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FIRST AID AT WORK

EFAW / FAW COURSE MANUAL

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FORWARD

It is often thought by the bystander that there is little that could have been done as they see the patient covered over whilst the loved ones cry.

The bystander is wrong and they could change everything if they were no longer a bystander but a person who has trained in First-aid. Then perhaps the loved ones may cry but with hope.

The fundamental lesson to learn from this book and its attendant practical course is that **IT IS WORTHWHILE . YOU CAN MAKE A DIFFERENCE.**

With all the skills and resources even the best of hospitals can not revive the dead; reverse the paralysed limbs. Your contribution can often delay these things happening and thus give a chance where before there was none.

I urge you to take seriously the content of this book and its attendant course. It will be one of the most important things that you will learn. It will be one of the most important things that you will ever do.

Be not complacent however, but do revise at frequent intervals.

Dr. Wayne SMALLMAN

Associate Specialist in A&E Medicine
1996

I am still pleased to be associated with Alex, his aims, ideals and long term plans.

Dr. Wayne SMALLMAN. MBCLB, MRNZCGP, FFAEM, FRSH

Consultant in A&E Medicine
1998

My thanks go to all those who have contributed to this manual and to making the formation of Holos Healthcare & Training a reality.

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SECTION 1

MODULE 01

THE PRIMARY SURVEY



1.1 THE AIMS OF FIRST AID

First Aid is the initial assistance or treatment for any injury or sudden illness using whatever suitable material is available. It is the first link in the chain that may eventually lead to the ambulance, hospital and / or medical facility.

The goal of our patient management may be briefly described as the 3 P's, to:

PRESERVE LIFE

PREVENT THE CONDITION WORSENING

PROMOTE RECOVERY

We must also follow the golden rule: **DO NO HARM.**

However remember the salvage of life takes precedence over the salvage of limb.



1.2 PRIMARY SURVEY OVERVIEW

The **PRIMARY SURVEY** function is to determine any life threatening injuries – unless triaging, where needs exceed resources, **treat as you find**;

The acronym DRs ABC is a simple, but effective way to remember the key points of the Primary Survey.

- **D** – "DANGER ACT First"; This expression identifies the key elements of initial scene assessment. The ACT stand for
 - Assess the Scene for any obvious hazards - remember Safety First
 - Communicate - Up / Down / Left & Right - speak to the patient and inform all around that you require assistance
 - Triage or Treat - where needs exceed resources, you will have to prioritise care
- **Rs** - Determine the patient's **RESPONSE** - are they Alert and talking coherently or have they got a lowered level of Response;
- **A** – Clear, Open and Maintain the patients **AIRWAY** together with neck precautions (*called c-spine*) if the situation and Resources allow;
- **B** - Determine if the patient is **BREATHING** and take any steps necessary to maintain adequate breathing;
- **C** - Determine the patient's **CIRCULATION**. Take steps to maintain blood circulation to the vital organs, including stopping any severe/life threatening bleeding. (*Blood on the Floor, and 4 more*)

Download the skillstation marking sheet and watch the video. Using the marking scheme, go down column 1 and tick or cross if you see the steps undertaken in the accompanying video. Do not worry if you are not sure, try and make an educated guess. Each aspect will be examined in further depth throughout this topic.



1.3 BLOOD BORNE DISEASES – HOLOS FACTSHEET

Tetanus

This is a dangerous infection that can develop if the tetanus germs enter a wound. They are carried in the air and in the soil. When they enter damaged or swollen tissues, they release a poisonous substance (*toxin*) that spreads through the nervous system, causing muscle spasm and paralysis. Tetanus is very difficult to treat, but can be prevented by immunisation and repeated boosters. Children are immunised, and receive boosters, during their time at school. Advice on adult boosters varies, some doctors require boosters every 10 years, whereas other doctors state that this is not required after 5 injections.

