

FIRST AID HANDBOOK

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The **Helpful Hints icon** appears throughout this book to assist you in being a better first aider.

INTRODUCTION

What is first aid?

Definition

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



For all first-aid treatment you should wear disposable gloves.



ROLE AND RESPONSIBILITIES OF THE FIRST AIDER

The role of the first aider

The most important role of a first aider is to ensure that the aims of first aid are put into practice in an emergency. The main aims of first aid are:

Preserve Life

Administer immediate effective first aid to a casualty in order to save life.

Prevent the Condition from Worsening

Recognising and treating the cause will assist with preventing the condition from worsening.

Promote Recovery

Administer ongoing treatment and offer constant support until the arrival of qualified medical assistance.



REMEMBER!

If you have not contacted the Emergency Services then they will not arrive!

Legislative requirements

First aid within the workplace is governed by legislative requirements.

The Health and Safety (First-Aid) Regulations 1981

The Health and Safety (First-Aid) Regulations (Northern Ireland) 1982

Requires employers to provide adequate and appropriate equipment, facilities and personnel to ensure their employees receive immediate attention if they are injured or taken ill at work. These Regulations apply to all workplaces including those with less than five employees and to the self-employed.

The Health and Safety at Work etc. Act 1974

Employers have a responsibility for the health and safety of their employees. They are also responsible for any visitors to the premises such as customers, suppliers and the general public.

RIDDOR Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (current Regulations)

RIDDOR places duties on employers, the self-employed and people in control of work premises (the Responsible Person) to report serious workplace accidents, occupational diseases and specified dangerous occurrences (near misses) in line with current regulations.

The Management of Health and Safety at Work Regulations 1999

The main requirement on employers is to carry out a concise risk assessment of the workplace. Employers with five or more employees need to record the significant findings of the risk assessment. The risk assessment will assist employers in determining the first-aid provision and requirements within the workplace.

Further information can be found on
the Health and Safety Executive (HSE)
website
www.hse.gov.uk

Consent (implied consent)

Before commencing treatment of a casualty the first aider should ask for and receive the casualty's consent to treatment. If casualties are unable to give their consent due to their injuries or because they are unresponsive you can assume their consent to treatment.

The responsibilities of the first aider

The responsibilities of the first aider will be dependent on specific workplace requirements. Responsibilities could include:

- preventing cross-contamination
- ensuring first-aid equipment is available to use and fit for purpose
- arriving at the scene
- assessing an incident and ensuring the scene is safe
- contacting the emergency services
- prioritising the treatment of casualties
- clearing up after an incident
- incident reporting and recording
- dealing with post incident stress



First-aid equipment

The content will be dependent on the assessment of first-aid needs that should be conducted.

CONTENTS															
	Leaflet	Contents list	Medium sterile dressing	Large sterile dressing	Triangular bandage	Eye pad sterile dressing	Sterile adhesive dressing	Alcohol free moist wipes	Adhesive tape roll	Nitrile gloves (pairs)	Finger sterile dressing	Resuscitation face shield	Foil blanket	Burn dressing	Shears
Type of Kit															
SMALL	1	1	2	2	2	2	40	20	1	6	2	1	1	1	1
MEDIUM	1	1	4	3	3	3	60	30	2	9	3	1	2	2	1
LARGE	1	1	6	4	4	4	100	40	3	12	4	2	3	2	1



From your risk assessment, what degree of hazard is associated with your work activities?	How many employees do you have?	What first-aid equipment personnel do you need?
Low-hazard - e.g. offices, shops, libraries.	Fewer than 25	1 small workplace compliant first-aid kit. At least 1 Appointed Person.
	25 - 50	1 medium workplace compliant first-aid kit. At least 1 EFAW trained first-aider.
	More than 50	1 large workplace compliant first-aid kit (per 100 people). At least 1 FAW trained first-aider for every 100 employees.
Higher hazard Light engineering and assembly work, food processing, warehousing, extensive work with dangerous machinery or sharp instruments, construction and chemical manufacture	Fewer than 5	1 small workplace compliant first-aid kit. At least 1 Appointed Person.
	5 - 50	1 medium workplace compliant first-aid kit. At least 1 EFAW trained first-aider.
	More than 50	1 large workplace compliant first-aid kit (per 50 people). At least 1 FAW trained first-aider for every 50 employees.



If mains tap water is not readily available for eye irrigation then there should be at least one litre of sterile water or sterile normal saline (0.9%) in a sealed, disposable container provided. The eye irrigation container should be safely secured or wall-mounted and located in close proximity to the first-aid box.

The first aider should regularly check the first-aid box, ensuring that it is suitably stocked and items are in date and undamaged.

Arriving at the scene

- Always try to remain calm
- Take charge of the situation
- Conduct a scene survey
- Ensure the safety of yourself, bystanders and others
- Gather information from bystanders and the casualty
- Fully brief the emergency services



Contacting the emergency services

First aiders will either contact the emergency services themselves or instruct a bystander to do so. Contacting the emergency services at the earliest opportunity is paramount. When contacting the emergency services on either **999**, it is important that the information given is clear, concise and sufficient. This can be achieved by remembering the acronym **LINE**.

L Location
I Incident
N Number of casualties
E Extent of their injuries

ACRONYM

Prioritising the treatment of casualties

After conducting a *primary survey* and contacting the emergency services, casualties should be placed in an order of priority and treated accordingly. This order is as follows:

Breathing ➡ **Bleeding** ➡ **Bones/Burns** ➡ **Other Conditions**

In certain circumstances these priorities can be changed. For example, if a casualty had a broken leg and a small finger cut then the broken leg would be treated before the bleeding finger.

Clearing up after an incident

Once the incident has been handed over to qualified medical assistance, then the clearing up process must commence. This process consists of the following:

- ensure that all used bandages and used items such as personal protective equipment (PPE) are placed in a yellow clinical waste bag, or something similar
- ensure that the area where any blood or other bodily fluids have been spilt is thoroughly cleaned
- restock the first aid-kit and replace any other equipment that may have been used during the incident
- record and report the incident



Incident recording and reporting

After any first-aid incident it is important that the incident is recorded and reported in full. Ultimately the employer is responsible for the reporting of accidents; however, as the first aider, you should be clear on your role within this process. **The accident record should be completed in full and populated with clear and concise information**; there may also be the necessity to inform RIDDOR. In cases where a public access AED has been used, dependent on local authority policies, there may be a requirement to report the event using a prescribed audit reporting chain.

Report Number

+

ACCIDENT RECORD EXAMPLE FORM

1 About the person who had the accident

Name *e.g. - David Smith*

Address *e.g. - 24 First Aid Street, Emergency Town, Accidentshire*

Postcode *e.g. A2C DEN2T*

Occupation *e.g. Warehouse Worker*

2 About you, the person filling in this record

▼ If you did not have the accident write your address and occupation.

Name *e.g. Bob Smith*

Address *e.g. 2 The House, Placeville, Any Town*

Postcode *e.g. ANY W34A*

Occupation *e.g. Warehouse Manager*

3 About the accident Continue on the back of this form if you need to

▼ Say when it happened. Date *e.g. 01 / 04 / 22* Time *16:02*

▼ Say where it happened. State which room or place. *e.g. loading bay, main building*

▼ Say how the accident happened. Give the cause if you can.

e.g. Walking into the loading bay at the main building, David Smith tripped and fell over a box. The box had fallen off a fork lift truck which had just entered the loading bay. The operator had not returned to remove the box.

▼ If the person who had the accident suffered an injury, say what it was.

e.g. David Smith sustained a sprained ankle

▼ Please sign the record and date it.

