Epilepsy is the most common cause of seizures is not the only cause. Other causes include:

- Shortage of oxygen to the brain
- Shortage of glucose to the brain
- Strokes and brain tumours
- Infections
- Infantile convulsions
- Head injury
- Rise in body temperature
- Certain poisons, including alcohol
- On rare occasions, pregnancy

Never assume epilepsy is the cause. Medic alert bracelets and necklaces may be carried giving an indication that the casualty suffers from epilepsy.

MAJOR SEIZURES

SIGNS

This type of seizure causes involuntary contractions of muscles, sometimes leading to aggressive shaking of the body. It is sudden and dramatic and can be very frightening to witness. In the majority of cases the following sequence is followed:

1. AURA

This is a feeling that the casualty often has just before the seizure. Those who have had seizures previously recognise this as a warning that a seizure is likely to start. The signs may include a certain smell, taste in the mouth or a strange feeling that they usually have. Occasionally this warning allows them time to call for help and lie down before they fall.

2. TONIC STAGE

- Rigidity of the body
- Sudden unresponsiveness
- The casualty may give out a cry
- Back arches
- Flushed face and neck
- Blueness around the lips

3. CLONIC STAGE

- Convulsive muscle spasms
- Violent jerking movements of the body
- Jaw clenches
- Eyes roll
- Noisy Breathing
- Saliva from the mouth
- May bite their tongue making the saliva blood stained
- Loss of bowel and/or bladder control

4. RECOVERY

- Muscles relax
- Breathing returns to normal
- Response level improves although they feel dazed, disorientated and unaware of their surroundings
- May behave strangely or react in a violent manner
- Tiredness and may fall asleep

TREATMENT

Do:

If a person is falling, try to support or ease the fall and lie them down gently, without putting yourself in danger. Only do so if you are trained and practised in the 'controlling a fall' technique.

Prevent injuries to the casualty. Clear a space and move any objects that may cause harm from around them and use clothing or padding to soften the blow from the seizure. Pay particular attention to protecting the head.

Loosen tight clothing around the neck.

Ask bystanders, that you cannot use, to leave.

Constantly monitor and record your observations. In particular, make a note of the time that the seizure started and its duration.

Do not:

- Try to move the casualty unless they are in immediate danger
- Attempt to restrain the casualty
- Put anything in the casualty's mouth, particularly your fingers
- Give anything by mouth until recovery is complete
- Try to wake the casualty during the seizure

AFTER A MAJOR SEIZURE

Manage them as an unresponsive casualty:

- Maintain Airway and Breathing (Primary survey)
- Check for major injuries (Secondary survey)
- Place them in the recovery position
- Offer reassurance
- Protect their modesty: they may feel embarrassed, particularly if they have been incontinent
- Constantly monitor and record your observations

Call an ambulance if:

- It is the first ever seizure or the first you know of
- If the casualty is known to be epileptic, but the seizure continues for more than 5 minutes, or there is no improvement in the level of response within 10 minutes
- The casualty is having repeated seizures
- If they have injured themselves during the seizure
- You are in any doubt: remember there may be underlying causes of the seizure, it is far better to call an ambulance even if you are unsure

MINOR SEIZURES

SIGNS

Minor seizures are otherwise known as absences. They occur in people who suffer a milder form of epilepsy.

Convulsive movements and unresponsiveness rarely occur during a minor seizure although a major seizure may follow. They can be mistaken for daydreaming or lack of concentration.

The signs of a minor seizure may include:

- Staring blankly
- Slight jerking or twitching of an individual limb, the face, head or eyelids
- Strange behaviour including smacking of the lips, chewing and making strange noises

TREATMENT

Usually these seizures will only last for a few seconds.

- Assist the casualty to rest in a quiet environment with plenty of space
- Remove any objects that may cause harm from around them, such as hot drinks, knives or glasses
- Offer reassurance, but do not question the casualty until the seizure is over
- Remain with the casualty until the seizure has ended and they have fully recovered
- On recovery, if the casualty is unaware of their condition, advise them to consult their doctor
- Be prepared in case a major seizure develops

SEPSIS

Sepsis is a life-threatening complication that can occur when the body's response to an acute infection leads it to harm its own tissues and organs. Five people die from sepsis every hour in the UK (Sepsis Trust).

It is crucial to differentiate between infection, which is common, and sepsis, which is an uncommon complication that may arise when an infection does not respond to treatment.

Sepsis can affect anyone, but it is most prevalent in very young and elderly individuals, as well as those with compromised immune systems.

Early signs and symptoms of sepsis are often nonspecific, making it challenging to recognise.

Early recognition and treatment are crucial.

Sepsis carries high mortality rates, with the delay in recognition and treatment directly impacting survival.

SIGNS

If an individual has a confirmed or possible infection and shows any of these signs, they may have sepsis.