HIV and AIDS

HIV or Human Immunodeficiency Virus is a very fragile virus which attacks certain white blood cells, called T Helper cells, which help organise the body's immune system to attack invading micro-organisms. It is the resulting inability of the body to fight off various diseases that results in full blown AIDS or Acquired Immune Deficiency Syndrome. AIDS is not a disease, but a syndrome (or group) of specific infections and cancers that occur because the body's immune system has been damaged by HIV virus.

HIV is spread from an infected person where there is an exchange of semen, vaginal fluids or blood. HIV is quite fragile, and cannot live long outside the optimum conditions that are found inside the body. Therefore, the route of entry must be direct and quick. The main routes are:

Sexual contact, especially unprotected anal and vaginal intercourse;

Shared use of needles and syringes, especially where infected blood remains in the syringe and then is re-injected into the next person;

There is a small risk through accidental injury with contaminated needles;

In the past through the use of infected blood in transfusions and blood products for use in treating haemophilia and;

From mother to baby, before (and possibly during) birth. After birth, HIV may rarely be transmitted by breast feeding.

There is no link between CPR and AIDS. The AIDS virus has been isolated in saliva, but there is no evidence that the virus can be transmitted through saliva. The virus was found in saliva only under highly artificial and sterile laboratory conditions. As previously stated, there is a risk of infection from blood, especially directly from one open bleeding wound into another open bleeding wound. If possible use the universal precautions detailed below.



Hepatitis

Hepatitis is an inflammatory disease of the liver, highlighted by patchy death (*necrosis*) of its cells. Liver damage may be caused by alcohol consumption and certain drugs, but mainly by viral infection (the most common being Hepatitis A and Hepatitis B). The differences between the viruses are their routes of entry.

Hepatitis A is contracted through direct contact with infected faecal material or the indirect faecal contamination of food or water. Workers at risk are thought to include sewage workers and it is possibly envisaged in occupations where hygiene is difficult to control i.e. those caring for the young, incontinent elderly and physically or mentally handicapped.

Hepatitis B is caused by a blood-borne virus and, like HIV, is predominantly transmitted by unprotected sexual contact or by intravenous injection of infected material. However, Hepatitis B is over 100 times more infectious than HIV and is a much sturdier virus, being able to live outside the body for days or even weeks.

However, unlike HIV, there are vaccines against both Hepatitis A and B and (under COSHH) employers must assess risks to health arising from use of / contact with substances (including blood & other body fluids like vomit, sweat and tears) at work and implement measures to eliminate / reduce that risk.

Universal Precautions

- **It is important that First Aiders wear gloves (and any other Personal Protection equipment (PPE) as appropriate) when handling casualties who are contaminated with blood, body fluids or excrement;**
- Be careful with splashed body fluids near the face, since one of the easiest routes for contamination is through the eyes;
- **Use, if possible, mouth-to-mouth face masks or face shields when performing CPR or undertake compression-only CPR;**
- If you come into contact with blood or body fluids, wash your hands and arms in hot soapy water. Do not use a scrubbing brush since this may scratch the skin;
- Appropriate disposal of clinical waste.
- Needle-stick injuries, or other cuts and abrasions should be allowed to bleed profusely to help flush as much of any infection out as possible. The incident must be recorded in the accident book as soon as practicable and advice sought from your occupational health department, local hospital or GP;
- Consider the Hepatitis B (and possibly A) vaccines.



1.3 DANGER – “A.C.T. FIRST”

On arrival at a situation a systematic approach is required to ensure critically injured patients are located and treated as soon as possible and the scene is safe to approach. The initial scene assessment can be remembered using various means; Holos currently uses the acronym ACT:

- **ASSESS**
- **COMMUNICATE**
- **TRIAGE & TREAT.**

-

ASSESS

Are there any **hazards** to you and your patient – is it safe to approach them? If not, are they able to undertake self-aid until you are safe to approach them? Are there any unsafe firearms / weapons nearby or any unexploded explosive devices.

