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Thank you for choosing Healthier Business Group to conduct your Online Training.

Please see the next slide to see what you will require before starting your training. We will also give you a few handy tips on some of the additional features that assist you with your learning.



BEFORE BEGINNING

○ If you are using a mobile device or laptop, please ensure that it is fully charged.



○ You should also have a pen and notepad ready.



○ Ensure you are in a quiet area with minimal distractions.



In addition to the above please make yourself familiar with some of the tools available above such as;

Resource Bank

Here you will find useful documents that will be relevant to the course you are undertaking but also you will have access to a CPD reflective learning template which you can download and complete to gain your points.

Highlighter/Pen tool

This feature allows to highlight, circle and write notes on parts of the material wherever you feel necessary.

Presenter Function

Selecting this function will give you instant access to our contact details without having to leave the course should you require support with the system or any assistance from one of our qualified trainers.

Audio Dictation

Please note this feature is auto-enabled. If this isn't required simply select the mute function or decrease the volume.

Hyperlinks

Should you click on a hyperlink within the course material you will be required to click your back button on your browser or device once you are ready to resume.

INTRODUCTION:

First Aid in the Workplace is the provision of immediate necessary care to ill or injured people in the workplace. First Aid at Work Regulations (1981) are applicable to all employers to ensure that in the event of injuries or people falling ill in the workplace receive immediate attention, appropriate medical intervention, and where necessary, an ambulance is called for more serious cases.

The First Aid in the Workplace (FAW) module aims to provide you as the learner, the underpinning knowledge of what you need to know and how to safely and effectively manage an incident that has occurred in the work place and where you are the first on the scene.

On completion of this module learners will:

- Know what to do if you are first on the scene of an incident
- Be able to assess the situation as a potential danger zone
- Know the key processes to follow and what to do for each one: Danger, Response, Shout, Airway, Bre
- Understand the importance of the recovery position and how to apply it provide first aid.



This module will primarily focus on the assessments that should be conducted of casualties when you arrive first on the scene to the incident, what intervention should be implemented to preserve life in the event of an emergency/serious injury. It will also identify where possible cause of the event and provide appropriate treatment to prevent the condition from worsening and promote recovery. Conditions covered in this module include:

- Briefly discuss Adult Basic Life Support and the treatment of the unconscious/unresponsive casualty as a more comprehensive online module is available on the Healthier Business UK Ltd training website.
- Shock
- Anaphylaxis
- Bleeding (major and minor)
- Burns and scalds
- Fractures and soft tissue injuries
- Minor injuries
- Asthma
- Angina
- Diabetes



WHAT IS FIRST AID?

First Aid is defined as the provision of emergency treatment of illness or injury in order to maintain life, to ease pain and to prevent deterioration of the patient's condition until professional medical help can be obtained.

It is important to recognise that accidents can happen at any time and minimum first aid provision needs to be available at all times. Provisions are specific to risk factors/hazards identified within the work environment.

Risk factors/hazards to be considered include:

- Are there hazardous substances, dangerous tools, plant material/equipment used, manual handling tasks involved, electric shock risks, dangerous exposure to surrounding neighbours, animals etc.
- Number of persons likely to be on the premises
- Is the rotation in shift patterns, night work hours?
- Does the employer travel a significant distance to or from work or does their job involve a lot of travel to different sites on a regular basis
- Are there pregnant mothers, vulnerable groups such as the elderly, young children or those with disabilities/special health needs present on the premises on regular occurrences?
- Does the premises have many members of the general public on their site?
- Is there an emergency medical service provider nearby that is easily accessible and within a short period of time?

The minimum first aid provision for ALL employers has to have at least the following:

- A suitably stocked first-aid box
- An appointed person to take charge of first-aid arrangements

THE FIRST AIDER:

The employer has the responsibility to ensure ALL employees are informed of the internal arrangements for first aid. Putting up notices telling staff who and where the first aiders are and where a first aid box can be easily accessed. First aid cover should always be available when people are at work.

