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What is First Aid and what are its aims?

"Provision of initial care for an illness or injury."

3 aims:

Preserve life

Prevent further harm - this covers both external factors, such as moving a patient away from any cause of harm, and applying first aid techniques to prevent worsening of the condition, such as applying pressure to stop a bleed becoming dangerous.

Promote recovery - first aid also involves trying to start the recovery process from the illness or injury, and in some cases might involve completing a treatment, such as in the case of applying a plaster to a small wound.

Before CPR – Primary Survey

1) **Danger** - Are you or the casualty in any danger? If you have not already done so, make the situation safe and then assess the casualty.

2) Response - If the casualty appears unconscious check this by shouting:
 Can you hear me?, *Open your eyes* and gently shaking their shoulders.

If there is a **response** AND no further danger:

 leave the casualty in the position found and summon help if needed.
 Treat any condition found and monitor vital signs - level of response, pulse and breathing.
 Continue monitoring the casualty either until help arrives or he recovers. If there is no response:

1) Shout for help. If possible, leave the casualty in the position found and open the airway.

2) If this is not possible, turn the casualty onto their **back** and open the airway.

- 3) Airway Open the airway by placing one hand on the casualty's forehead and gently tilting the head back, then lift the chin using 2 fingers only.
- This will move the casualty's tongue away from the back of the mouth.
- 4) Breathing:
- Look to see if the chest is rising and falling.
- Listen for breathing.
- Feel for breath against your cheek.

no more than 10 seconds

- 1) If the casualty is **breathing normally**, place them in the **recovery position**.
- 2) 2)Check for other life-threatening conditions such as severe bleeding and treat as necessary.

1) If the casualty is **not breathing normally** or if you have any doubt whether breathing is normal **begin CPR**!!



Recovery Position

The Recovery position is for when someone is unconscious (passed out) but otherwise unhurt, and breathing normally.





CPR – Cardiopulmonary Resuscitation

- Physical interventions to create artificial circulation by **chest compressions**, and **artificial respiration** by the rescuer exhaling into the patient (or using a device to simulate this).
- Its main purpose is to maintain a flow of oxygenated blood to the brain and the heart – both are vulnerable to damage from hypoxia.
- Some brain cells start dying within less than 5 minutes of hypoxia!

CPR for adults: DEEP INHALATIONS AND EXHALATIONS!
 30 compressions : 2 breaths for 2 minutes
 rate of 100/min ventilation: 8 – 10 breaths/min

• CPR for children (1 year to puberty): SHALLOW BREATHS AND DON'T EMPTY YOUR LUNGS COMPLETELY!

Start: 5 rescue breaths & 30 compressions then continue with 30 compressions: 2 breaths

• CPR for babies (birth to 1 year): FILL YOUR CHEEKS WITH AIR AND USE THIS!

Start: 5 rescue breaths & 30 compressions then continue with 30 compressions: 2 breaths

Agonal breathing : This is common in the first few minutes after a sudden cardiac arrest. It usually takes the form of sudden irregular gasps for breath. It should not be mistaken for normal breathing and if it is CPR should be started.



If you suspect the victim has a neck injury, place your hands alongside the cheeks and pull the face toward you with your index fingers

ADAM.



Look, listen and feel for breathing and pulse





Place your mouth over the victim's mouth and exhale

*ADAM.



While pushing back on the forehead, use your other hand to lift the chin forward

ADAM.

CPR on adults



CPR on children: 1yr - puberty





CPR on infants:



Keeping the infant's head tilted back, place two fingers on the breastbone and give five quick downward thrusts.



ALS – <u>A</u>dvanced <u>L</u>ife <u>S</u>upport

- Advanced life support, including intravenous drugs and defibrillation (the administration of an electric shock to the heart) is usually needed to **restore a viable rhythm**. This only works for certain heart rhythms:
- 1) ventricular fibrillation (VF) (uncoordinated contraction of the cardiac muscle of the heart ventricles, making them quiver rather than contract properly.)
- 2) pulse less ventricular tachycardia (fast heart rhythm, that originates in one of the ventricles.)
- **NOT** useful in a 'flat line' **asystolic** patient, since the heart is already depolarised. CPR and injections of epinephrine/atropine will help.
- CPR is generally continued, usually in the presence of advanced life support, until the patient **regains a heart beat** (called "return of spontaneous circulation" or "ROSC") or is declared **dead**.

Defibrillation

Consists of delivering a therapeutic dose of electrical energy to the affected heart, using a **defibrillator**. This **depolarizes** a critical mass of the heart muscle, terminates the arrhythmia, and allows normal sinus rhythm to be re-established by the sinoatrial node of the heart.





Push the button to release the lid and turn on the defibrillator.





Pull the handle to get the electrode pads and adhere them to the person's chest as shown.



Press the flashing button if told to do so.*



CPR Videos

- <u>http://www.youtube.com/watch?v=5r7haVfZXek</u>
- <u>http://www.youtube.com/watch?v=qSsHcdy4GnA</u>

ALS Video:

• http://www.youtube.com/watch?v=zO3r50mIgr4

http://www.sja.org.uk/sja/first-aid-advice.aspx

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First aid advice	Home > First aid advice > Life saving procedures		
Primary survey	Life saving procedures	See also	
CPR for adults	As a first aider the priorities when dealing with a casualty are always the same: Airway Breathing Circulation. 	Training courses	
CPR for children		First aid kits	
CPR for infants		Volunteer with us	
The recovery position			
Choking			
Heart attacks and shock	A primary survey of a casualty will establish your priorities. When dealing with an unconscious casualty you should open and maintain their airway as your first priority. If the airway should become obstructed, possibly by the tongue falling to the back of the throat, then the casualty w		
Other medical emergencies			
Wounds and bleeding	be unable to breathe and this will lead to death if untreated.		
Fractures	If the casualty is breathing, the simple procedure of placing the casualty in to the recovery position should ensure that the airway will remain		
Head injuries and seizures	clear of obstructions.		
Effects of heat and cold	If the casualty has stopped breathing you can assist them by performing a combination of chest compressions and rescue breaths. You		
Breathing problems Poisoning	breathe out enough oxygen to potentially keep the casualty alive until the emergency services arrive, the oxygen you breathe into the casualty will need to then be pumped around the body using chest compressions.		
	It is important to remember that in any life threatening situation the emergency services should be called as soon as breathing or absence of breathing has been identified.		

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