Signature Date *e.g. 01 / 04 / 22*

4 For the employer only

▼ Complete this box if the accident is reportable under the RIDDOR Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (Current Regulations)

How was it reported? *e.g. By telephone call*

Date reported *e.g. 01 / 04 / 22* Signature

Minimising infection

It is important that as a first aider you do not transmit infections to your casualty, work colleagues or people within the workplace environment and vice versa. To assist in minimising the risk of infection and cross-contamination there are various precautions that can be taken such as:

- having good personal hygiene
- 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

Barrier devices

Barrier devices are essential equipment and help to eradicate the spreading of infection and cross-contamination. Barrier devices, as their name suggests, place a barrier between the first aider and the casualty. Barrier devices include:

- nitrile powder-free gloves
- face shields
- pocket masks
- *non surgical face mask/clean fabric material



*You should keep up to date with the Resuscitation Council UK Statement on COVID-19 in relation to CPR and resuscitation in first aid and community settings www.resus.org.uk/covid-19-resources/covid-19-resources-general-public/resuscitation-council-uk-statement-covid-19



Resuscitation using a face shield.



Resuscitation using a pocket mask.

ASSESSING AN INCIDENT

Scene survey

Upon arrival at an incident a scene survey must be conducted to ensure the safety of the casualty, any bystanders and the first aider. The scene survey should be conducted by remembering the acronym **CLAP**.



Control the situation

Stop, take a deep breath and take charge of people and vehicular traffic.



Look for potential hazards

Look for anything that could cause further harm to the casualty, bystanders or more importantly yourself within the immediate area.



Assess the situation

Gather as much information about what has occurred from the casualty and from bystanders and try to make a diagnosis (history, signs and symptoms).



Protect and Prioritise

Ensure protection is worn (gloves), and that casualties are prioritised (breathing, bleeding, bones/burns and other conditions). Try to gain assistance from a bystander and contact the emergency services.

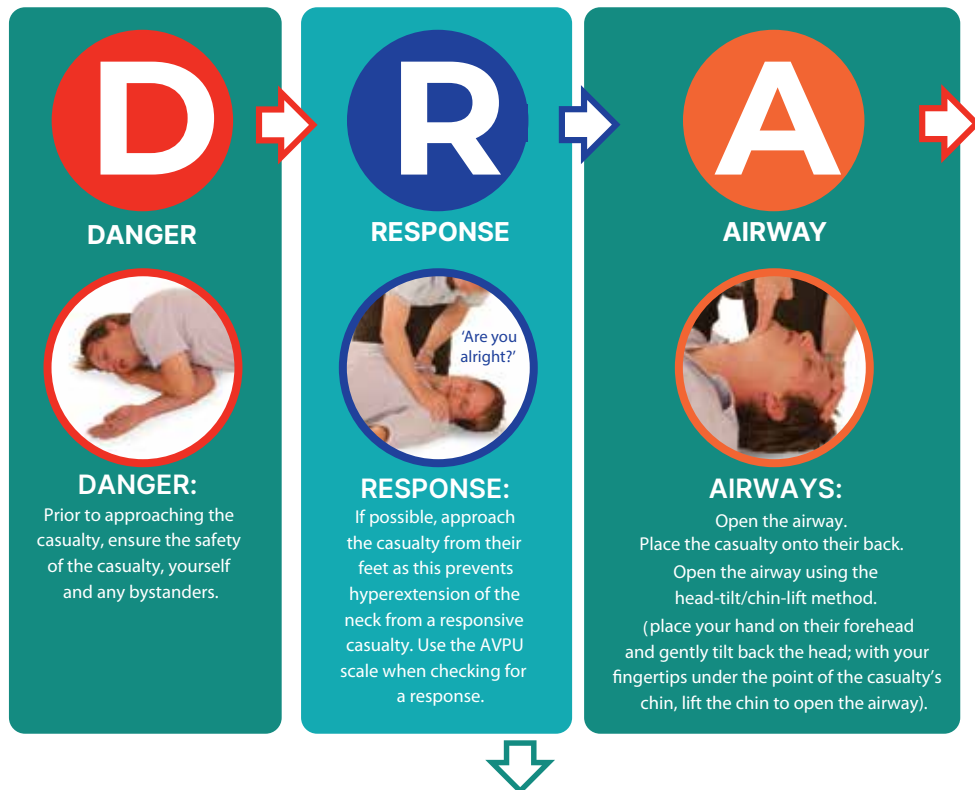
ACRONYM

Primary survey

Having conducted a scene survey and established that the immediate area is safe from any dangers, you can now approach the casualty. When approaching the casualty, an initial assessment should be conducted; this initial assessment is called a primary survey. The primary survey is a systematic process of approaching, identifying and dealing with immediate and or life-threatening conditions.

The primary survey can be remembered by the acronym **DRABCD** (or the easy way to remember, **Doctor ABCD**).

Doctor ABCD



REMEMBER!

ACRONYM



The 'P' in the acronym AVPU is sometimes also referred to as 'Pain' depending on the scale used.

- A** **ALERT** - Are they moving/talking - **No** - Proceed to **V**.
- V** **VOICE** - Do they respond to speech? - **No** - Proceed to **P**.
- P** **PLACE** - Place your hand on their shoulders and gently shake them asking, 'Are you alright?', if **No** response then proceed to **U**.
- U** **UNRESPONSIVE** - Assume the casualty is unresponsive.
(If the casualty responds and providing there is no further danger, leave them in the position found and try to find out what is wrong, get help if needed.)

DRABCD

B

BREATHING



BREATHING:

After opening the airway; look, listen and feel for normal breathing for no more than 10 seconds.



Agonal Gasps

In the first few minutes after a cardiac arrest, a casualty may be barely breathing or taking infrequent, slow agonal gasps. Do not confuse this with normal breathing. If in any doubt that breathing is normal, act as if not breathing normally and prepare to start CPR.

If the casualty is breathing normally but still unresponsive, check for further injuries (conduct a secondary survey), and if safe to do so, place in the recovery position. Call an ambulance (999), check breathing regularly, if the casualty deteriorates or stops breathing normally then be prepared to commence CPR immediately.

C

CALL 999/ CIRCULATION



Call an ambulance (999)

Ask a helper to call, otherwise call yourself.

Stay with the casualty when making the call if possible, and activate speaker function on the phone to aid communication with ambulance service. Send someone to get an AED if available.

If you're on your own do not leave the casualty: start **CPR** - 30 compressions 2 breaths. Depth of compression 5 – 6 cm.

At a rate of 100 – 120 compressions per minute.

D

DEFIBRILLATION



DEFIBRILLATION:

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



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 100-120 per minute and to a depth of 5 – 6 cm.

Casualty communication

It is vital that clear and effective communication is used at all times when dealing with a casualty or casualties. A casualty may be in a distressed and confused state; the first aider should remain calm and authoritative. Talk to the casualty constantly and explain what you are going to do prior to doing it, irrespective of whether the casualty is responsive or not. Other considerations with regards to casualty communication are as follows:



- try to use the casualty's preferred name
- gather as much information as possible about what has occurred
- let the casualty, if possible, explain where the injury is
- only speak about facts, not what your opinion is
- directly face the casualty and speak clearly and slowly without shouting
- allow the casualty time to think and respond
- explain what you are going to do, prior to doing it
- ask the casualty to assist wherever possible (a distraction)
- try to keep eye contact with the casualty

KEY TASK: 1

Link the word on the left to the correct description on the right.