A first aider is someone who has undergone an approved training course in administering First Aid at Work (FAW) and holds a current FAW certificate. Training should be undertaken every three years. Up until 1st October 2013, Training organisations were formerly 'Approved' by HSE to deliver First Aid at Work Training, however this is no longer applicable and the flexibility arising from the changes in the Regulations gives employers more choice in the first aid training they provide for their employees and who they choose to provide it (HSE, 2015). Approved training courses should meet the standards and are in accordance to the guidelines published by the following

- Resuscitation Council (UK)
- and the current edition of the first-aid manual of the Voluntary Aid Societies (St John Ambulance, British Red Cross, St Andrew's First Aid)
- other published guidelines, provided they are in line with the two above or supported by a responsible body of medical opinion.

As the designated first aider on site or the first on scene where an individual has suddenly become unwell or has sustained an injury, the three priorities of treatment are to **PRESERVE LIFE, PREVENT THE CONDITION FROM WORSENING AND PROMOTE RECOVERY!!**

ASPECTS TO CONSIDER:

Any employee who has any underlying medical condition that imposes a risk of requiring emergency treatment should notify their HR/Line Manager of same. Conditions such as Epilepsy, Diabetes, Asthma, known allergies that can trigger Anaphylaxis etc. are potentially life threatening if not acted upon immediately. Some individuals may wear Medical Identity Bracelets therefore it is crucial to be aware of same.

This enables emergency professionals to gain vital information from members' secure emergency personal records, 24/7, 365 days a year, especially where the individual is in an unresponsive or unconscious state and unable to communicate. As the first aider, it will also indicate the likely cause of the event and will assist you to assess what appropriate action should be undertaken.

Your role as the first aider is vital and it is important that you consider the following guidance:

- Keep calm as much as possible and use your first aid training skills. Avoid panic as this can affect your train of thought but also can impose dangers to you, by-standers and your casualty.
- Ensure that you and others around you are kept safe and remove any dangers in the area that can impose a threat to you and surrounding persons.
- Protect yourself and minimise risk of infection
- Prioritise casualties if attending an incident that involves multiple casualties. Treat the most serious first.



THE FIRST AID KIT

There are no set criteria for the contents that should be put in place in a first aid box as this is dependent on the employer's assessment of needs and the potential hazards that have been identified.



Where there are no specific needs or special risks identified in the workplace, a minimum stock of items required are listed below:

STOCK FOR UP TO 50 PERSONS

• A leaflet giving general advice on first aid, for example HSE leaflet 'Basic advice on first aid at work	1
• Medical adhesive plasters	40
• Sterile eye pads	4
• Individually wrapped triangular bandages	6
• Safety Pins	6
• Individually wrapped medium sterile, un-medicated wound dressings	8
• Individually wrapped large sterile, un-medicated wound dressings	4
• Individually wrapped antiseptic wipes	10
• Paramedic shears/tough cut scissors	1
• Pair of latex gloves	2
• Sterile eye was if no clean running water resources	2
• Sterile gloves	2
• Sterile face shield (optional, but recommend)	1
• Incident log book/First aid report log book	1

HELPING IN AN EMERGENCY:

As previously discussed, the three key objectives when giving first aid are to preserve life, prevent the condition from worsening and to promote recovery until emergency services attend. The DR ABC Action plan is the simplest way to ensure the effective assessment of any casualty before considering and implementing first aid treatment. This section of the module will briefly discuss the DR ABC assessment and also the provision of administering CPR. You are required however to successfully complete online module: Adult Basic Life Support which is available on the Healthier Business UK Ltd on line training site, before you can deem yourself competent and confident in providing effective BLS management.

If someone is injured following an accident and you are the first person on the scene, first check that you and the casualty aren't in any danger. If you are, make the situation safe.

When it's safe to do so, assess the casualty and, if necessary, dial 999 or 112 for an ambulance. You can then carry out basic first aid where you are required to conduct two separate surveys to ascertain the treatment required to stabilise your casualty; Primary Survey is used to assess and prioritise the treatment of any life- saving treatment required followed by the Secondary Survey where you try to identify the initial cause of the incident and establish what happened.

