Adult Basic Life Support
Cardiopulmonary Resuscitation, Recovery Position and Management of Choking Study Guide

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Glossary

**AED**  Automated External Defibrillator

**ALS**  Advanced Life Support

**Asystole**  a cardiac arrest rhythm in which there is no discernible electrical activity.

**BLS**  Basic Life Support

**CPR**  Cardiopulmonary Resuscitation

**Cyanosis**  a bluish discolouration of the skin due to poor circulation or inadequate oxygenation of the blood.

**Defibrillator**  a medical device used to control abnormal heart rhythms by application of an electrical current to the heart directly or via the chest wall.

**Epiglottis**  a flap of cartilage behind the root of the tongue, which is depressed during swallowing to cover the opening of the larynx.

**Hyoid Bone**  a U-shaped bone in the neck that supports the tongue.

**Hypoxia**  a lower than normal concentration of oxygen reaching body tissues.

**Intrathoracic**  situated or occurring within the thorax.

**Pulseless Electrical Activity (PEA)**

a cardiac arrest rhythm, organised electrical activity of the heart persists without evidence of myocardial contraction (pulse).

**Pulseless Ventricular Tachycardia (Pulseless VT or pVT)**

a fast (>100 bpm) abnormal heart rhythm originating from the ventricles producing co-ordinated but ineffective contractions.

**Supine**  lying with the back or dorsal surface downwards. Lying face up.

**Tidal Volume**  the normal volume of air displaced during each respiratory cycle (inhalation & exhalation) without extra effort.

**Transthoracic**  crossing the thoracic cavity.

**Ventricular Fibrillation (VF)**

an abnormal heart rhythm where co-ordinated contraction of the ventricles is replaced by disorganised excitation resulting in failure of the ventricles to contract.

**Cyanosis** – a bluish discolouration of the skin due to poor circulation or inadequate oxygenation of the blood.
Defibrillator – a medical device used to control heart fibrillation by application of an electrical current to the heart directly or via the chest wall.

Epiglottis - a flap of cartilage behind the root of the tongue, which is depressed during swallowing to cover the opening of the larynx.

Hyoid Bone – a U shaped bone in the neck that supports the tongue.

Hypoxia – a lower than normal concentration of oxygen reaching body tissues.

Intrathoracic – situated or occurring within the thorax.

Pulseless Ventricular Tachycardia (Pulseless VT) – a fast (>100 bpm) abnormal heart rhythm originating from the ventricles producing co-ordinated but ineffective contractions

Supine – lying with the back or dorsal surface downwards. Lying face up.

Tidal Volume – The normal volume of gas displaced during each respiratory cycle without extra effort.

Transthoracic – done or made by way of the thoracic cavity.

Ventricular Fibrillation (VF) – an abnormal heart rhythm where co-ordinated contraction of the ventricles is replaced by disorganised excitation resulting in failure of the ventricles to contract.
Learning Objectives

- Able to recognise cardiorespiratory arrest and know how to take appropriate action.
- Able to perform basic cardiopulmonary resuscitation as a lone rescuer.
- Know when and how to place an individual in the recovery position.
- Able to recognise a choking adult and know appropriate interventions.
Introduction

Basic life support skills are simple manoeuvres intended to prevent cardiac arrest and in cases of cardiac arrest, increase the chance of survival and quality of outcome.

Each year, UK ambulance services respond to approximately sixty thousand cases of suspected cardiac arrest. When resuscitation is attempted, less than one in ten victims survive to go home from hospital. Strengthening the community response to cardiac arrest by training and empowering more bystanders to perform CPR and by increasing the use of automated external defibrillators (AEDs), at least doubles the chances of survival and could save thousands of lives each year.

The Chain of Survival describes four key, inter-related steps, which if delivered effectively and in sequence, optimise survival from cardiac arrest. The sequence of steps takes you through recognition of cardiac arrest, calling for appropriate help, starting CPR and using an AED.

Steps within a hospital environment may alter depending on the location of the arrest, the skills and number of staff present as well as the equipment available.

First link: Early recognition and call for help

If untreated, cardiac arrest occurs in a quarter to a third of patients with myocardial ischaemia within the first hour after onset of chest pain.

Once cardiac arrest has occurred, early recognition is critical to enable rapid activation of the ambulance service (or emergency teams in hospital) and prompt initiation of CPR.