DANGER

RESPONSE

AIRWAY

BREATHING

CALL 999

DEFIBRILLATION

Descriptions

We need to open this to check for breathing.

We need to check for no more than 10 seconds for this.

This should be used alongside CPR.

Prior to approaching the casualty, visually check the area for ...

Use the 'AVPU' scale when checking for this.

If not breathing ...

Secondary survey

Head-to-toe survey

If the casualty is breathing normally a secondary survey should be carried out. Inform the casualty what you are doing at all stages. If the casualty is responsive ask them to tell you if they feel any pain during the head-to-toe survey.

Head and Face

Look at the casualty's head and face for any obvious signs of injury or trauma. Remove spectacles if the casualty is wearing them. Gently feel around the head, face and scalp for any bleeding, swelling or depressions. Look at the casualty's ears for signs of bleeding or the presence of cerebrospinal fluid (CSF).



Neck

Loosen any restrictive clothing such as collars, ties and scarfs. Gently feel around the cervical spine area and back of the neck to check for any bleeding, swellings or deformity and also check for medical necklaces.



Chest and Shoulders

Gently feel around the shoulders to check for signs of deformity and bleeding. Check the chest for normal breathing movement (rise and fall) and check for any bleeding.



Arms and Hands

Check along the arms, feel for signs of deformity, swelling and bleeding. Check the wrists for medical bracelets.



Spine

Try to check as much of the spine as possible without moving the casualty; feel for tenderness and deformity as well as signs of bleeding.

Pelvis

Check the hips and pelvis for deformity, unnatural positioning or bleeding.



Abdomen

Gently check the abdomen for signs of bleeding, swelling or unnatural softness.

Legs and Feet

Check the legs and feet for bleeding, unnatural positioning, swelling and deformity. Check the pockets of skirts or trousers for objects that may cause discomfort or pain should the casualty be moved.



When a casualty is found after an unidentified incident, the casualty may be suffering from a number of injuries. Establish that the casualty is out of immediate danger, i.e. breathing and no life-threatening bleeding and then carry out an examination in the position they are found.

The recovery position

Kneel to the side of the casualty; remove glasses, watches and any large objects from side pockets.



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 the hand onto their nearest cheek with your hand.



With your free hand grasp the casualty's clothing around the knee and draw the leg up ensuring the foot remains on the ground.



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.



Adjust the casualty's upper leg so that the knee and lower leg are at right angles to the hip making a stable base. Check that the airway is open and adjust the hand under the cheek to maintain the airway.



The casualty is now in the recovery position.



Continual monitoring of normal breathing, and be prepared to carry out CPR.



Only place a casualty into the recovery position if there are no further injuries, once in the recovery position turn onto the opposite side every 30 minutes. 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.

MANAGING AN UNRESPONSIVE CASUALTY

The principles of resuscitation

Basic life support (BLS) and automated external defibrillation (AED) comprises the following elements.

Initial assessment

- Airway maintenance and breathing
- Cardiopulmonary Resuscitation (CPR) and Automated External
- Defibrillation (AED)

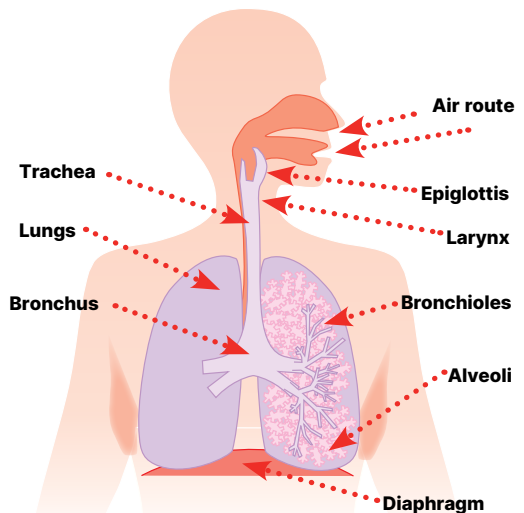
The respiratory system

The main aim of the respiratory system is to supply oxygen to all parts of the body. Breathing is essential to life. When we inhale we breathe in a mixture of:

- nitrogen (79%)
- oxygen (20%)
- other gases (1%)

When we exhale we breathe out a mixture of:

- carbon dioxide (4%)
- nitrogen (79%)
- oxygen (16%)
- other gases (1%)



THE RESPIRATORY SYSTEM

Airway maintenance

It is important that the casualty's airway is opened and remains open (maintained).



CHEST COMPRESSIONS

Chest compressions should be administered to a casualty who is not breathing normally. The depth of the chest compression is 5 - 6 centimetres (similar to the height of a credit card) and the rate of compression should be 100 - 120 compressions per minute. 30 chest compressions should be administered prior to moving on to rescue breaths (expired air ventilation).



RESCUE BREATHING (EXPIRED AIR VENTILATION)

After completing 30 chest compressions the emergency first aider should administer 2 effective rescue breaths.

Each breath should take one second to complete and the casualty's chest should rise as in normal breathing; this is known as an effective rescue breath. Administering the 2 breaths should not take more than 10 seconds to complete in total. Once the first breath is administered, remove your mouth from the casualty's mouth, turn your head and watch the chest rise and fall, then administer the second breath.



CARDIOPULMONARY RESUSCITATION (CPR)

CPR is a method of combining chest compressions with effective rescue breaths in order to artificially circulate blood and to put air into the lungs.

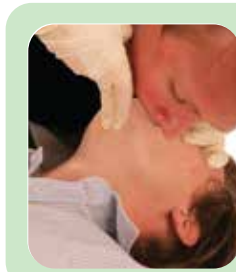
CARDIO = 'heart'

PULMONARY = 'lungs'

RESUSCITATION = 'revive'

TO ADMINISTER CPR:

- Kneel by the side of the casualty. Place the heel of one hand in the centre of the casualty's chest.
- Place the heel of your other hand on top of the first hand. Interlock the fingers of your hands.
- Position yourself vertically above the casualty's chest and with your arms straight, press down on the sternum 5 - 6 cm.
- After each compression, release all of the pressure on the chest without losing contact between your hands and the sternum. Repeat at a rate of 100 - 120 compressions per minute 30 times.
- Administer 2 effective rescue breaths.



