

These notes are designed for students undertaking the Proficiency in Medical Care course to assist with pre course preparation.

Course notes will be issued at enrolment.

BASIC FIRST AID

Objectives and Priorities of First Aid

Incident Management

Resuscitation

Shock

Bleeding

Heat Burns

FIRST AID	PRIORITIES OF FIRST AID						
First aid is defined as helping behaviours and initial care provided for an acute illness or injury. It can be initiated by anyone in any situation including self-care. GOAL To recognise when help is needed and how to get it. OBJECTIVES The objectives of first aid can be encompassed in three short phrases. • Preserve life • Prevent further harm • Promote recovery They are often referred to as the three “P’s”. These objectives should be demonstrated at all times while you are dealing with a casualty and not just initially.	The priorities can be remembered by using DR AB(C) D - is there any <i>danger</i> to you or the casualty? R - does the casualty <i>respond</i> when you talk to them? A - is the <i>airway</i> open? B - can the casualty actually <i>breath</i>? A third letter C is sometimes used to remind the rescuer of the next stage. This refers to <i>circulation</i> and can be interpreted in the following ways. <table border="0"> <tr> <td>If the casualty is not breathing required</td> <td>C = chest compressions</td> </tr> <tr> <td>If the casualty is breathing bleeding?</td> <td>C = is there catastrophic</td> </tr> <tr> <td>To assess the quality of the circulation</td> <td>C = check pulse</td> </tr> </table>	If the casualty is not breathing required	C = chest compressions	If the casualty is breathing bleeding?	C = is there catastrophic	To assess the quality of the circulation	C = check pulse
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MANAGING AN INCIDENT

At any incident the first aider will follow a plan of action. This will include assessing the situation and scene, assessing the casualty, getting help, treating the casualty and dealing with the aftermath. The time it takes, and methods used, may change according to the circumstances and the severity of the situation, but this process will always be carried out.

ASSESS THE SITUATION AND SCENE	ASSESSING THE CASUALTY	GETTING HELP	DEALING WITH THE AFTERMATH
What has happened? Look for clues to tell you. Do not approach the casualty until you are sure it is safe to do so. You must recognise and manage any dangers to yourself and the casualty at all times. Remember that the danger to you may not be obvious. Think about the immediate space around your casualty. eg spillages on deck, broken glass, wood splinters. Think about the dangers peculiar to your own working environment.	The initial assessment of the casualty is called the primary survey. This is the priority in any first aid situation. Does the casualty have an Airway? Is the casualty Breathing? What injuries are there? What can the casualty tell you?	Good communication is vital in any first aid incident. When calling for help the information that will be required is: • the location of the incident • what has happened • what help is required • how many casualties there are • what injuries sustained TREATING THE CASUALTY Constantly be aware of danger to you and your casualty. Everything you do must comply with the 3P's. Whilst treating the casualty you must always be aware of their "ABC"	Dealing with the aftermath of any first aid situation encompasses two aspects, practical issues and emotional issues. Practical issues include: • completion of accident reports or log book entries • restocking the first aid kit and returning it to its storage point • cleaning up any body fluid spills safely • participation in any accident investigation • disposal of contaminated materials

RESUSCITATION 2015

The full resuscitation guidelines may be found at www.resus.co.uk.

The initials **DR ABC** are used to remember the sequence of events.

D is for Danger:

A is for Airway

B is for Breathing

C is for Circulation (compressions)

First make sure that you, the casualty and any bystanders are safe.

Shout at the casualty as you approach them and see if they respond. They should be told to stay still. If there is no response to shouting, you should kneel by the casualty. Shout again while gently tapping and shaking their shoulders. If there is still no response, turn the casualty onto their back if they are not already in that position. At this point, if you have not already done so, you should shout for help.