In assessing scene hazards and potential injuries, using your understanding of Mechanisms of Injury (MOI) consider

- What has hit the patient?
- What has the patient hit?
- How and where has the energy transferred?;
- What parts of the body may have been damaged?
- Are your patient(s) moving, screaming or shouting or are they apparently lifeless?
- Any clues that may indicate patients other than the obvious (i.e. an empty child's carry seat may indicate an ejected child)



-

Be aware of the need to undertake **hygiene** precautions - termed universal precautions

Universal Precautions

- **It is important that First Aiders wear gloves (and any other Personal Protection equipment (PPE) as appropriate) when handling casualties who are contaminated with blood, body fluids or excrement;**



- Be careful with splashed body fluids near the face, since one of the easiest routes for contamination is through the eyes;
- **Use, if possible, mouth-to-mouth face masks or face shields when performing CPR or undertake compression-only CPR;**
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- Appropriate disposal of clinical waste.
- Needle-stick injuries, or other cuts and abrasions should be allowed to bleed profusely to help flush as much of any infection out as possible. The incident must be recorded in the accident book as soon as practicable and advice sought from your occupational health department, local hospital or GP;
- Consider the Hepatitis B (and possibly A) vaccines. For further details on blood borne diseases and cross infection, download the accompanying fact sheet

COMMUNICATE

Don't forget to communicate

UP – DOWN – LEFT and RIGHT

- **UP** - If you have immediate help and they can be released, send them to call for professional medical help.
- **DOWN** - call out to the patient to assess their level of response. Ascertain if they are able to undertake self-aid until you are safe to approach them
- **LEFT and RIGHT** - gain immediate help from colleagues and /or warn them of any dangers;



The Emergency numbers in the UK are either 999 or, the Universal Emergency Number 112. Please note they go to the same place and are answered by the same trained personnel - however 112 is valid in many more countries worldwide than 999.

Non Emergency numbers are either 111 (NHS non-emergency) or 101 (Police non-emergency)

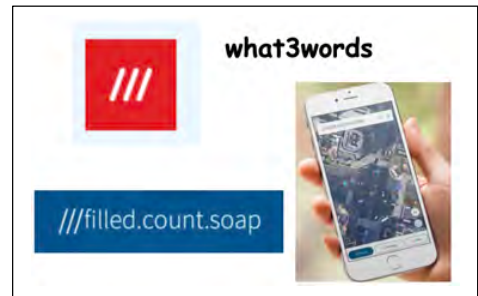
Your initial situation report can take many forms however whichever one is used, it should be delivered quickly and succinctly. **In fact the initial situation report may not be complete and may be as simple as** "Road Traffic Accident, 3 casualties, location is further information to follow"



Once the initial chaos has been controlled, casualties identified and life-threatening conditions dealt with, a more detailed report can then be submitted.

For further information regarding registering your phone to enable you to text through to 112 look at https://www.youtube.com/watch?v=XPZv_8dABfU&t=36s

Informing the emergency services of your location can be difficult – the free App What 3 Words may be useful in informing others as to your location.



TRIAGE & TREAT.

Where needs exceed resources, the larger number of casualties greatly impedes the ability to fully evaluate and treat every patient in a conventional manner. Where the resources are sufficient, treatment occurs as per normal.

Triage comes from the French word “triagere” – to sift or to sort and was first devised by Marshall Laree, the surgeon general to Napoleon Bonaparte. The management of mass casualty events requires a different approach from that of dealing with patients in a routine scenario. **A mass casualty event is one in which the casualty numbers and needs far exceed the available resources.**



At its simplest level, if you were first on scene at a Road Accident with more than one patient, some element of triage would be needed. If there was a screaming patient and a quiet patient, most people would tend to go towards the screaming patient first – whereas in fact the quiet patient should be first on the list. If the patient is screaming they are alive and can maintain their airway, the quiet may not. This is triage in its basic form, however if you are interested in a more in depth analysis of triage, further information is located in the website <https://www.citizenaid.org/>





Revision Questions – Initial Scene Assessment

1. What are the general aims of First Aid (PPP)
2. What is the most important assessment to be undertaken when first arriving at the scene of an incident?
3. What is the name given to the simple precaution undertaken to minimise the risk of cross-infection?
4. State 3 possible actions you could undertake to minimise the risk of cross infection?
5. In a multiple casualty situation, the aim of the first responder is always to **fully treat** the first patient they come across before moving onto the next patient: true or false?
6. What does the word triage mean?