- Severe breathlessness and/or rapid, shallow breathing
- Extreme pain or discomfort
- The casualty has not urinated throughout the day
- The skin appears pale, mottled and discoloured
- Cold hands and feet
- A feeling of impending death
- Slurred speech, confusion and drowsiness

Children may show signs of:

- Rapid breathing
- Mottled, blue, or pale skin
- Cold hands and feet
- No recent wet nappies
- Seizures
- Extreme tiredness, difficult to wake

TREATMENT

- Call for an ambulance immediately
- Maintain Airway and Breathing
- Reassure the casualty
- Address symptoms of fever (page 34) by maintaining body temperature
- Monitor and record observations

DIABETES

Diabetes is a condition in which a person does not produce enough insulin. Insulin works by breaking down the sugars you eat.

	Hypoglycaemia (low blood sugar)	Hyperglycaemia (high blood sugar)
Causes	Not eating enough food, excessive exercise, injecting too much insulin	The body makes too little insulin or does not use insulin efficiently
Warning signs	History of diabetes, the casualty may recognise the symptoms	Progressively feeling unwell, see symptoms below
Onset	Rapid, within minutes	Slow, gradual, many hours or days
Skin	Pale, cold, sweating	Flushed, warm, dry
Pulse	Increased rate, weak	Increased rate, strong
Breathing	Normal to fast	Deep breaths
Response	Rapid deterioration Noticeable change in character/behaviour Confusion, irritability, uncooperative Lack of coordination Speech slurred Unresponsiveness if not treated	Lowers slowly Drowsy Restless Unresponsiveness if not treated
Other signs	Weakness, faintness Muscle tremors Seizures (in later stages) May be mistaken for drunkenness	Fruity/sweet odour on the breath Excessive thirst Need to frequently urinate
Other clues	Medic alert bracelets or necklaces Diabetic warning cards Glucose replacements, such as glucose tablets or gel (hypostop) Medication, such as tablets or insulin syringes	
Treatment	Primary and secondary surveys (pages 5 and 8) Give the casualty food or drink to raise their blood sugar level, e.g. sugary drink, dextrose tablets, sugar, chocolate, sweet food Do not give food or drink if responsiveness is impaired Advise them to visit their doctor Call an ambulance if: • Their condition does not improve within 10 minutes • The casualty becomes unresponsive. • You are unable to manage the casualty, or have any concern about the treatment	Primary and secondary surveys (pages 5 and 8) They should seek medical advice as soon as possible In severe cases, call an ambulance Monitor their condition

You can have low blood sugar without being a diagnosed diabetic.

PAEDIATRICS

Children are NOT miniature adults. There are some important differences that need to be considered when dealing with sick and injured children:

- Smaller body - sustain more injuries than an adult from the same amount of force
- Large head (infants) - more likely to land on their head when falling from a height
- More elastic skeleton - more likely to suffer internal injuries without fracturing a bone
- Smaller volume of blood - relatively small loss of blood is potentially serious
- Difficulty regulating heat (young children) - excessive heat may cause seizures
- Lower body fat - lose heat quicker, prone to hypothermia

Age	Respiratory rate	Heart rate
0-11 months	30-49 RPM	110-159 BPM
12-23 months	25-39 RPM	100-149 BPM
2-4 years	20-34 RPM	90-139 BPM
5-11 years	20-29 RPM	80-129 BPM
Over 12 years	15-24 RPM	70-109 BPM

FEVER

The body's mechanism to fight against infection with heat. A temperature above 38°C can be dangerous to a child.

SIGNS

- Raised body temperature
- Pale face
- Feeling chills
- Goose pimples
- Shivering

In severe cases:

- Hot, flushed skin
- Sweating
- Headaches
- Aches, pains
- Refuse fluids, seem too ill to drink enough
- Dehydration
- Confused, delirious
- Seizures

TREATMENT

- If possible, take the child's temperature using a thermometer under the armpit
- Make the child comfortable
- Remove excessive clothing
- Give the child plenty to drink: water, juice
- Ensure they are in a cool environment
- Seek medical advice if the temperature continues to rise or the child's condition deteriorates

INFANTILE SEIZURES

An infantile (febrile) seizure occurs when a child has a very high temperature. These are fairly common in children between six months and four years of age.

SIGNS

Recent history of an infection
Eyes roll back, squint, fixed in one direction
Flushed, hot appearance
Sweating
Arched back
Shaking movements
Clenched fists
Cyanosis
Saliva from the mouth

TREATMENT

- Maintain Airway and Breathing
- Clear a space, remove any objects that may cause harm, use clothing or padding to soften the blow from the seizure and protect the head
- Allow an adequate supply of cool fresh air
- Cool them by removing outer clothing, sheets
- If unresponsive, place in the recovery position
- Monitor and record your observations, note the time and duration of the seizure
- Call an ambulance

DO NOT:

- Do not overcool the child
- Do not move them unless they are in immediate danger
- Do not attempt to restrain them
- Do not put anything in their mouth, particularly your fingers
- Do not try to wake them during the seizure
- Usually, once the child is cooled the seizure will stop

CROUP

Croup is caused by a narrowing of the main Airway due to infection. It usually affects children between the ages of 6 months and 3 years.