Second link: Early bystander CPR
The immediate initiation of bystander CPR can double or quadruple survival from out-of-hospital cardiac arrest. Despite this compelling evidence, only 40% of victims receive bystander CPR in the UK.

**Third link: Early defibrillation**

Defibrillation within 3–5 minutes of collapse can produce survival rates as high as 50–70%. This can be achieved through public access defibrillation in the community and by use of appropriate defibrillators within hospitals. Each minute of delay to defibrillation reduces the probability of survival to hospital discharge by 10%.

**Fourth link: Early advanced life support and standardised post-resuscitation care**

Advanced life support with airway management, drugs and the correction of causal factors may be needed if initial attempts at resuscitation are unsuccessful.

This study guide focuses on the sequence to follow in an out-of-hospital setting as a lone responder to an adult.

Adult Basic Life Support skills can be applied, when appropriate, to anyone that appears to be an adult (post puberty), regardless of gender, age and appearance.
Surface Anatomy / Relevant Physiology

Oxygen is essential for life; all tissues require oxygen to perform aerobic respiration, maintain normal cellular function and thus ensure tissue survival. Oxygen delivery depends on adequate ventilation, gas exchange and effective circulatory distribution.

Airway

Flexion of the neck in a supine, unconscious individual produces obstruction of the airway in three ways:

- The mandible, to which the tongue is attached, recedes and the flaccid tongue drops against the posterior pharyngeal wall.
- The hyoid bone recedes, causing the epiglottis to fall back.
- Flexion of the cervical vertebrae causes the pharynx to narrow.
- Patency of the airway occurs when the head is mechanically extended as four things occur:
  - The mandible tends to move forwards.
  - The tongue is drawn forward.
  - The epiglottis is pulled anteriorly by the movement of the hyoid bone.
  - Extension of the cervical vertebrae causes a widening of the pharynx.

Breathing and Oxygenation
During cardiac arrest, unconsciousness will occur rapidly once the heart stops beating, typically within twenty seconds. Deprived of the oxygen and the sugars it needs to function, the brain will be unable to deliver the electrical signals needed to sustain organ function, including breathing.

- Hypoxia will cause permanent brain damage in as little as four minutes at normal body temperature, with an additional four to six minutes resulting in increased brain damage and death.
- Expired air ventilation (mouth to mouth or mouth to mask) provides reduced oxygen and increased carbon dioxide content to usual inspired air, but is considered adequate.
- Excessive tidal volume (overventilation) may produce inflation of the stomach, splinting of the diaphragm and increase intrathoracic pressure. Increased intrathoracic pressure decreases coronary perfusion.
- Excess gas in the stomach increases risk of regurgitation, which may lead to further airway obstruction.

Chest compressions force blood out of the heart and into the vasculature under pressure, repeated compressions generate enough pressure to move blood through the veins and back to the heart. Allowing complete chest re-coil following compression is thought to create negative intrathoracic pressure, allowing venous return to the heart.

![Figure 3 Surface anatomy of the chest (male)](image)

**Preparation and Considerations**

Basic Life Support requires little preparation and no equipment is necessary.
Prior to approaching, it is essential to ensure that the rescuer, the victim and any bystanders are safe and remain safe. A mental risk assessment of the situation must be carried out considering environmental hazards e.g. trips, traffic, fire, water etc. as well as potential contamination risks e.g. infection, poisons, fumes etc.

The risk of acquiring an infection during CPR is considered low, Resuscitation Council (UK) guidance advises that breaths are delivered unless you are unable to do so or there is a safety risk. The risk of infection increases in the presence of blood and/or body fluids – ensure you risk assess.

If there is a possibility that the victim may have COVID-19, there is alternative/additional advice to be followed. This advice is detailed in appendix 1.

Safety is a priority, identified safety concerns must be addressed by the rescuer if safely able to do so. When unable to do so, appropriate support must be summoned and appropriate actions taken to reduce risk.

Layers of clothing over an unconscious person’s chest may inhibit accurate assessment of their condition and impede intervention. Exposing the chest to enable effective lifesaving intervention is appropriate.

Basic life support manoeuvres may cause injury to the recipient. A rescuer should not deviate from guidance in an attempt to reduce the risk of harm; in doing so the effectiveness of intervention will be reduced potentially resulting in greater harm.

When an individual needs emergency treatment to save their life, but they are incapacitated (e.g. unconscious), intervention may go ahead without the person’s consent.