1.4 RESPONSE

The calling out to patient undertaken in the initial scene assessment (ACT : Assess – Communicate – Triage & Treat) will give the responder an idea if the patient is fully alert or not.

The main priority is to locate and treat any immediately life threatening injuries – facilitated by using the systematic approach ABC. A brief assessment of the patient's Levels of Response is initially undertaken, however in reality this would also be undertaken whilst simultaneously completing ABC since the first aider would naturally be talking to the casualty and making a mental note of any deterioration.

The patient's Levels of Response should be assessed and recorded as they represent a baseline for the more detailed neurological examination that may be carried out by medical professionals. It is essential that these assessments are monitored frequently to detect any deterioration.

Initially as you approach the patient you would attempt to communicate with them. If there was no response, then after ensuring the scene is safe, you would approach the casualty and give them a gentle "shake and shout"



The response you get may be broadly divided into 4 categories, using the AVPU acronym (which is in itself the first part of the Glasgow Coma Scoring or GCS utilised by medical professionals).

At any time the patient will be in one of the following 4 states:

Acronym		Patient Presentation
A	Alert	Patient is alert & coherent
V	Voice	Patient responds to verbal stimuli
P	Pain	Patient responds to painful stimuli
U	Unresponsive	Patient unresponsive



1.5 AIRWAY

PATHWAY FROM LIFE TO DEATH

There is more than one pathway from life to death depending on the sequence of events prior to this journey (i.e. a cardiac arrest due to a heart attack as opposed to catastrophic bleeding resulting in no blood left in the body to pump). However it is possible to describe, in general terms, the usual sequence of events together with the possible interventions used to stop them

1. The first stop on this path is **loss of meaningful communication**. The dying person becomes less and less aware of their surroundings and stops making attempts at communication
2. After a variable period the person becomes unresponsive. The patient is totally unresponsive, the muscles become slack, and the jaw slips back. - **possible intervention is to open the airway.**
3. This allows the tongue to sag against the back of the throat leading to **airway obstruction** - **possible intervention is to open the airway.**
4. Air cannot now enter the lungs and, within a few minutes, the patient stops breathing altogether and they suffer **respiratory arrest** - **possible intervention undertake artificial respiration (mouth-to-mouth / mouth-to-barrier device).**
5. The heart cannot now continue to function very long without the oxygen normally supplied by breathing. Shortly after breathing stops, the heart stops – **cardiac arrest**, or clinical death - **possible intervention is to undertake Cardio Pulmonary Resuscitation (CPR) either combining rescue breaths and chest compressions, or compression only CPR (see module 05)**
6. Without oxygen flow to any part of the body, cells start to die. The most vulnerable cells to oxygen deprivation are those in the brain. Within a few minutes of clinical death irreversible brain damage, or biological death, occurs.

Losing an airway, unless it is done deliberately, takes some time. The casualty will make attempts to breathe whilst still conscious. Even with severe chest trauma, causing a collapsed lung and a breathing rate of 60 breaths per minute the patient will make an effort to breathe. Although clearly not sustainable for a prolonged period of time, there is still a window of opportunity²⁴.

However once a patient becomes unconscious or their airway suddenly becomes blocked (i.e. through choking on food), their ability to protect and maintain their airway has gone and, as shown on the previous page, death quickly follows.

AIRWAY

The casualty cannot breathe if their airway is blocked. This could be by a foreign object (solids - food / toy or liquids – vomit / water etc.). However the most common cause of obstruction is by their own tongue if they're unconscious and on their back.

With the unconscious casualty our first priority is to look in their mouth to make sure that there is no obstruction. The airway may be narrowed or blocked making breathing difficult, noisy or impossible. If the cause is:

- **A liquid obstruction** - postural drainage will have to be undertaken, since “scooping” the liquid out is ineffective and, unless the patient is an owl, the head will not be able to be rotated sufficiently. Quickly place the patient on their side to facilitate removal of the liquid;
- **An obvious solid obstruction** - we use a pincer movement to gently remove it.