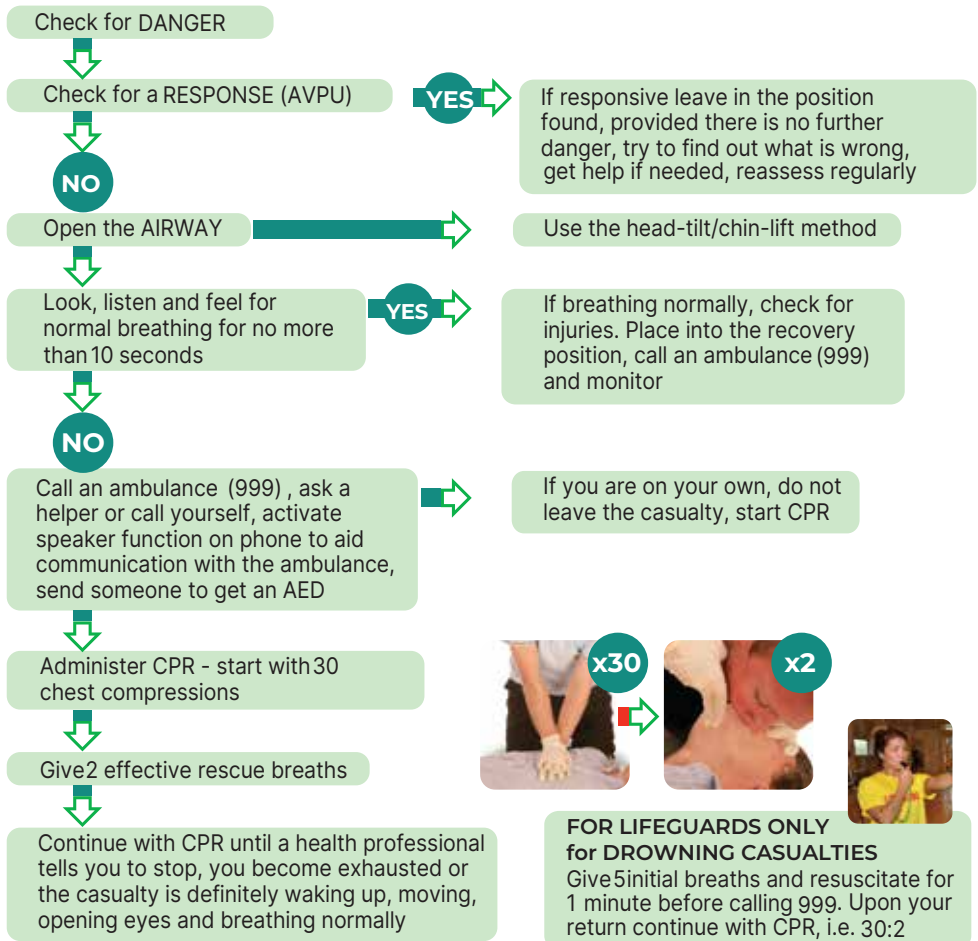
Complete **30** compressions and **2** rescue breaths until:

1. A health professional tells you to stop
2. You become exhausted
3. The casualty is definitely waking up, moving, opening their eyes and breathing normally
4. Prompted by the AED



If there is assistance available when administering CPR you should change over every 1- 2 minutes.

Adult basic life support and automated external defibrillation



COMPRESSION-ONLY CPR

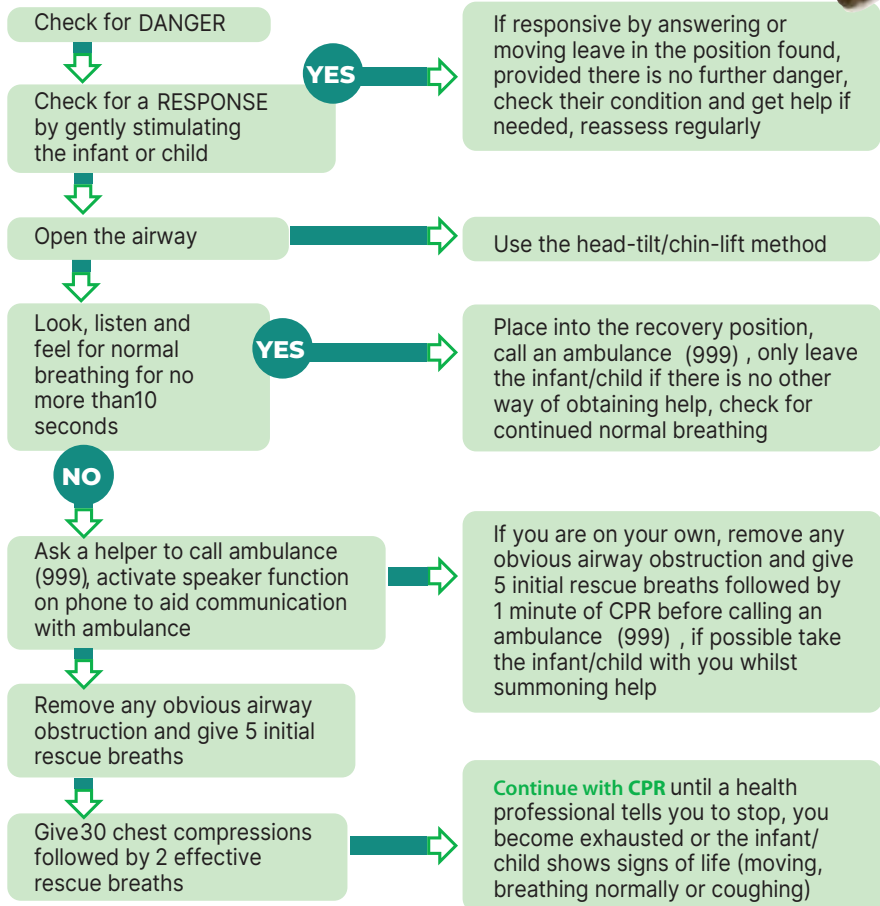
If you are untrained or unable to give rescue breaths then compression-only CPR may be administered. If compression-only CPR is given, then this should be continuous at a depth of 5 - 6 cm and at a rate of 100 - 120 compressions per minute.

INFANT AND CHILD CPR

The definitions of infant and child are as follows:

An infant is under the age of 1 year

A child is between 1 year and 18 years of age



CHAIN OF SURVIVAL

After suffering from a cardiac arrest, with each passing minute, a casualty's chance of survival diminishes roughly by 6-10%. The chain of survival is a series of actions, or links, that when put quickly in motion increase the odds of survival. If the chain is broken, or has a link missing, the odds of survival will be reduced.

TO PREVENT CARDIAC ARREST

1

EARLY RECOGNITION

and call for help
Recognise those at risk of cardiac arrest and call for help in the hope that early treatment can prevent arrest.



TO BUY TIME

2

EARLY CPR

Start CPR to buy time until medical help arrives.



To restart the heart

3

EARLY DEFIBRILLATION

Defibrillators give an electric shock to reorganise the rhythm of the heart.



To restore quality of life

4

POST-RESUSCITATION CARE

Care provided by the paramedics and the hospital.



AUTOMATED EXTERNAL DEFIBRILLATOR (AED)

An automated external defibrillator (AED) is used in conjunction with CPR.



- 1** Follow the adult basic life support sequence as described on page 21. If the AED is not available immediately commence CPR prior to it arriving.
- 2** Once the AED arrives
 - If more than one rescuer is present, continue CPR while the AED is switched on. If you are alone, stop CPR and switch on the AED.
 - Follow the voice and/or visual prompts.
 - Attach the electrode pads to the casualty's bare chest, ensuring the positioning of the pads as per the instructions given.
 - Ensure that nobody touches the casualty whilst the AED is analysing the heart rhythm.



Check the position of the pads.



There is no need to shave the chest unless it will affect the pads sticking to the skin.



Look for signs of a pacemaker or piercings; if visible ensure that the pads are kept clear of them. Medication patches should be removed and skin wiped dry before pads are placed.



3 (A) IF A SHOCK IS INDICATED:

- Ensure that nobody is in contact with the casualty and give clear instructions for everyone to 'Stand Clear'
- Press the shock button as directed (fully-automatic AEDs will deliver the shock automatically).



- Continue as directed by the AED's voice and visual prompts.
- The AED will inform you to continue with CPR; continue with CPR until the voice prompt informs you to stop.

(B) IF NO SHOCK IS INDICATED:

- Resume CPR immediately using a ratio of 30 chest compressions to 2 rescue breaths.
- Continue as directed by the voice/visual prompts.