If you are in doubt of the need or appropriateness of performing basic life support, ensure that appropriate help is summoned and commence basic life support. The potential consequences of delay are greater than the consequences of inappropriate life support.

Choking is an uncommon but potentially treatable cause of accidental death. As most choking events are associated with eating, they are commonly witnessed. As victims are initially conscious and responsive, early interventions can be life-saving.

Recognition of airway obstruction is the key to successful outcome. Choking usually occurs while the victim is eating or drinking. People at increased risk of choking include those with reduced consciousness, drug and/or alcohol intoxication, neurological impairment with reduced swallowing and cough reflexes (e.g. stroke, Parkinson’s disease), respiratory disease, mental impairment, dementia, poor dentition and older age.

Foreign bodies may cause either mild or severe airway obstruction.

Mild airway obstruction: Victim is able to breathe, cough and speak.
Severe airway obstruction: The victim may be silent, wheezy, attempting to cough or unconscious.

The manoeuvres detailed in this study guide can be initiated for any victim over the age of one year. Infants require alternative manoeuvres, utilised to minimise the risk of serious injury.
There is no equipment required to make basic life support intervention.

**Pocket Face Mask**

A pocket face mask is an adjunct that may be available and is used in attempts to reduce the risk of transfer of infection between victim and rescuer by use of bacterial filters and/or one-way valves (not suitable for use with some viruses – see appendix 1).

Filters and valves may be supplied combined in to a single additional component or supplied as two additional components.

Some will be supplied already attached and others will require assembly prior to use.

Always use bacterial filter and one way valve supplied with the mask (both single person use (rescuer)).

![Pocket mask preparation](image)

**Figure 4 Pocket mask preparation**

To use:
- Remove components from packaging.
- If flat-packed - hold mask with between both hands with the inside of the mask facing you. Using your thumbs, push the soft dome of the mask away to create the correct form for use.
- If not already, attach supplied filter and valve (will only fit with correct orientation).

**Automated External Defibrillator (AED)**

AEDs are safe and effective, they offer victims in cardiac arrest, a potentially lifesaving therapy.

An AED is a portable electronic device that automatically diagnoses the life-threatening cardiac arrhythmias of ventricular fibrillation (VF) and pulseless ventricular tachycardia. Following diagnosis it is able to treat them through defibrillation, the application of therapeutic
transthoracic electricity intended to terminate the arrhythmia, allowing the heart to potentially re-establish an effective rhythm.

With simple audio and visual commands, AEDs are designed to be simple to use.

When help arrives with an AED, without delay turn on the AED and follow instructions, minimising interruptions to CPR. The quicker therapy is delivered (if required) the better the chance of survival.

Figure 5 Example of AED

Procedure – Cardiopulmonary Resuscitation

The acronym **DRSABC** may assist you in remembering the sequence that can give a victim of cardiac arrest an increased chance of survival.
D – Danger

Ensure that it is safe for you, the victim and any bystanders. Do not approach if it is unsafe to do so, if you are able to make the situation safe without causing harm to yourself or others, do so. If not, call for appropriate assistance and wait.

R – Response

Check to see if the patient is responsive.

Support the victims head, gently shake shoulders and ask loudly “are you alright?”

If the victim responds, leave them in the position in which you find them, provided there is no further danger; try to establish what is wrong and get help as needed. Reassess regularly.

Figure 6 Checking for a response

S - Shout for help

Shout for “help” – You may be alone but someone may hear you and come to your aid. Do not leave the victim to seek help at this point.

If someone does come to assist you, continue your assessment so you are able to give clear and relevant instruction upon completion of assessment.

A – Airway

Open the airway with a head tilt, chin lift manoeuvre.

If not already – turn the victim on to their back.

Place your hand on their forehead and gently tilt the head back, with your fingertips under the point of the patient’s chin, lift the chin (skywards) to open the airway.

B – Breathing

Maintaining the airway opening manoeuvre, you now need to assess the patient’s breathing by using a Look, Listen and Feel technique for no longer than 10 seconds.
• Look – observe for usual rhythmical rise and fall of chest, usual colour, any definite/deliberate movement that would indicate life.
• Listen – place the side of your face just above the victim’s nose and mouth, listen for the movement of gases from the nose and mouth.
• Feel for the movement of gases from the nose and mouth against your cheek.