OPEN THE AIRWAY

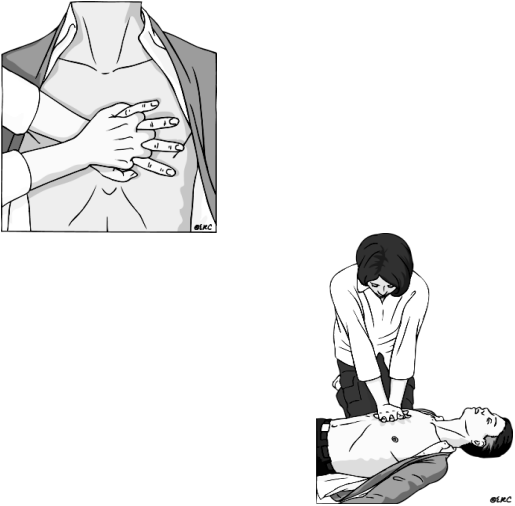


Make sure the casualty has an open airway. Keep one hand on their forehead and gently tilt the head back. Place fingertips under the chin and lift the chin up. This action opens the airway by moving the tongue away from the airway entrance.

CHECK FOR BREATHING



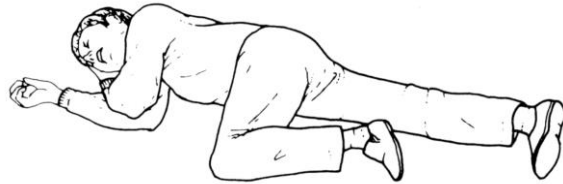
With your head next to the face of the casualty, keep the chin supported and look, listen and feel for evidence of *normal* breathing for no longer than 10 seconds. Can breath be felt on your cheek? Is there chest rise and fall? Can any sounds be heard?
In the first few minutes after cardiac arrest, a casualty may be barely breathing, or taking infrequent, noisy, gasps. This is often termed agonal breathing and must not be confused with normal breathing. Agonal gasps are present in up to 40% of cardiac arrest casualties
If breathing is not normal, or if you have any doubts, act as if it is not normal, raise the alarm and ask for help including an AED if there is one available.

COMMENCE COMPRESSIONS 	Kneel by the side of the casualty placing the heel of one hand in the centre of their chest. Place the heel of the other hand on top of the heel of the first. Interlock fingers and raise them off the chest ensuring no pressure is applied on the ribs. No pressure should be put on the lower end of the breast bone or the upper abdomen. Positioned vertically over the casualty, and with arms locked straight, with hand, elbow and shoulder in line, press down on the breastbone to a depth of 5 - 6 cm. After each compression release all the pressure on the chest, letting it return to its original position, but do not remove hands from the chest. Repeat this at a rate of 100 - 120 compressions per minute. Complete 30 compressions.
DELIVER BREATHS (VENTILATIONS) 	After 30 compressions, open the airway using the head tilt chin lift method. Pinch the soft part of the nose using thumb and index finger of one hand. Maintain chin lift with the other hand keeping the mouth open. Take a normal breath and place your lips around the casualty's mouth making sure there is a good seal. Blow steadily in the mouth and watch for the chest to rise as in normal breathing. This takes about 1 second. Take your mouth away and watch for the chest to fall as the air comes out. Repeat this once more. This completes two effective rescue breaths.
CONTINUE WITH CPR	Return to the chest without delay and give 30 more compressions. Continue with a ratio of 30 compressions to 2 breaths <i>If you are unable to do rescue breaths give continuous chest compressions only</i>

IF AN AED ARRIVES 	Switch on the AED • Attach the electrode pads on the casualty's bare chest • 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 casualty while the AED is analysing the rhythm If a shock is indicated, deliver shock • Ensure that nobody is touching the casualty • 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 and continue as directed by the voice prompts
WHEN TO STOP CPR	Do not interrupt resuscitation until: • You are told to stop by a health professional (or the master) • You become exhausted • You are in danger • The casualty is definitely waking up, moving, opening eyes and breathing normally It is rare for CPR alone to restart the heart. Unless you are certain the person has recovered continue CPR. If you are certain the casualty is breathing normally, but is still unresponsive, place them in the recovery position
DROWNING	Where a casualty has been rescued from drowning, they have not been breathing and do not have oxygen in their blood to be circulated. In drowning incidents, after discovering the casualty is not breathing, give 5 rescue breaths and then continue with compressions and ventilations at a ratio of 30:2. If you are on your own, perform CPR for 1 min before going for help.

MANAGEMENT OF THE UNCONSCIOUS CASUALTY

RECOVERY POSITION



There are several variations of the recovery position, each with its own advantages. No single position is perfect for all casualties. The position should be stable, near a true lateral position with the head dependent, and with no pressure on the chest to impair breathing.