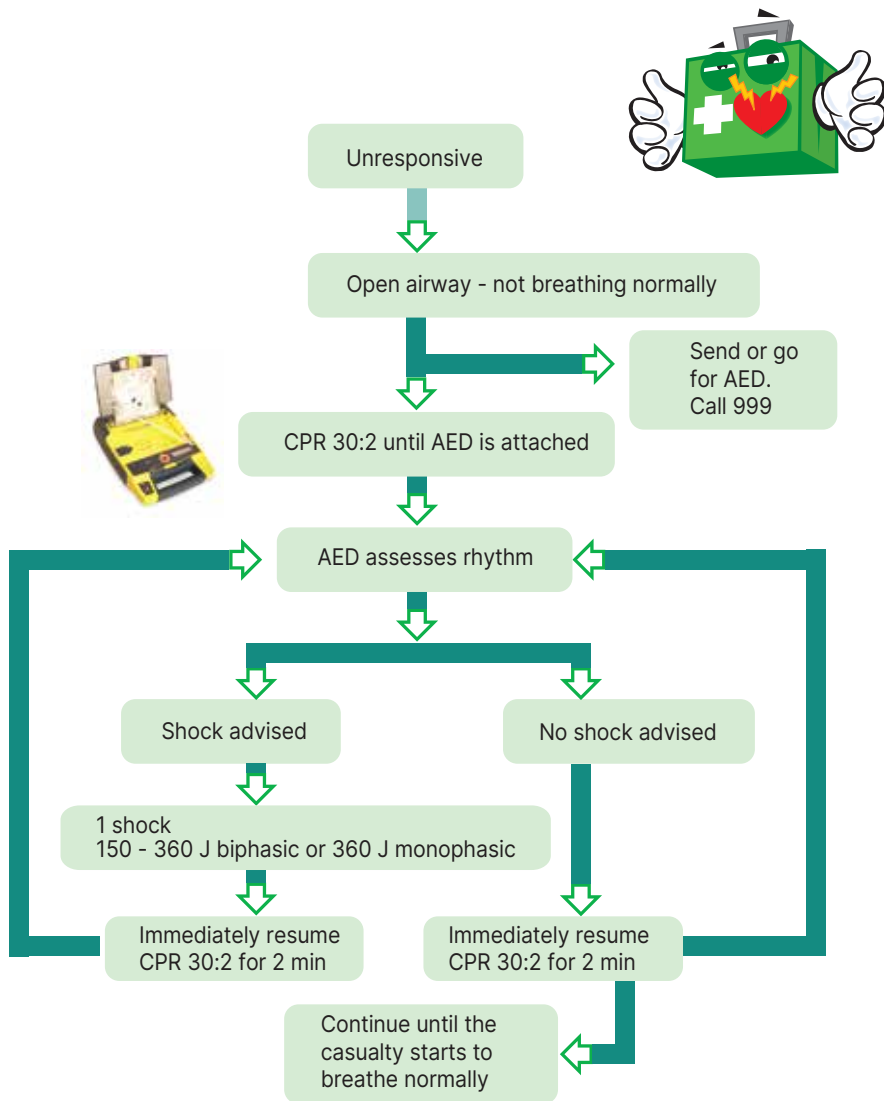
4 Continue to follow the AED prompts until:

- qualified help arrives and takes over
- the casualty starts to show signs of regaining consciousness, such as coughing, opening their eyes, speaking, or moving purposefully AND starts to breathe normally
- you become exhausted



Leave the pads attached when placing the casualty into the recovery position.

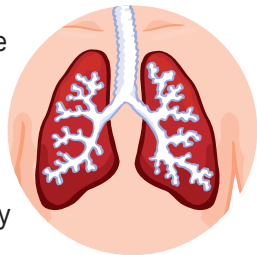
DEFIBRILLATION ALGORITHM



THE RESPIRATORY SYSTEM

OBSTRUCTED AIRWAY

An obstructed airway is the partial or complete blockage of the upper airway (larynx and trachea) which leads to the lungs. The obstruction of the airway can be due to different causes including foreign bodies (foods), allergic reactions, asthma, blood, vomit and infections. An obstruction can cause minor or major breathing difficulties and in severe circumstances may cause the casualty to become unconscious and unresponsive.



A CHOKING ADULT OR CHILD (AIRWAY OBSTRUCTION)

Someone who is choking will have either a mild or severe airway obstruction. The severity of the blockage will determine the difficulty in breathing.

RECOGNISING A CHOKING CASUALTY

Mild

- Coughing
- Difficulty breathing and speaking
- Redness of the face
- Eyes enlarged and watering
- Displaying distress.

Severe

- Grasping at the throat
- Displaying distress
- Unable to breathe or speak
- Skin colour may develop a blue/grey tinge
- Progressively getting weaker
- Eventually they will become unconscious.

TREATING A CHOKING ADULT OR CHILD

Encourage the casualty to cough. If coughing clears the obstruction, monitor the casualty. If after coughing the obstruction still remains and the casualty is still choking, then administer up to a maximum of 5 back blows.

BACK BLOWS

Stand to the side and slightly behind the casualty

Support the chest with one hand, lean the casualty forward and administer a maximum of five sharp blows between the shoulder blades with the heel of your other hand

If the back blows are ineffective then give up to 5 abdominal thrusts



ABDOMINAL THRUSTS

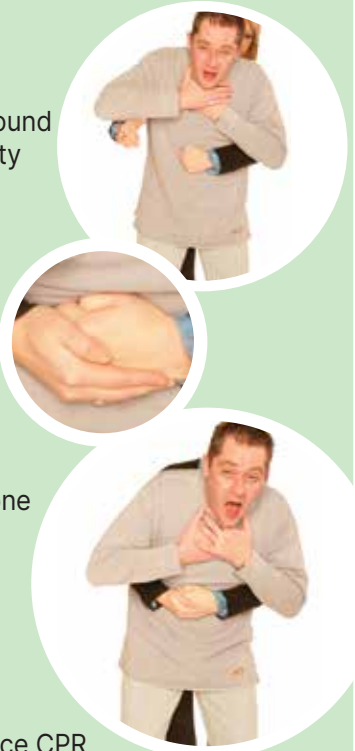
Stand behind the casualty and put both arms round the upper part of the abdomen, lean the casualty forward

With one hand clench your fist and place it between the navel and the ribcage

Grasp this hand with your other hand and pull sharply inwards and upwards, repeat this process up to a maximum of 5 times

Assess the casualty's condition, if the obstruction is still not relieved shout for someone to call 999, or call on a speaker-phone if you can do this at the same time as giving treatment. Continue with cycles of up to 5 back blows and up to 5 abdominal thrusts (if the treatment seems ineffective, make sure someone has called 999 for emergency help) until qualified medical assistance takes over

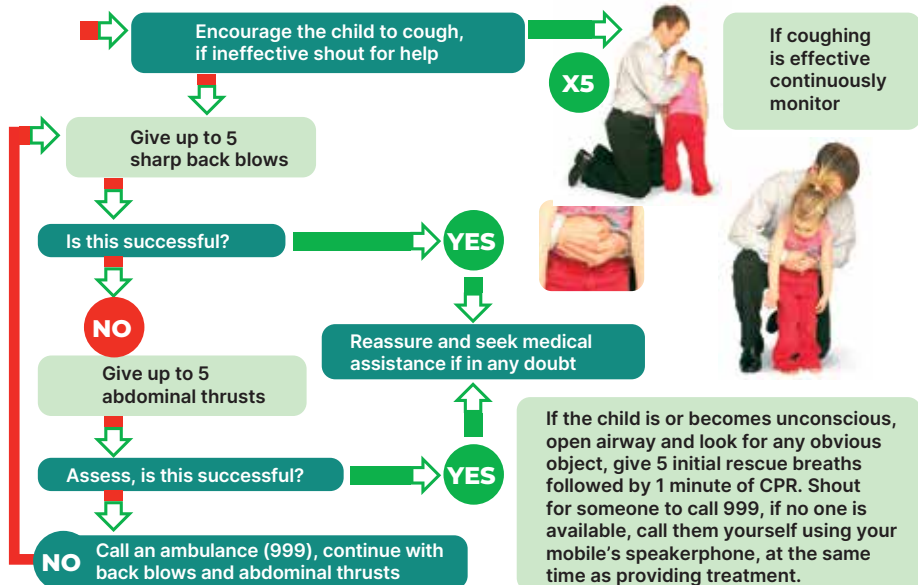
If the casualty becomes unresponsive commence CPR