In the first few minutes after cardiac arrest, a victim may be barely breathing, or taking infrequent, slow and noisy gasps. Do not confuse this with normal breathing. If you have any doubt whether breathing is normal, act as if it is they are not breathing normally.

If the breathing is normal, place them in the recovery position, if safe to do so, and continue to assess.

C – Call for help & Automated External Defibrillator (AED) / Cardiopulmonary Resuscitation

Call for help & AED

Ask an available helper to call for emergency medical assistance with AED.

If you are alone, you must summon help (otherwise no help will come and CPR alone is unlikely to resuscitate the patient) – this may necessitate leaving the patient to access a phone and make that call.

If possible, remain with the victim to make the call and activate speaker function on the phone to aid communication.

If you have had to leave to make a call, once you’ve made your call, return without delay to start chest compressions.

If you have sent someone else to make a call, you start chest compressions – ensure the caller returns and confirm to you that help has been summoned.

Call an appropriate response – in the community, an ambulance, by dialling 999 or 112 from a phone. When Emergency Services answer, request the services required and answer the questions they ask you.
If on University Campus dial 2222 from a Uni phone to contact Campus Support who will contact and co-ordinate the attendance of the emergency services. If using a mobile phone dial 0151 794 2222. If you are unable to contact Campus Support dial 999 or 112 as above.

In hospitals the emergency number to dial is 2222 – this will get you through to hospital Switchboard – know which team you want to request (e.g. Cardiac arrest team, Medical Emergency Team).

When you are placed in a clinical setting, ensure that you are familiar with processes for summoning emergency medical assistance.

**Send for an Automated External Defibrillator (AED) if available**

If you are alone, do not leave the victim to locate an AED, start CPR after summoning emergency medical assistance – the responders that you have summoned can fetch an AED or will bring one.

**CPR**

**Start chest compressions**

Position yourself beside the victim. If on the floor, kneel by them.

Place the heel of one hand in the centre of the victim’s chest (middle of lower half of the sternum) and then place the heel of your other hand on top of the first hand. Avoid placing hands over xiphoid process and upper abdomen.

Interlock your fingers (if you can), keep your arms straight and position your shoulders vertically above the victim’s chest and your hands. Avoid placing any pressure over the victim’s ribs.

Depress the sternum by pressing down, to a depth of five to six centimetres. After each compression release all the pressure on the chest but keeping your hands in contact with the chest.

Leaning on the chest, preventing full chest recoil, is common during CPR; allowing complete recoil of the chest wall, after compression, results in better venous return. Take care not to lean forward during CPR.

Think about counting your compressions to aid keeping to the duty cycle of compressions and ventilations (if being done).

Do not reduce depth of compression for fear of doing harm – Resuscitation Council recognises that it can be difficult to estimate chest compression depth; chest compressions that are too shallow are more harmful (as ineffective) than too deep.

Repeat at a rate of 100-120 compressions per minute (approximately two per second)
Continue chest compressions for thirty compressions, once you have delivered thirty compressions you need to give two ventilations. If you are unwilling (risk assess) or unable to deliver breaths, provide chest compressions continuously at a rate of 100-120 per minute without interruption.

Give rescue breaths/ventilations

After thirty compressions open the airway again using head tilt and chin lift and give two ventilations.

Breaths may be delivered via mouth to mouth ventilation or use of pocket mask (if available). In hospital settings more advanced ventilation equipment may be available. It is important to use only equipment and techniques that you have been trained in and are effective at, to do otherwise could be detrimental to outcome.

Mouth to mouth ventilation

Re-establish the head tilt – chin lift, then pinch the soft part of the patient’s nose with your thumb and forefinger.

Open the mouth remembering to maintain the head tilt – chin lift.

Take a normal sized breath for you and place your lips around the patient’s mouth, making sure you create a good seal.

Breathe steadily into the mouth while watching for the chest to rise, taking about one second, as in normal breathing; this is an effective rescue breath.

Maintaining head tilt and chin lift, take your mouth away from the patient and watch for the chest to fall as gas comes out.

If the chest fails to rise, improve the airway position, correct any incorrect technique before attempting the next ventilation.

Take another normal breath and breathe into the patient’s mouth once more to achieve a total of two effective ventilations.
Do not interrupt chest compressions by more than ten seconds to deliver two ventilations.

Return your hands without delay to the correct position on the sternum and give a further thirty chest compressions.