PRIMARY SURVEY

D - CHECK FOR DANGER AND DON'T PANIC!

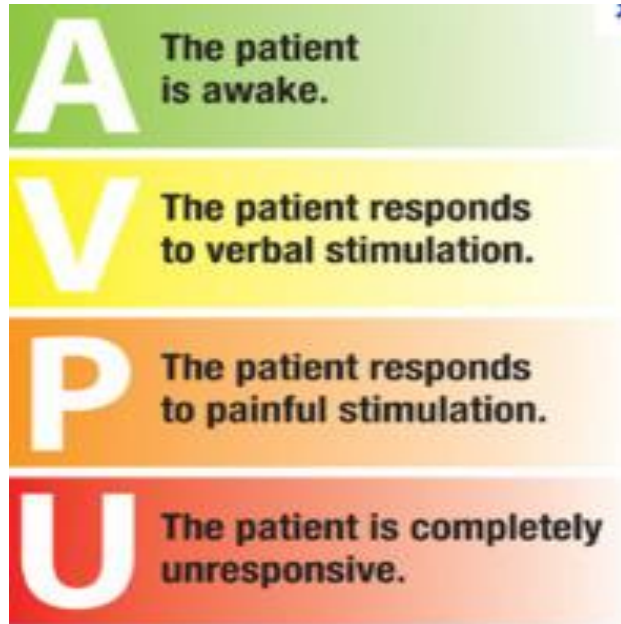
Check for hazards such as hanging electrical cables, fuel spillage, oncoming traffic, broken glass, wear appropriate PPE (Personal Protection Equipment) including gloves and face shield if providing mouth to mouth resuscitation.

R - CHECK FOR RESPONSE

Approach the casualty with caution if you don't know them. Lean over casualty, shout and ask if they can hear you. If no response, lean towards opposite ear and repeat 'Can you hear me?' This is to ensure they do not have any hearing deficit and also to make sure they are not wearing earphones.

If the candidate still fails to respond to verbal contact, proceed to stimulate pain such as pinching the nail beds of fingers (assess for capillary refill where restricted blood flow returns and colour under nail bed is seen), ear lobe pinch or sternum rub.

Checking for level of response:



A The patient is awake.

V The patient responds to verbal stimulation.

P The patient responds to painful stimulation.

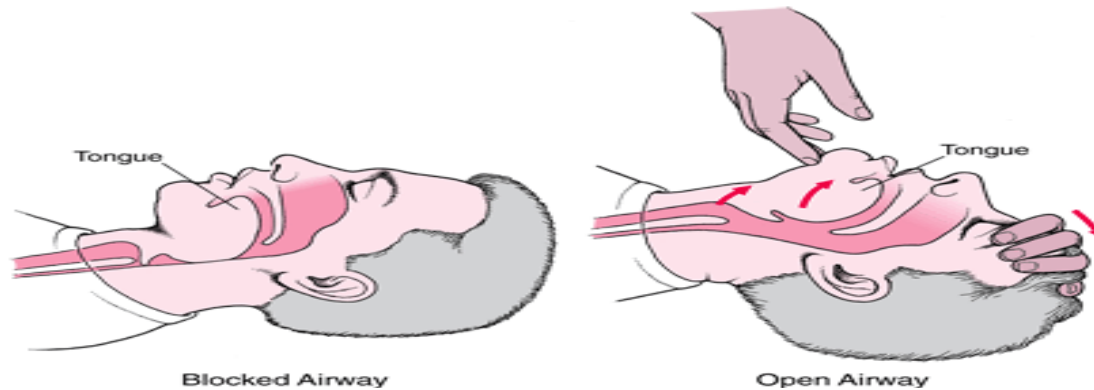
U The patient is completely unresponsive.

CAUSES OF UNRESPONSIVENESS

- Fainting
- Inability to maintain body temperature
- Shock
- Head Injury
- Stroke
- Heart Attack
- Poisoning
- Anaphylaxis
- Seizures
- Diabetes

A - AIRWAY

Where you have identified an unconscious casualty and there is evidence of vomit present in or around the mouth, carefully roll on to their side to allow the vomit to empty. Should there be suspicion of spinal trauma, utilise bystanders to assist with log roll to stabilise neck and reduce further risk of injury. Failure to remove residual vomit can lead to the airway obstructing. To open the airway, use the head tilt- chin lift technique.