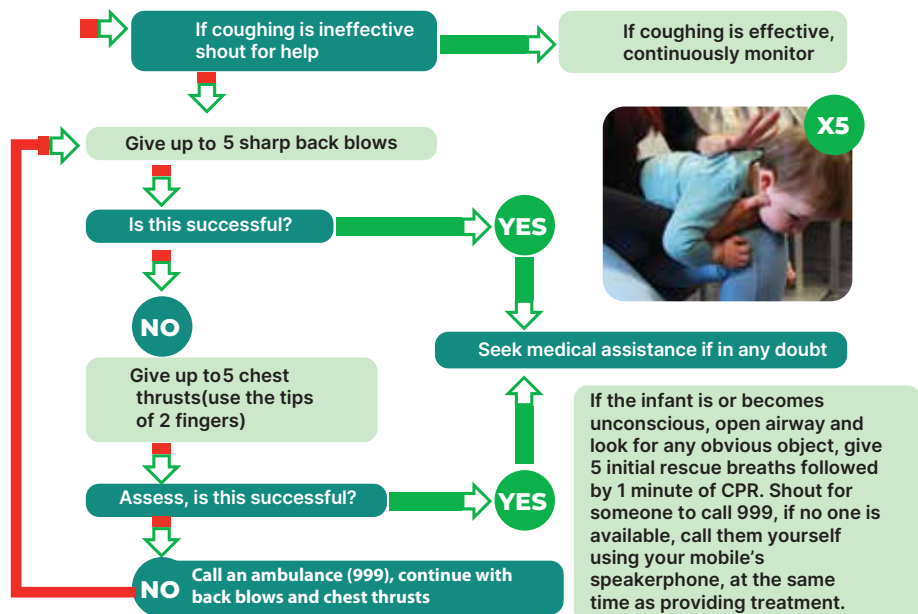
Casualties should seek medical attention if they:

- have received abdominal thrusts
- have difficulty swallowing or still feel as though they have an object stuck in their throat

ACTION FOR A CHOKING CHILD



ACTION FOR A CHOKING INFANT



KEY TASK: 2

Answer the questions by filling in the blanks using the numbers provided.



Seconds to take to check normal breathing.



Rate of compressions given per minute during CPR.

 -


Number of breaths given during CPR.



Number dialled for ambulance services.



Number of compressions during CPR.

NUMBER CHOICES:

100 -120

999

10

30

2



KEY TASK: 3

Please place in order of action; label 1 - 4 for a choking casualty.



X5

Give up to 5 back blows.



Encourage the casualty to cough.



X5

Give up to 5 abdominal thrusts.

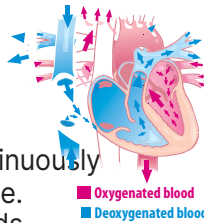


Assess the casualty's condition.

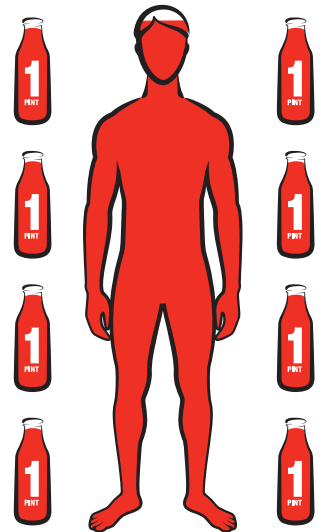
WOUNDS AND BLEEDING

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 average adult heart beats continuously at a rate of 60-100 beats per minute. The average 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.

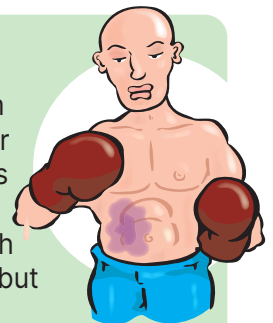


HEART BEATS PER MINUTE: ADULTS 60 - 100
CHILDREN 90 - 110
INFANTS 110 - 130

Types of bleeding

INTERNAL BLEEDING

This is when blood escapes from the circulatory system but remains inside the body. Internal bleeding can occur in various places such as within tissues, organs, cavities or spaces inside the body (chest, head and abdomen). Sometimes signs of internal bleeding can be visible such as when the casualty coughs up blood or vomits blood but most of the time internal bleeding is not apparent.



EXTERNAL BLEEDING

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

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. Arterial bleeding is a life-threatening condition.

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. Venous bleeding can be a life-threatening condition.

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.



Treatment of bleeding (General)

Ensure that you put on your disposable gloves.

Sit or lay the casualty down on a firm, stable base.

Examine the wound.

Do not attempt to remove any embedded foreign objects.

Apply direct pressure onto the wound to try and stem the bleeding.

Dress the wound with a sterile dressing.

If blood seeps from the first dressing then apply a second dressing directly over the top of the first one.

If blood seeps through the second dressing then remove both dressings and start again. This course of action is carried out because there is not a sufficient seal between the dressing and the wound. Once the dressing becomes saturated with blood it becomes ineffective.

Support the wounded part and be prepared to treat the casualty for shock.

A triangular bandage can be folded into a broad fold bandage to help support a limb. It can also be used to apply pressure over a sterile dressing.

Do not allow the casualty to smoke or to consume any food or drink.

Call for ambulance (999) and monitor the casualty.

Wounds with embedded foreign objects

1: Wound with embedded foreign object.



2: Apply dressings and pressure to either side of the embedded object.



3: Apply a larger dressing if possible over the top.



4: Ask the casualty to assist if able.



5: Secure the dressing in place.



6: Call for an ambulance (999) , monitor the casualty and, if required, treat for shock.



REMEMBER!

If you have not called for an ambulance then one will not arrive!

SHOCK

Hypovolaemic shock

Hypovolaemic shock is a life-threatening condition that occurs when the body loses 20% (one fifth) or more of its blood or fluid supply

Hypovolaemic shock can be caused by:

- severe bleeding (internal and external)
- severe diarrhoea and vomiting (D and V)
- severe cuts or wounds
- severe burns
- excessive sweating



RECOGNITION

- a visible associated wound
- pale, blue/grey, cold clammy skin
- a weak pulse
- a rapid heart rate
- nausea

TREATMENT

- Treat the cause if apparent.
- Lay the casualty down on a flat surface and raise the legs; ensure the legs are above the level of the heart.
- Loosen tight clothing.
- Keep the casualty warm with a blanket.
- Monitor the casualty's airway and breathing.
- Do not allow any food or drink (may induce vomiting).
- Call for an ambulance (999)

Anaphylaxis

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



RECOGNITION

- swelling of the mouth, tongue, face and neck
- difficulty in breathing
- red, blotchy and itchy skin
- nausea
- anxiety

TREATMENT

If you think the person has anaphylaxis encourage the casualty to use the medication if applicable (antihistamine or adrenaline auto-injector)*.

Call for an ambulance (999).