Continue with chest compressions and rescue breaths in a ratio of 30:2.

If you are unable to give rescue breaths, provide continuous chest compressions at a rate of 100-120 compressions per minute.

**Figure 9 Delivery of mouth to mouth ventilation**

**Using a pocket face mask**

Place the mask over the victim’s mouth and nose (there is an arrow on the mask indicating which way up it goes (it also indicates nose, the ‘nose’ end). Roll the mask over the nose and mouth, starting just above the nose, avoiding the eyes. The lower edge of the mask is designed to sit on, not under, the chin.

Using a technique that is comfortable for you, maintain the mask’s position using two hands spread evenly over the mask. Spread fingers under the mandible, to create a seal, apply downward pressure above the mask whilst simultaneously lifting mandible into the mask from below (as shown). This technique supports you maintaining the head tilt/chin lift manoeuvre.
Place your mouth around the valve (& filter) and gently blow, observing for chest rise.

Remove your mouth from around the valve, observe for the chest fall. Straighten up and take your next breath ensuring that you are not inhaling patient’s expired gas. Repeat to deliver two ventilations, within ten seconds.

A pocket rescue mask is a tool, the principles of delivering breaths are as mouth to mouth – deliver two effective breaths taking no longer than ten seconds, minimising interruption in chest compressions. Each breath should be delivered over one second and the chest allowed to fall between breaths. Take normal sized breaths for you and deliver normal sized breaths to the victim (enough to see chest rise).

![Figure 10 Positioning of pocket mask](image)

Performing effective basic life support is tiring, most people will have reduced effectiveness after only 2 minutes of CPR. Wherever possible, enlist the support of additional rescuers and take turns to provide intervention, with minimal interruptions in chest compressions.

Use of an AED

**Switch on the AED**

Attach the electrode pads on the victim’s bare chest, breast tissue may need displacing to apply pads/electrodes in the correct position.

If more than one rescuer is present, CPR should be continued while electrode pads are being attached to the chest

Follow the spoken/visual directions

Ensure that nobody is touching the victim while the AED is analysing the rhythm

**If a shock is indicated, deliver shock**

Ensure that nobody is touching the patient

Push shock button as directed (fully automatic AEDs will deliver the shock automatically)
Immediately restart CPR at a ratio of 30:2
Continue as directed by the voice/visual prompts

If no shock is indicated, continue CPR
Immediately resume CPR
Continue as directed by the voice/visual prompts

If you are in a hospital, it is likely that staff will be present who are trained in resuscitation utilising specific equipment and protocols— it is unlikely that you would be alone. Make staff aware of the resuscitation skills that you have and work to your ability and training within the team of professionals.

Do not interrupt resuscitation until:
A health professional tells you to stop.
You become exhausted.
The patient has definite signs of life, moving, opening eyes and breathing normally.

It is rare for CPR alone to restart the heart. Unless you are certain the victim has recovered, continue CPR.
Monitor for safety issues throughout a resuscitation, maintain personal safety as a priority.
Basic Life Support Algorithm

Unresponsive and not breathing normally

Call 999 and ask for an ambulance

30 Chest compressions

2 Rescue breaths

Continue CPR 30:2

As soon as AED arrives switch it on and follow instructions

In hospital/Uni dial 2222 and summon emergency response

Figure 11 Basic Life Support Algorithm 2015 Guidelines
Post Procedure - CPR

The actions that you will take post delivery of CPR will vary and are dependent on the outcome and circumstances of the situation. Things to consider:

Safety –
Consider recovery position for victim if appropriate and maintain temperature as able.
Stay with the victim, continue to monitor their condition and await professional medical support if it has not yet arrived.
Consider safe and appropriate disposal of any waste and wash your hands with soap and water or hand gel when possible.
Replenishment of any equipment used.

Dignity –
Provide as much dignity for the victim as possible, cover unnecessarily exposed areas.
Provide a private space/environment where possible.
Disperse unnecessary on-lookers.
Arrange for provision of support for any distressed person(s) present.

Documentation –
This will depend upon circumstances, if there is a need to document your actions for the purpose of official records, keep it factual and as you recall.

A personal reflection.