If their airway appears clear we must then make sure that it is open.

Tilting the casualty’s head back and lifting the chin will “open the airway” - as this position physically lifts the casualty’s tongue from the back of the throat.

Spinal precautions

From the mechanism of injury, if a spinal injury is suspected then the basic technique will have to be modified.

Ideally the jaw thrust method is used. However if there are safety issues (e.g. building fire / building collapse) or lack of resources (e.g. multiple casualties and not enough resources) then maintaining c-spine (“cervical” or neck) precautions would take a secondary priority – postural drainage would have to suffice. If spinal precautions are deemed to be required and sufficient resources are available:

- **Maintain the head in a still / “neutral position”**, maintaining in-line stabilisation of the head and neck.
- **Rest and reassurance**;
- **Improvise support** (i.e. rolled clothes etc.) to prevent accidental movement and;

If the casualty becomes unconscious, support them with hands and clothes, manually maintaining an airway;

This is ideally done using the jaw thrust technique where by pushing the jaw up, the tongue is lifted from the back of the throat. Whilst the patient is still unconscious, any time that the jaw is released, then the tongue will fall back down and the airway will re-occlude – basically, once applied the jaw thrust is maintained constantly.





If they vomit, if possible roll them on their side using the “log roll” technique. If insufficient resources allow then using the modified recovery position is acceptable.



1.6 BREATHING – HOLOS FACTSHEET

The normal breathing rate is between 12 and 20 breaths per minute (about 1 rise-and-fall every 3 to 5 seconds).

Air is a mixture of gases including 20 - 21% oxygen, about 0.04% carbon dioxide, 79% nitrogen and about 1% of other gases. Expired air contains about 16% oxygen and 4% carbon dioxide, the body using only about 5% of the oxygen. Expired air, therefore, contains enough oxygen to temporarily support life and this is the basis of Artificial Respiration.

After opening the airway, the patients breathing needs to be assessed. This is done by:

- **Looking** - for rise and fall of the chest;
- **Listening** - for breath sounds, and;
- **Feeling** - for signs of breathing, placing your hand on the patient's chest and / or abdomen feeling for rise-and-fall

This is done for no more than 10 seconds - you are looking for at least 2 rise and falls of the patient's chest. Under the current COVID-19 guidelines it is advised that first aider no longer put their ear close to the patient's face to look, listen and feel, but to keep their head own a bit further away.



In the first few minutes after cardiac arrest, a casualty may be barely breathing or taking infrequent, slow agonal gasps. Do not confuse this with normal breathing. If there is any doubt that breathing is normal, act as if there is no breathing and call 999 and prepare to commence resuscitation (CPR). You will cause less harm by doing CPR if it is not required than by not doing if it is.

If the patient is breathing, you may wish to assess the patients breathing over a longer period (for example 30 seconds). If the breathing is too fast or too slow there is a real risk of not enough oxygen getting down to the air sacks (alveoli) and then into the blood. In addition many of the body's compensating mechanisms will increase the respiratory (breathing) rate and this is often a good diagnostic tool that something is not quite right.

A breathing rate **ABOVE 30** breaths per minute or **BELOW 10** breaths per minute, at rest, is indicative of this and is termed "The Goalposts of Life". Breathing rates outside the "Goalposts of Life" are an important indicator that something is not quite normal and requires further investigation.



Review Questions – Airway and Breathing

1. What is the normal adult's breathing rate?
2. What is the most common cause of airway obstruction?
3. What is meant by the term stridor?
4. What is the normal percentage of oxygen
 1. In the atmosphere that we breathe in
 2. In air that we breathe out
5. What is the technique used to lift the tongue from the back of the throat in a non-trauma unconscious patient?
6. What is the variation used in an unconscious patient suspected of having a spinal injury?
7. What are the breathing rates that patient would have that would cause concern (termed the "goal posts of life")?