B - BREATHING

With the airway open and free of possible obstruction look, listen and feel for approximately 10 seconds to determine if the victim is breathing normally. Look to see if the chest rises and falls, listen for breathing and feel for breaths on your cheek. Should you have any doubt as to whether breathing is normal, act as if it is not normal. Should you suspect Agonal Breathing in a victim, you should suspect cardiac arrest and start CPR, if the victim is unresponsive and not breathing normally (British Resuscitation Council, 2015). Further details regarding Agonal breathing are discussed in the Adult BLS module.

EVIDENCE OF ABSENT OR IRREGULAR BREATHING- SHOUT FOR HELP BEFORE PROGRESSING!!!

If the victim is breathing and no indication of spinal injury or trauma (i.e. crush injuries, fall from height or road/motor collision), place victim in Recovery Position, call for help and reassess at regular intervals.

C - CIRCULATION

In adults who require CPR, there is a high probability of an underlying cause for their cardiac arrest. Although circulation stops, oxygenated blood in the lungs and arterial system remain oxygenated for several minutes hence priority is to commence chest compressions before ventilation. If an unconscious casualty has irregular or absent breathing, commence CPR.

DELIVERY OF CHEST COMPRESSIONS

Ask a bystander to call for an ambulance and bring Automatic External Defibrillator if one available. If you are on your own, call for an ambulance and only leave the casualty if there is no other option for requesting help exists. Once attempt for help and emergency services has been made, follow the below process:

1. Chest compressions are normally delivered by a single aider. Situate yourself next to the casualty and in kneeling positioning.
2. Place the heel of your hand in the centre of the chest (lower half of the sternum) with the heel of the other hand on top, interlocking fingers as in below image. Ensure no external pressure can be applied to the victims' ribs, to avoid risk of puncture to lung or rib fracture.

3. Position yourself vertically above the casualty's chest, straighten arms and press downwards approximately 5-6cm. The Resuscitation Council (UK) advise that a compression depth range of 4.5-5.5cm in adults leads to better outcomes than all other compression depths during manual CPR, and to aim for 5cm but no more than 6cm in an average size adult.
4. Chest compressions should be administered at a rate of $100-120 \text{ min}^{-1}$ (100-120 per minute).



5. After each compression, release all the pressure on the chest wall without losing contact between your fingers and the sternum.
6. Compression and release should take equal time and pauses in chest compressions should be minimised and training provided to emphasise the importance of close co-operation between CPR providers to achieve this.
7. CPR provider fatigue can cause inadequate/insufficient CPR technique and where possible, CPR providers should alternate every two minutes to prevent a decrease in compression quality and promote increase chance of effectiveness.

RESCUE BREATHS

CPR providers should give rescue breaths with an inflation duration of 1 second and provide sufficient volume to make the victim's chest rise. The maximum interruption from chest compressions to providing rescue breaths should not exceed 10 seconds (Resuscitation Council UK, 2015).

- Pinch the victim's nose to close nostrils, keeping the airway open by the head-tilt, chin-lift.
- Take a deep breath and seal your lips around the outside of the victim's mouth, preferably with a CPR barrier mask, creating an airtight seal.
- Give the victim 2 full breaths (1 second each), taking your lips off the victim's mouth to inhale between each breath.
- Check for chest rising and falling with each breath you give. The rising of the chest during your exhalations indicates the effectiveness of your breaths.
- Perform 5 sets of the 30-to-2 cycle within 2 minutes.