Mental Health –
Providing life support can result in undesirable thoughts and feelings.
Talk through your experience with a peer, colleague, supervisor or friend that you trust to support a safe de-brief.
Write a reflection.
Seek medical advice if unwanted thoughts and feelings persist for an unacceptable time post event.
Procedure – The Recovery Position

Check environment is safe to perform recovery position, choose to roll the victim to the safest side taking in to account space for manoeuvre, injuries sustained, any bulky objects on the victim’s person that have the potential to cause harm (or cause unnecessary damage to property) if lying on them e.g. mobile phone or keys in a pocket.

Kneel on the floor to one side of the patient, remove the patient’s spectacles (if any) and straighten out their legs.

You will be able to move unconscious people with ease as they are flaccid, do not force a limb in to a position when there is some resistance.

Place the patient’s arm nearest to you at a right angle to their body, so that it is bent at the elbow with the palm facing upwards. This will keep it out of the way when you roll them over.

![Figure 12 Placing arm at 90°](image)

Gently pick up their other hand with your palm against theirs (palm to palm). Now place the back of their hand onto their opposite cheek (the cheek nearest you). Maintain that hand position (if you do not their hand/arm will flop away) to guide and support their head as you roll them. Once rolled, their hand will be left supporting the head. If you are somewhat smaller than the victim it may be advisable to carry out the next step before this one as once you are holding the victim’s hand to their face, you may not be able to reach across to their knee.

![Figure 13 Placing back of hand to face](image)

With your free arm, reach across and place your hand under the victim’s knee that is furthest from you, raise it so that their leg is bent and their foot is flat on the floor. If the victim is wearing trousers, you could grasp the trouser over the knee and pull it up to the same position.
Slide your hand from under the knee, placing your palm on top of the knee with your fingers lateral. Keeping your hands positioned at the face and the knee, shuffle yourself backwards to create a space large enough for the victim to be rolled in to. Gently pull their knee towards you. As they are flaccid, the momentum and their weight will cause them to roll over onto their side, facing you.

Move the bent leg that is nearest to you, in front of their body so that it is resting on the floor. Both the hip and the knee should be flexed at ninety degrees where possible. This position will provide support and prevent rolling.

Tilt the head back to make sure that the airway remains open. If necessary, adjust the hand under the cheek to keep the head tilted and facing downwards to allow any liquid to drain from the mouth.
Post Procedure – Recovery Position

See post procedure-CPR.

Stay with the victim, continue to monitor their condition and await professional medical support if it has not yet arrived. If you need to leave them to summon appropriate help, ensure you return and re-assess whilst waiting for the emergency medical response.

A victim can remain in the recovery position for no longer than thirty minutes (risk damage to brachial plexus). At thirty minutes of the victim being in the recovery position you will need to alter their position by repeating the steps and turning them on to their other side.

Consider any other first aid interventions remembering that a patent airway is a top priority.

Procedure - Management of a Choking Adult
Foreign bodies may cause either mild or severe airway obstruction. It is important to ask the conscious victim “Are you choking?”

Managing mild airway obstruction.
If the patient is conscious and coughing, encourage coughing.

Coughing generates high and sustained airway pressures and may expel the foreign body. Aggressive treatment with back blows, abdominal thrusts and chest compressions at this stage may cause harm and can worsen the airway obstruction. These treatments are reserved for victims who have signs of severe airway obstruction. Victims with mild airway obstruction should remain under continuous observation until they improve, as severe airway obstruction may subsequently develop.

Managing severe airway obstruction in the conscious patient
If the patient has an effective cough, cyanosis or is silent, choking manoeuvres are indicated.

Give up to 5 back blows
Stand to the side and slightly behind the victim.
Support the chest with one hand and lean the victim well forwards so that when the obstructing object is dislodged it comes out of the mouth rather than goes further down the airway.
Give up to five sharp blows between the shoulder blades using the heel of your other hand. Each blow is intended to be effective. If the obstruction is relieved after two blows you do not need to administer a further three.

If back blows are ineffective give up to 5 abdominal thrusts.
If you are unable to deliver abdominal thrusts – continue back blows and call for help.
Stand behind the victim and put both arms around the upper part of the abdomen.

Figure 18 Back Blows
If they are taller than you, ask them to kneel so that you can achieve the correct posture.

Lean the victim forwards.

Clench your fist and place it between the umbilicus and the xiphoid process.

Grasp this hand with your other hand and pull sharply inwards and upwards.

Repeat up to five times as necessary.

If the obstruction is still not relieved, return to back blows, continue alternating five back blows with five abdominal thrusts.