1.7 CIRCULATION

Circulation under the DRs ABC paradigm does not mean undertaking a pulse check - that was dropped in the 2005 Resuscitation Council guidelines. Circulation assessment means identifying what may compromise the patient's circulation and then dealing with it - and depends on the outcome of the Breathing assessment.

- If the patient **IS BREATHING**, then they have a circulation. The task here is to identify if anything might compromise the circulation. A common cause in a breathing patient is blood loss leading to clinical shock (see below). Therefore, if the patient is breathing, Circulation means identifying any pools of blood and dealing with it (by direct pressure)
- If the patient **IS NOT BREATHING** then they are clinically dead and have no circulation. Our main priority now is to ensure 999 or 112 has been notified and then undertake CPR.

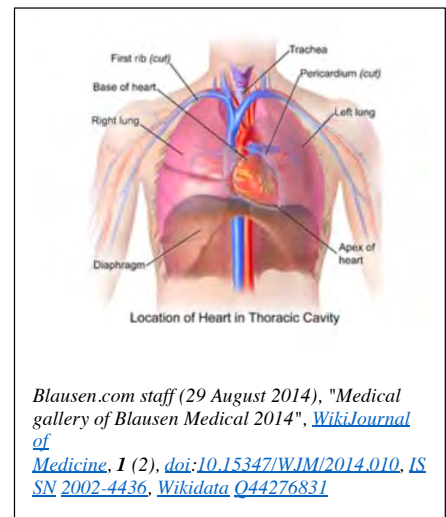
The Circulatory System

The blood circulates around the body in a network of flexible tubes known as blood vessels. The blood is pumped around the system by the regular, rhythmic contraction and relaxation of the heart. The blood, blood vessels and heart are known collectively as the circulatory system or cardiovascular (*cardio-heart, vascular-vessels*) system.

The Heart

The heart is located in the chest (thoracic cavity) and is in fact not one pump, but two, separated by a wall. The right hand side pumps deoxygenated blood into the lungs (*pulmonary circulation*), where it picks up oxygen, and then goes into the left side of the heart. Here, the oxygenated blood is pumped around the body (*systemic circulation*), where it offloads the oxygen and nutrients, and picks up the carbon dioxide and other waste products transporting them to the right hand side of the heart and the cycles starts again.

The heart muscle contracts in an organised fashion by regular electrical impulses, which force the blood out of its two pumping chambers.





The Blood Vessels

There are three types of blood vessels:

- **Arteries.** These are strong, elastic walled vessels that carry blood (oxygenated in the systemic circulation) away from the heart;
- **Veins.** These are thin-walled vessels that carry blood (de-oxygenated in the systemic circulation) towards the heart and;
- **Capillaries.** These are small, thin walled (about 1 cell thick) vessels where the substances (oxygen and nutrients) are transported out of the blood into the cells and also out of the cells into the blood.

The Blood

There are about 10 pints (6 litres) of blood in the average adult. It consists of about 55% plasma in which there are suspended various cells (about 45%):

- **Red cells** - carry oxygen to the tissues;
- **White cells** - help fight infection;
- **Platelets** - help in the clotting process.

The blood is also responsible for distributing heat around the body (and also, therefore, cooling), transport of carbon dioxide (and other waste products) and for the distribution of certain enzymes and hormones.

Clinical Shock

Clinical shock is the “**failure of the cardiovascular system to distribute blood (and therefore oxygen) to the tissues of the body**”. This will result in reduced flow of blood through the tissues (*reduced tissue perfusion*) and insufficient oxygen reaching the cells. Clinical shock is introduced here and will be covered further in Module 04 - Bleeding, Shock and Wounds.

Clinical shock can be caused by either:

- **Failure of Pump** - this is termed cardiogenic shock and is often caused by heart conditions (e.g. a heart attack) reducing the ability of the heart to pump blood around the body - leading to circulation failure, or shock;
- **Failure of Blood** - this is termed hypovolaemic (low blood volume) shock. This starts when the body loses about 15% blood volume (about 1 1/2 pints or about 1L)
- **Failure of Blood Vessels** - an example of this is Anaphylactic shock, where the allergen results in increased vessel permeability (increased "leakiness") which results in the fluid leaking out of the blood vessels into the inter-cellular space causing swelling and difficulty in breathing.