Sit the casualty down (if responsive).

Remove the trigger if possible.

Monitor the casualty (airway and breathing).

Be prepared to carry out basic life support.



REMEMBER!

It is important that the casualty is seen by a qualified medical practitioner.

* In the UK, there is no legal problem with any person administering adrenaline using an adrenaline auto-injector if it could save someone's life. The first aider must be able to recognise an anaphylactic reaction and be trained to use an adrenalin auto-injector.

KEY TASK: 4

Draw arrows to match the condition to the recognition.

FAINTING ☐

HYPOVOLAEMIC SHOCK ☐

ABDOMINAL WOUND ☐

ANAPHYLAXIS ☐

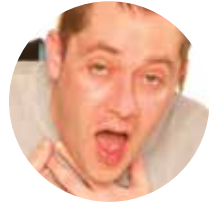
Recognition

☐ Pale, blue/grey, cold and clammy skin.
Weak pulse.

☐ Pale, cold, clammy skin. Slow pulse.
Sudden, but normally brief unconsciousness.

☐ Swelling of the face and neck.
Red blotchy skin.

☐ Bleeding and visible intestines.



KEY TASK: 5

Complete the following acronym.

C ☐

L ☐

A ☐

P ☐

SEIZURES

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.



Partial seizures

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

RECOGNITION

- staring blankly
- mood swings
- 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

Generalised seizures may cause the casualty to lose consciousness and suffer massive muscle spasms.

RECOGNITION

- convulsions
- shallow breathing
- blue or purple colouration to the skin (cyanosis)
- confusion and fatigue
- rigidity
- crying out
- muscle jerks
- lack of consciousness
- loss of bladder and/or bowel control

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).

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).



Do not place objects in the casualty's mouth.

DEALING WITH MINOR INJURIES

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

CONTUSIONS (BRUISE)

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. It will often be visible, appearing as a blue/purple or purple/black colouration.



TREATMENT

- R** REST the area where the bruise occurs.
- I** Apply ICE (over a covering).
- C** COMPRESS the area.
- E** ELEVATE if possible.



This is also the treatment for sprains and strains. Apply the cold compress for 20 minutes in the case of a bruise.



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.



TREATMENT

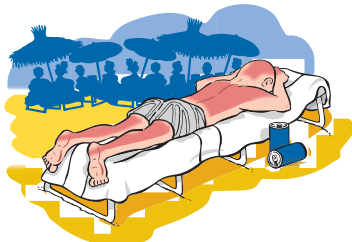
- Wear disposable gloves.
- Look at the wound for any foreign embedded objects.
- Clean the affected area with a sterile cleansing wipe.
- If required, apply direct pressure to the wound.
- Apply a dry, sterile dressing to the wound.

MINOR BURNS and SCALDS



Every year there are large numbers of people who suffer from a minor burn or scald injury. A burn or scald injury can be caused by many things such as:

- radiation (sunburn, ultraviolet lamps, overexposure to X-rays)



- dry heat (hot surfaces, fire, friction)
- electricity (domestic low-voltage appliances, lighting, high voltage, cables)
- extreme cold (freezing temperatures, frozen foreign objects, refrigerants)
- chemicals (acids and alkalis, domestic cleaning products, industrial chemicals)
- inhalation of toxic fumes (from a fire)
- wet heat (hot water, steam, fat/oil)

RECOGNITION

pain at the site of the injury
redness, tenderness and swelling
possible blistering

TREATMENT

Remove the source of the burn
if possible.

Put on your disposable gloves.

Remove clothing, if not stuck to the burnt skin, and then flush the area of the wound with water for a minimum of 20 minutes.

Dress the burn with a loose sterile dressing or if unavailable then place a layer of clingfilm over the burn and continue cooling.**

Remove restrictive clothing or jewellery as swelling may occur.

Do not remove anything that is stuck to the burnt skin.

Seek medical attention immediately.



For electrical burns ensure that the source has been disconnected.

**Clingfilm is sterile if the first few inches are discarded. It also does not stick to the skin and the condition of the burn can clearly be seen through it.

FOREIGN OBJECTS

A foreign object is any object, large or small, that finds its way into the body, either entering through wounds or entering the body through orifices such as the ear, nose and eye. You should always wear disposable gloves when treating a casualty. Seek medical attention unless the incident is extremely minor. Calm and reassure the casualty at all times.



EAR	NOSE	EYE
May cause infection and/or perforation of the ear-drum.	May cause infection and difficulty in breathing. Could cause nose bleeds due to vessel damage.	May cause damage to the eye either by puncture wound or surface scratch.
TREATMENT Make no attempt to remove the object. Cover the ear with a dry sterile dressing. Advise the casualty to seek qualified medical attention.	TREATMENT Where possible ask the casualty to breathe through the mouth. For treatment for nose bleeds please refer to page 49.	TREATMENT The eye will be itchy but advise the casualty not to rub. Ask the casualty to open the eye wide, pull the top lid up and the bottom lid down. Look into the eye and see if you can see the object. Ask the casualty to look up, down, left and right as eye movement will produce tears which may flush out the object. For insects use an eyewash to see if the insect can be removed. Cover the eye with a dry sterile dressing. For embedded objects, if possible, place the casualty on the floor with their head and shoulders raised and their head supported.



In the case of an insect, flood the ear with clean water to flush the insect out.



SMALL SPLINTERS

Splinters are foreign objects that embed themselves into the skin, either fully or partially. Splinter injuries are often surprisingly painful and are a common occurrence that can be caused by many things such as:

- shards of glass
- splinter of wood
- splinter of plastic
- sliver of metal



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 large splinters and fully embedded splinters that cannot be drawn out please seek qualified medical attention. If the splinter is under a fingernail or toenail then seek medical attention as the extraction may become complicated.

TREATMENT (Partially embedded)

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.

TREATMENT (Fully embedded)

Put on your disposable gloves.

Clean the area surrounding the splinter.

With fully embedded splinters incorporate a 'drawing technique', which is:

- cover the splinter with a plaster and leave overnight
- remove the plaster and see if the splinter has been drawn out either fully or partially

DRAWING TECHNIQUE:

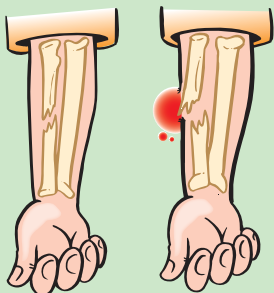
Place the sticky part of the plaster on the splinter.



OTHER INJURIES

FRACTURES

A fracture can be closed (no associated wound), open (the fracture has broken the skin) or complicated (the fracture is causing a further injury to vessels or organs for example).



RECOGNITION

- pain, tenderness, bruising and swelling at the site of 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).



Monitor the casualty for the onset of shock. In the case of a dislocation treat as a fracture.

Applying a support sling

An easy-to-follow guide showing one of the methods of applying a support sling.

Gently support the injured arm.
Ask the casualty to assist if possible.



Place a triangular bandage with its base parallel to the casualty's body.



Bring the lower end of the bandage up to meet the upper end at the shoulder. Secure with a reef knot.



Use a safety pin to secure at the elbow, or twist bandage and tuck into sling at the back of the arm.

With the arm safely supported in a sling, you can transport the casualty.



OTHER METHODS:

There are various support slings available and it is worth researching these alternative techniques.



HEART ATTACK



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



REMEMBER!

It is important to call for an ambulance (999) immediately.

The administration of 150-300mg of chewable aspirin is recommended for a casualty with chest pain due to a suspected heart attack. First Aid providers should encourage and assist the self-administration of aspirin (if available).