If the patient becomes unresponsive, lower them to the ground as safely as possible trying not to cause harm to yourself. Once they are safely on the ground, summon an emergency medical response and start CPR. In this situation rescue breaths may appear to be ineffective due to the airway obstruction, you should still attempt rescue breaths but accept that the chest may not rise and fall as normal and not delay chest compressions for more than ten seconds. Chest compressions in this situation are the intervention to relieve the obstructed airway and will also serve to produce a circulation should the victim deteriorate into cardiac arrest.

Do not interrupt CPR to reassess unless the victim shows definite signs of life.
Following successful treatment of choking, foreign material may nevertheless remain in the upper or lower airways and cause complications later. Victims with a persistent cough, difficulty swallowing or the sensation of an object being still stuck in the throat should, therefore, seek medical advice. Abdominal thrusts and chest compressions can potentially cause serious internal injuries and all victims successfully treated with these measures should be examined afterwards for injury. This risk should not deter you from attempting to relieve their choking, the risk of death through airway obstruction is greater.
Further Resources

1. Resuscitation Council (UK) iResus – a free mobile device app. that gives immediate access to RC(UK) 2015 life support algorithms. Does not require an internet connection to function following download.

2. Resuscitation Council (UK) Lifesaver – Lifesaver is an award winning way to learn life-saving skills anytime, anywhere, through four action-packed scenarios. It throws you into the heart of the action as you make the crucial decisions and learn the essential skills needed to save a life.

3. Resuscitation Council (UK) Lifesaver VR - Lifesaver VR is an innovative and immersive live-action virtual reality training tool; it throws you into the heart of the action as three young people are faced with a life-or-death situation. You control their movements as you make crucial decisions and learn essential life-saving skills. You will need a virtual reality headset in order to play Lifesaver VR.

4. St John’s Ambulance Instructional Video – What to do when someone is Choking
5. St John’s Ambulance Instructional Video – [How to do CPR on an Adult](#)

**References**

This study guide has been reproduced and adapted from Resuscitation Council (UK) 2015 [resuscitation guidelines and the underpinning evidence](#). The following link takes you to their website which provides reference to the research underpinning the guidelines.

**Picture Credits**

1. **Figure 1:** The Chain of Survival - [Resuscitation Council (UK)](#)
2. **Figure 2:** Airway obstruction/patency – [Wikimedia.org](#)
3. **Figure 3:** Surface anatomy of the chest (male) - Archbold, Andrew; Naish, Jeannette. The cardiovascular system, Medical Sciences, Published January 1, 2019. Pages 483-556. © 2019.
4. **Figure 4:** Pocket mask preparation – CSTLC Staff
5. **Figure 5:** Example of AED – needpix.com
6. **Figures 6 to 10:** – CSTLC Staff
7. **Figure 11:** Basic Life Support Algorithm 2015 Guidelines – Resuscitation Council (UK), modified by CSTLC staff
8. **Figures 12-19:** CSTLC staff
9. **Figures 20-23:** – Resuscitation Council (UK)

**Appendix 1**

In March 2020 Resuscitation Council (UK) published additional advice and actions to be taken in an out of hospital/community setting if the victim is known or suspected of having COVID-19.

- Recognise cardiac arrest by looking for the absence of signs of life and the absence of normal breathing. Do not listen or feel for breathing by placing your ear and cheek close to the patient’s mouth. If you are in any doubt about confirming cardiac arrest, the default position is to start chest compressions until help arrives.
• Make sure an ambulance is on its way. If COVID 19 is suspected, tell them when you call for assistance.

• If there is a perceived risk of infection, rescuers should place a cloth/towel over the victim’s mouth and nose and attempt compression only CPR and early defibrillation until the ambulance (or advanced care team) arrives.

• Early use of a defibrillator significantly increases the person’s chances of survival and does not increase risk of infection.

• If the rescuer has access to personal protective equipment (PPE) (e.g. FFP3 face mask, disposable gloves, eye protection), these should be worn.

• After performing compression-only CPR, all rescuers should wash their hands thoroughly with soap and water; alcohol-based hand gel is a convenient alternative. They should also seek advice from the NHS 111 coronavirus advice service or medical adviser.

Resuscitation Council (UK) has produced a video that explains the advice relating specifically to out of hospital cardiac arrest when COVID 19 is suspected.