PLEASE NOTE: CPR CYCLES SHOULD NOT BE INTERRUPTED UNTIL A FULL CYCLE HAS BEEN COMPLETED OR WHERE THE CASUALTY IS SHOWING SIGNS OF CONSCIOUSNESS SUCH AS COUGHING, OPENING THEIR EYES, STARTING TO SPEAK etc. WHERE A CASUALTY IS SHOWING SIGNS OF THE AFOREMENTIONED, STOP CPR AND PLACE IN RECOVERY POSITION, AS LONG AS THERE IS NO EVIDENCE OR POTENTIAL RISK OF SPINAL INJURY OR TRAUMA AND YOU DEEM SAFE TO DO SO.

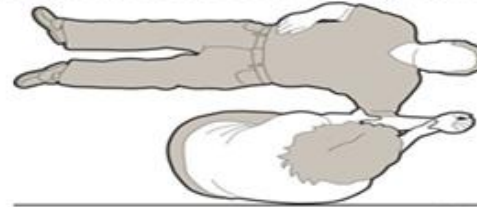
RECOVERY POSITION

Recovery position for adults

This is the best position for a casualty who is unconscious and breathing.

If the casualty is unconscious but breathing, place them on their side in the recovery position.

1. Place arm nearest you at a right angle.



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2. Move the other arm, as shown, with the back of their hand against their cheek. Then get hold of the knee furthest from you and pull up until foot is flat on the floor.



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3. Pull the knee towards you, keeping the person's hand pressed against their cheek, and position the leg at a right angle.



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4. Make sure that the airway remains open by tilting the head back and lifting the chin. Check breathing.



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SECONDARY SURVEY

Once your casualty has shown signs of consciousness or responding to commands/pain stimulae, and you have assessed, prioritised and treated any life- threatening conditions, move to the Secondary Survey to ascertain or try to establish what has happened. It also allows you to assess if there are any other injuries or illnesses that may have contributed to the accident. Where possible, try to acknowledge the events that have taken place and take notes from the casualty or other responsible adults/witnesses who may have been nearby.

Questions to ask and information to obtain include;

- History- What happened, or what events had taken place leading to them becoming unwell. Did they fall from a height, were they working with electrical wires, operating plant material/ machinery, working with chemicals/toxic material etc.;
- Symptoms- did they complain of any symptoms such as headaches, nausea, auras, pain etc. or feeling disorientated, confused, light headedness.
- Initiate Top- to Toe assessment- Check them over from head to toe. What signs do you find on their body? Use all your senses. Look for obvious physical injury, expressions of pain or discomfort, listen for abnormal breathing such as wheezing, crepitus in joints, and feel for any masses, abnormal lumps and bumps, smell for unusual aromas.

MEDICAL HISTORY

Obtaining as much information regarding their previous medical history can help to assist with the ongoing management for your casualty, and also to eliminate factors that may have attributed to the onset of the condition such as Diabetes, previous Strokes, Epilepsy, and Anaphylaxis etc. The more information you can obtain and relay back to the attending emergency services will help to ensure appropriate and safe management of treatment and recovery going forward.

SIGNS:

- Head to toe examination
- *Breathing and pulse:* How fast and strong is their breathing and pulse?
- *Bleeding:* Check the body from head-to-toe for any bleeding.
- *Head and neck:* Is there any bleeding, swelling, sensitivity or a dent in the bone, which could mean a fracture?
- *Ear:* Do they respond when you talk to them? Is there any blood or clear fluid coming from either ear? If so, this could mean a serious head injury.
- *Eyes:* Are they open? What size are their pupils (the black bit)? If they're different sizes this could mean a head injury.
- *Nose:* Is there any blood or clear fluid coming from the nostrils? This could mean a serious head injury.
- *Mouth:* Check their mouth for anything that could block their airway. Look for mouth injuries or burns in their mouth and anything unusual in the line of their teeth.
- *Skin:* Note the colour and temperature of their skin. Pale, cold, clammy skin suggests shock. A flushed, hot face suggests fever or heatstroke. A blue tinge suggests lack of oxygen from an obstructed airway, poor circulation, or asthma.
- *Neck:* Loosen any clothing around their neck to look for signs like a medical warning medallion or a hole in their windpipe. Run your fingers down their spine without moving it to check for any swelling, sensitivity or deformity.
- *Chest:* Check if the chest rises easily and evenly on each side as they breathe. Feel the ribcage to check for any deformity or sensitivity. Note if breathing is difficult for them or painful in any way.