SIGNS

- Barking cough
- Difficulty Breathing
- Noisy Breathing, especially Breathing in
- Hoarse voice

In severe cases there may be:

- Use of other muscles when Breathing - nose, neck, shoulders, abdomen
- Cyanosis

TREATMENT

- Make them child comfortable
- Sit them up to assist Breathing
- Take them to a steamy atmosphere - use a bath or a boiled kettle to create steam (keeping safe distance from the child)
- Talk to a doctor for advice
- Do not panic as this will make their condition worse
- In severe cases, call an ambulance

SICKLE CELL DISORDER

Sickle Cell Disorder (SCD) is associated with the 'sickling' in the shape of red blood cells which can block the flow of oxygen around the body. Examples include: Sickle Cell Anaemia, Haemoglobin Sickle Cell Disease, Sickle Beta-Thalassaemia.

Those with SCD may experience 'crisis' bouts of pain, anaemia, infection or jaundice. SCD may also cause brain damage, blindness, renal failure, mobility problems and even death.

FOREIGN OBJECTS

- Maintain Airway and Breathing
- Build up padding using sterile dressings around the protruding object
- Apply pressure on either side of the object and support it in position
- Maintain the pressure to control bleeding
- If necessary bandage the padding in place, ensuring that the pressure is applied on either side of the object and not directly onto it
- Support in a raised position
- Arrange for medical assistance
- Constantly monitor and record your observations
- Never remove the object

APPENDICITIS

Appendicitis is an inflammation of the appendix.

SIGNS

- Sudden onset of intermittent pain (waves of pain) starting in the naval
- Pain moving to the lower right side of the abdomen
- Mild fever
- Loss of appetite
- Nausea, vomiting
- Frequent passing of water
- Diarrhoea

TREATMENT

- Take immediate action
- Make the child comfortable
- Call an ambulance
- Do NOT give the child anything to eat or drink - if it is appendicitis it is likely that the child will need an operation

MENINGITIS

Meningitis is the inflammation of the tissues that surround the brain.

SIGNS

- Fever
- Nausea, vomiting, appetite
- Headache
- Pain in the eyes caused by light
- Red or purple rash that does not fade when pressure is applied (glass test)
- Pain, stiffness in the neck
- Joint pains
- Dislikes being moved or handled
- Drowsiness
- Seizures

TREATMENT

- Maintain Airway and Breathing
- Make the child comfortable
- Call an ambulance

A child who is very ill needs medical help even if there is no rash or if the rash does fade during the glass test.

EMPLOYER'S RESPONSIBILITIES

Under Health and Safety law, an employer has a responsibility to ensure that first aid provision in the workplace is sufficient. This includes:

- Carrying out an assessment to decide how many First Aiders are needed and where they should be located
- Providing training and requalifying training for their First Aiders
- Providing sufficient first aid kits and equipment for the workplace
- Ensuring that staff are aware of how and where to get first aid treatment

Further information: www.hse.gov.uk

FIRST AID KITS

First Aid kits should be easily accessible and clearly identified by a white cross on a green background. The container should protect the contents from dust and dampness. A first aid kit should be available at every work site. Larger sites may need more than one first aid kit. The following list of contents is given as guidance only:

- General first aid guidance leaflet
- Adhesive dressings (plasters) of assorted size, individually wrapped, sterile
- Blue plasters for food handlers
- Triangular bandages, individually wrapped, sterile
- Sterile wound dressings of assorted size
- Disposable gloves
- Burn dressings
- Tape
- Scissors
- Sterile eye pads
- Face shield
- Foil blanket

This list is not mandatory, so equivalent items may be used. Other items should be provided if necessary. They may be stored in the first aid kit if they will fit, or kept close by for use.

ACCIDENT BOOK

All accidents must be reported to employers and recorded. An accident book is a legal document and should be provided by the employer. An accident book will contain the following details:

- Information regarding the person who had the accident.
- Information regarding the person who completed the accident record in the book. Details regarding the incident, including where when and how the accident happened.
- A record of whether the employer has reported the accident to the HSE under the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations.

REPORTING OF INJURIES, DISEASES & AND DANGEROUS OCCURRENCES (RIDDOR)

Under Employers must report to the Health and Safety Executive:

- Death
- Fractures, other than to fingers, thumbs and toes
- Amputation
- Any injury likely to lead to permanent loss of sight or reduction in sight
- Serious burns (including scalding) which Covers more than 10% of the body or causes significant damage to the eyes, respiratory system or other vital organs
- Any loss of responsiveness caused by head injury or asphyxia
- Scalping
- Injuries leading to hypothermia or heat-induced illness
- Injuries requiring resuscitation or admittance to hospital for more than 24 hours
- Injuries resulting in a person being away from work/unable to do their normal work for more than seven days
- Carpal tunnel syndrome
- Occupational dermatitis
- Occupational asthma

Dangerous Occurrences
RIDDOR should be consulted, to establish what is required to be reported: riddor.gov.uk

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Important: This manual is designed as a learning guide to a first aid course. If you suspect illness or injury, you should always seek professional medical advice.

Disclaimer: Whilst every effort has been made to ensure the accuracy of the information contained in this manual, the author does not accept any liability for any inaccuracies or for any subsequent mistreatment of any person, however caused.