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

- Call for an ambulance (999).
- 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 the casualty becomes unresponsive then carry out basic life support.

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**



F

Facial weakness

Can the person smile?
Has the face dropped on one side?

A

Arm weakness

Can the person raise both arms?

S

Speech problems

Can the person speak clearly and understand what you say?

T

Time to call 999

By calling 999 early, treatment can be given which can prevent further damage.



TREATMENT

- Call for an ambulance (999) 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.
- If unresponsive place the casualty in the recovery position (monitor airway and breathing).
- Be prepared to carry out basic life support.



IMPORTANT

Contact the Emergency Services as soon as possible; this is vital to prevent further damage.

Diabetes

Hypoglycaemia and hyperglycaemia

HYPOGLYCAEMIA (Blood sugar content too low)

RECOGNITION

- blurred vision
- hunger
- tiredness or lethargy
- lack of concentration
- increased heart rate
- headaches
- tingling sensations
- noticeable changes in personality
- feeling faint



TREATMENT

Sit the casualty down, calm and reassure.

For suspected hypoglycaemia, assist the casualty to take their glucose tablets or give other dietary forms of sugar.

If the condition improves offer further sugary drinks or foods.

If there is no improvement in the casualty's condition then call 999.

Monitor the condition. If the casualty becomes unconscious carry out basic life support.

HYPERGLYCAEMIA (Blood sugar content too high)

RECOGNITION

- sweet, fruity-smelling breath
- increased need to urinate
- increased thirst
- dry mouth
- loss of appetite
- tiredness and lethargy



TREATMENT

Sit the casualty down.

Encourage the casualty to use their medication.

If they have not been previously diagnosed then call for ambulance (999).

Monitor the condition. If the casualty becomes unconscious carry out basic life support.



Head injuries

All head injuries have the potential to be life-threatening and qualified medical assistance should be sought in all instances where a major head injury is suspected. Types of major head injuries include concussion, cerebral compression and skull fracture.



CONCUSSION What is it?	CEREBRAL COMPRESSION What is it?	SKULL FRACTURE What is it?
Shaking of the brain causes temporary disturbance of normal brain activity often caused by a blow to the head.	A build-up of pressure on the brain caused by brain tissue swelling or an accumulation of blood.	Can be either open or closed; caused by either a direct or indirect blow to the head.
RECOGNITION	RECOGNITION	RECOGNITION
possible brief loss of consciousness dizziness and nausea headache brief loss of memory blurred vision	intense headache drowsiness unequal pupil sizes slow, strong pulse weakness or paralysis down one side of the body noisy breathing	associated wound tenderness and pain depression/deformity of the skull bruising and swelling at the site of injury presence of cerebrospinal fluid (CSF) from ears and nose

TREATMENT (General)

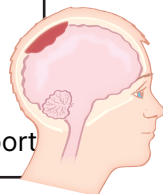


Control any bleeding and or CSF loss.

Contact the emergency services.

Place the casualty in a comfortable position, preferably on a flat surface with the head and shoulders raised.

Monitor the casualty and be prepared to carry out basic life support



Nose bleed

Nose bleeds are common and can be caused by:

- a direct blow
- veins or vessels in the nose bursting because of blowing or picking
- high blood pressure caused by colds and congestion

TREATMENT

Sit the casualty down and leaning forward.

Ask the casualty to breathe through the mouth and to pinch the soft part of the nose.

Maintain the pressure for 10 minutes and then release slowly.

If still bleeding repeat the process.

If bleeding has ceased clean up any blood and inform the casualty to rest and avoid blowing or picking the nose for the next few hours.

If after 30 minutes the nose is still bleeding seek medical assistance.



Amputations

An amputation is the removal of a body part by trauma or prolonged constriction.

TREATMENT

Call for an ambulance (999) immediately.

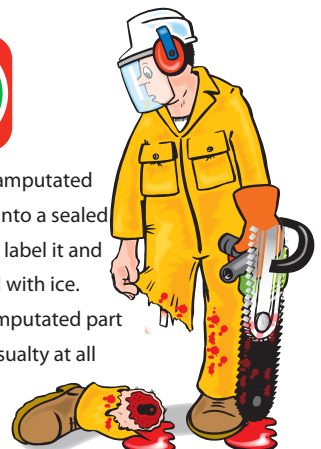
Try to control the bleeding (direct maintained pressure).
Monitor for shock.

Be prepared to carry out basic life support.



Retain the amputated part, place into a sealed bag, clearly label it and keep it cold with ice.

Keep the amputated part with the casualty at all times.



Spinal injury

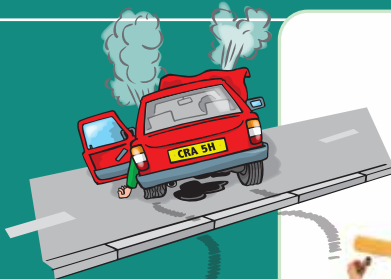
Spinal injuries are serious as they may result in paralysis or even death should the spinal cord become damaged.

MAIN CAUSES OF SPINAL INJURY

- car accident
- diving accident
- slips, trips and falls
- impact accident

RECOGNITION

- unusual position of the head or body
- pain at the site of the injury
- lack of mobility in the limbs
- weakness and tingling sensations
- loss of bowel and bladder control
- signs of shock



TREATMENT of Conscious Casualty

Call for an ambulance (999).

Keep the casualty in the position found and immobilise by holding the head and neck.

Ask the casualty to remain as still as possible.

Avoid asking questions that require a nod or head shake.

Keep the casualty warm.

TREATMENT of Unconscious Casualty

Determine if the casualty is breathing, if not, commence basic life support.

If the casualty is breathing do not move unless in danger or choking on blood or vomit. Keep the head gently tilted back to maintain the airway.

Contact the emergency services.

Keep the casualty warm and monitor.

Keep the head and spine in line where possible.

Poisons

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



DO NOT encourage vomiting or moving around.

TREATMENT (General)

Call for an ambulance (999).

Ensure the scene is safe.

Remove the cause or remove the casualty from the scene.

Identify the poison.

Be prepared to carry out basic life support.



Asthma

Asthma is a condition that affects and inflames the airways, making it difficult to manage normal breathing; there are many asthma triggers' such as dust, pet fur and house dust.

RECOGNITION

- breathlessness
- (gasp for breath)
- wheezing
- tightness of the chest
- bouts of coughing
- cyanosis (grey/blue lips and skin)
- may become unconscious



TREATMENT (General)

Assist the casualty to sit down.

Ensure use of medication (reliever inhaler) and get the casualty to follow own personal action plan.

Reassure the casualty.

If the attack is prolonged call for an ambulance (999).

Be prepared to carry out basic life support.



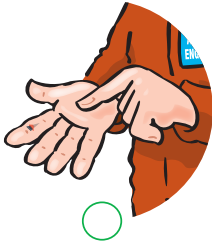
If it is the casualty's first attack or they are hyperventilating then call for an ambulance (999) immediately and be prepared to carry out basic life support.



KEY TASK: 6

Place in order of priority when treating.

Splinter



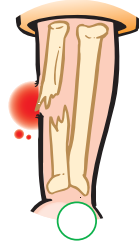
Choking casualty



Non-breathing casualty



Open fracture



Your First Aid information:

Location of YOUR First Aiders and their names:

Person responsible for checking YOUR First Aid box content:

Location of nearest First Aid box (to where you work):

Location of accident book:

Training Company:

Tutor Name:

Certificate Number:

Expiry Date:

Adult basic life support and automated external defibrillation