- Collarbone, arms and fingers: Feel all the way along the collarbones to the fingers for any swelling, sensitivity or deformity. Check they can move their elbows, wrists and fingers.
- Arms and fingers: Check they don't have any unusual feeling in their arms or fingers. If their fingertips are pale or greyish-blue this could suggest their blood isn't circulating properly. Also look for any needle marks on the forearms, which suggest drug use. See if they have a medical warning bracelet.
- Spine: If they've lost any movement or sensation in their legs or arms. Don't move them to check their spine as they may have a spinal injury. Otherwise, gently put your hand under their back and check for any swelling or soreness
- Abdomen: Gently feel their abdomen to check for any signs of internal bleeding, like stiffness or soreness, on each side.
- Hips and pelvis: Feel both hips and the pelvis for signs of a fracture. Check their clothing for any signs of incontinence, which may suggest a spinal injury or bladder injury, or bleeding from body openings, which may suggest a pelvic fracture.
- Legs: Check the legs for any bleeding, swelling, deformity or soreness. Ask them to raise one leg and then the other, and to move their ankles and knees.
- Toes: Check their movement and feeling in their toes. Compare both feet and note the colour of the skin: greyish-blue skin could suggest a problem with their circulation or an injury due to cold, like hypothermia.

(St John's Ambulance, 2015)

Throughout the Secondary Survey, ensure regular monitoring of breathing is maintained. Any irregular or signs of absent breathing, return the casualty back on to their back and commence CPR.

COMMON CAUSES OF INJURIES AND ILLNESSES THAT OCCUR IN THE WORKPLACE:

After completing the Primary and Secondary Survey when attending to an individual who has come unwell or sustained injury, the next section of this module will assist you in providing First Aid for common illnesses and accidents that can occur any time and any place. First Aid not only serves to preserve life until emergency services are in attendance, but also to provide safe and effective management of acute injuries and illnesses to prevent the condition from worsening and to promote recovery. The following list of conditions is not exhaustive and further reading may be required depending on your specific place of work and the needs of the workforce.

HEART ATTACKS:

Whilst a heart attack can lead to a cardiac arrest, these are two separate conditions. A cardiac arrest as will cause the victim to become unconscious and unresponsive with very little to absent respiratory effort and is normally caused by abnormal electrical activity in the heart. Heart attacks are mostly caused by physiological changes in the heart muscle/arteries where there are signs of CORONARY HEART DISEASE (fatty deposits in the coronary arteries that supply your heart muscle with oxygen rich blood). Should a piece of this fatty material (atheroma) break off it may cause a blood clot (blockage) to form. If it blocks your coronary artery and cuts off the supply of oxygen-rich blood to your heart muscle, this is a heart attack (BHF, 2015).

Where you have identified the casualty is suffering from a heart attack, KEEP CALM. Get the casualty to sit on the ground (if possible against a wall/hard surface), sit upright with legs bent towards their chest. This will assist with their breathing. Call 112/999 and advise operator that you have casualty with suspicious heart attack. If the individual has previous history of known chest pain/cardiac complaints, they may be in possession of a Glycerol TriNitrate spray (GTN). Assist them to use this. If the symptoms persist and no relief and the casualty is known to be prescribed Aspirin, 300 mgs can be administered. Encourage them to chew to gain optimal absorption into the blood stream. Should their condition deteriorate, and are showing signs of diminished breathing and loss of consciousness, they are most likely to have a cardiac arrest and you should proceed to CPR.