The way the body responds when the circulation fails is to ensure adrenaline is secreted into the body, this causes:

- Constriction of the peripheral blood vessels in order to maintain blood levels to the core - this results in a **Pale, Cold and Clammy skin**;
- **Increased Heart and Breathing rates** - in order to try to maintain circulation to the vital organs
- Quite often the patient may also feels nausea and a sense of fear.

In the presence of major external bleeding - the immediate treatment procedure is to apply direct pressure - this should stop bleeding eventually. Possible limb elevation may help (however injuries may dictate that this is not possible - e.g. fractures). Again, this will be covered in more depth during module 04 - Bleeding, Shock and Wounds.

Fainting

A faint can be defined as a “**temporary loss of consciousness due to a temporary loss of blood to the brain**”. This is an example of “Vessel Failure” of the body’s cardiovascular system, but is temporary in nature and recovery is usually rapid and complete. A faint may be a reaction to pain or fright, emotional problems, exhaustion or lack of food. The brain **temporarily** loses control of the blood vessels, causing them to dilate - blood pools and is literally “drained from the brain”.

However, since blood is not lost from the system (merely temporarily re-directed) this should not be confused with the life-threatening fluid failure (i.e. blood loss) or vessel failure (i.e. allergic reaction). Sometimes after long periods of physical inactivity, especially in warm climates (i.e. in the bath), blood pools in the lower legs, and again drains from the brain, especially if you get up too quickly for the body to compensate.

Recognition and Management

There may be signs of the following:

- A feeling of dizziness, blurred vision or nausea prior to collapse;
- A brief loss of consciousness
- A history of “feeling” faint and pale skin – literally “draining” from their face.
- Often the pulse rate is slow (as opposed to compensating shock where it is rapid)



Our management of a person about to faint is to:

- If still conscious **position** the casualty to improve blood flow by laying the casualty down, then raise and support their legs.
- Ensure good air supply - open a window if necessary - and encourage deep breaths;
- As they recover, reassure, and allow them to sit up gradually;
- Look out for any injury sustained.



If the casualty becomes unconscious - go back to our DRs ABS check list and, if breathing, put them in the recovery position, dial 999 and monitor.

BE AWARE THAT A PERSON WHO COLLAPSES DUE TO A SIMPLE FAINT SHOULD START TO COME ROUND WITH 2-3 MINUTES - IF THEY DON'T START TO RECOVER YOU MAY NEED FURTHER MEDICAL ASSISTANCE AS IT MAY NOT BE A SIMPLE FAINT.

Review Questions – Circulation & Shock

1. What is the amount of blood contained by an average adult and what are the 3 component parts of blood?
2. What is a clinical definition of shock and what are the 3 ways in which a patient can go into shock (giving an example of each of the pathways)?
3. What are the 3 major clinical signs of shock?
4. What is the general principle for control of external (non-catastrophic) bleeding?
5. What is initial management of a patient who feels faint?



PRIMARY SURVEY REVIEW

The acronym DRs ABC is a simple, but effective way to remember the key points of the Primary Survey.

- **D** – "DANGER ACT First"; This expression identifies the key elements of initial scene assessment. The ACT stand for
 - Assess the Scene for any obvious hazards - remember Safety First
 - Communicate - Up / Down / Left & Right - speak to the patient and inform all around that you require assistance
 - Triage or Treat - where needs exceed resources, you will have to prioritise care
- **Rs** - Determine the patient's **RESPONSE** - are they Alert and talking coherently or have they got a lowered level of Response;
- **A** – Clear, Open and Maintain the patients **AIRWAY** together with neck precautions (*called c-spine*) if the situation and Resources allow;
- **B** - Determine if the patient is **BREATHING** and take any steps necessary to maintain adequate breathing;
- **C** - Determine the patient's **CIRCULATION**. Take steps to maintain blood circulation to the vital organs, including stopping any severe/life threatening bleeding - obvious "*Blood on the Floor*".