The Resuscitation Council (UK) recommends this sequence of actions to place a casualty in the recovery position:

- Remove the casualty's spectacles
- Kneel beside the casualty and make sure that both his legs are straight
- Place the arm nearest to you out at right angles to his body, elbow bent with the hand palm uppermost
- Bring the far arm across the chest, and hold the back of the hand against the casualty's cheek nearest to you
- With your other hand, grasp the far leg just above the knee and pull it up, keeping the foot on the ground
- Keeping his hand pressed against his cheek, pull on the far leg to roll the casualty towards you onto his side
- Adjust the upper leg so that both the hip and knee are bent at right angles
- Tilt the head back to make sure the airway remains open
- If necessary, adjust the hand under the cheek, to keep the head tilted and facing downwards to allow liquid material to drain from the mouth
- Check breathing regularly
- Be prepared to start CPR immediately if the casualty stops breathing

SHOCK

DEFINITION	CAUSES	SIGNS AND SYMPTOMS	MANAGEMENT
Shock is a lessening of the vital activities of the body caused by injury or illness. It is a physical condition and should not be confused with emotional shock. Its speed of onset will vary and may not depend on the severity of the injury. It may result in unconsciousness and death if not managed immediately.	Shock may happen as a result of: • pain • injury • allergy • infection • fluid loss <i>eg bleeding, diarrhoea, vomit, burns</i> • medical conditions <i>eg heart attack</i>	These result from the effect of reduced blood supply to vital organs and the body's own efforts to compensate. • pale colour • skin cold and clammy • profuse sweating • feel cold • feel faint or dizzy • anxiety or confusion • feel thirsty • nausea • pulse rapid, weak and may be irregular • breathing rapid and shallow • may be evidence of injury	• maintain airway • deal with the cause • lay down <i>if injuries allow</i> • elevate legs <i>if injuries allow</i> • loosen tight clothes • reassure • don't allow to drink or eat: <i>they may vomit and their airway is at risk.</i> • moisten lips only • no smoking or alcohol • do not move unless absolutely vital • protect from the elements • cover with blanket

EXTERNAL BLEEDING

TYPES OF BLEEDING	SIGNS AND SYMPTOMS	MANAGEMENT
• arterial is bright red and spurting • venous is dark red and flows, gushes or pools • capillary oozes The type of bleeding will dictate the severity of the injury and the speed with which it needs to be controlled.	• visible bleeding • evidence of injury • signs of shock	The standard method for first aiders to control open bleeding is to APPLY DIRECT PRESSURE to the bleeding site. The pressure needed for an arterial bleed should never be underestimated. Bandaging alone does not provide sufficient pressure. There is no evidence to support the use of elevation of an extremity, or the use of pressure points to control bleeding. (2015 ILCOR systematic review) • identify wound location and type of bleeding • do not remove penetrating objects • wear gloves before blood contact if possible <i>but don't delay</i> • apply direct pressure to wound <i>or to base of penetrating object</i> • apply appropriate wound dressings and continue direct pressure • monitor dressing and circulation beyond injury A tourniquets may be used in initial care when direct pressure is not possible, during a mass casualty situation, or in an unsafe environment. The first aider should be trained in their use.

HOT BURNS

CAUSE	DEPTH	MANAGEMENT	SPECIAL CONSIDERATIONS
• dry heat • wet heat • electrical • Chemical • radiation • friction	• Superficial <i>red, tender, no blisters</i> • Partial <i>red, tender, blisters</i> • Deep <i>all layers, appearance varies (eg white, charred)</i>	• remove from source of heat • <i>cool for at least 20 - 30 minutes</i> • remove constrictions • cover with non-fluffy dressing	• do not remove burnt on clothing <i>this may further damage tissue</i> • monitor airway <i>can swell quickly and stop breathing</i> • rinse with cold water for mouth burns
SEVERITY This is defined as the depth in relation to the area of burn. The complexity of a burn is affected by where it occurs on the body.	AREA The palm of the casualty is considered to be approximately 1% of their body surface. Its size can be used as a template to measure the total body area burnt.		