ANGINA:

Angina is chest pain that occurs when the blood supply to the muscles of the heart is restricted. It usually happens because the arteries supplying the heart become hardened and narrowed. The pain and discomfort of angina feels like a dull, heavy or tight pain in the chest that can sometimes spread to the left arm, neck, jaw or back. The pain is usually triggered by physical activity or stress and typically only lasts for a few minutes. (NHS Choices, 2014)

- Should your casualty be displaying symptoms of an Angina attack, the following action should be undertaken:
- Ask them to sit down and to take 5 deep breaths. If they have been prescribed GTN spray, help them to administer if necessary. Spray 1 to 2 puffs under the tongue and ask them to close their mouth.
- After 5 minutes, ask them if they are still experiencing pain. If yes, repeat 1- 2 puffs under the tongue. Wait a further five minutes and again, repeat “Are you still having chest pain?” If they reply yes, and they are prescribed Aspirin, administer 300 mgs and call 112/999.
- If the pain subsides, they are alright but are encouraged to make an appointment with their GP/Specialist Nurse to advise of recent events.
- Should the pain continue for 10 minutes or more despite intervention, there is a likelihood that the casualty is experiencing the symptoms of a heart attack.

ASTHMA:

Asthma is a common long-term condition that can cause coughing, wheezing, chest tightness and breathlessness. In most cases, Asthma is triggered by exposure to irritants such as pollen, dust, pet hair, chemicals, stress and causes the airways to go into a spasm and the lining of the airways to become inflamed and swell. Around 5.4 million of the UK population suffer from asthma (NHS Choices, 2014) and symptoms vary from person to person. Asthma is normally well controlled with use of inhalers. Steroids are used for preventative measures (such as a brown inhaler known as Beclomethasone, and a blue inhaler (Salbutamol) for exacerbation of its common symptoms, also known as a reliever. Severe attacks may require hospital treatment and can be life threatening, although this is unusual.

The severity of these symptoms varies from person to person. Asthma can be controlled well in most people most of the time, although some people may have more persistent problems. Should you suspect an individual be showing signs of having an asthma attack, the following action should be undertaken;

- Sit the casualty upright to try and ease the symptoms, and provide reassurance. If you panic, this will only make their symptoms worse
- Assist the casualty to take their usual dose reliever inhaler (Salbutamol) immediately, preferably with a spacer if available.
- Sit them upright and try to reassure them to stay calm. DON'T PANIC.
- If symptoms are not relieved, they can administer their reliever inhaler up to 10 puffs at two minute intervals.
- If no improvement after following the previous steps, call 112/999 or for help
- Should ambulance/emergency services not attend within 10 minutes repeat stage 4
- If the casualty has recovered following the administration at stage 2 or stage 4, they must be encouraged to seek medical advice with their GP/Asthma nurse for urgent review within 24 hours of any given attack.

ANAPHYLAXIS:

Anaphylaxis is a severe, potentially life-threatening allergic reaction that can develop rapidly. (NHS Choices, 2014) It is also known as anaphylactic shock.

Signs of anaphylaxis include:

- Itchy skin or a raised, red skin rash
- Swollen eyes, lips, hands and feet
- Feeling lightheaded or faint
- Swelling of the mouth, throat or tongue, which can cause breathing and swallowing difficulties
- Wheezing
- Abdominal pain, nausea and vomiting
- Collapse and unconsciousness

In the event of an individual experiencing an Anaphylactic Shock (Anaphylaxis) the following action is required:

- If mild reaction to an allergen is evident, antihistamines in the form of oral tablet or suspension (such as Certizarine, Loratadine) can be effective however this can take up to 15 minutes before any benefit from same.
- Should the casualty be displaying more severe reaction such as swelling to the tongue, difficulty to breathe, or evidence of a systemic reaction (all over body symptoms including difficulty to breathe, swollen eyes, swelling to fingers and toes, wheezing etc.), the likelihood is that they have previously experienced similar symptoms and carry an auto- injector of adrenalin (**epinephrine**). Aim the auto- injector on the outer thigh, press to inject contents of same and hold in place for 5-10 seconds. Call 112/999 after first administration and assess response. Even if the casualty has shown evidence of recovery, emergency services MUST always be called.
- A second dose may also be needed if the person improves and then becomes unwell again.
- If the person is unconscious but breathing, you should move them to the recovery position – on their side, supported by one leg and one arm, with the head tilted back and the chin lifted. If the person's breathing or heart stops, cardiopulmonary resuscitation (CPR) should be performed.

DIABETES:

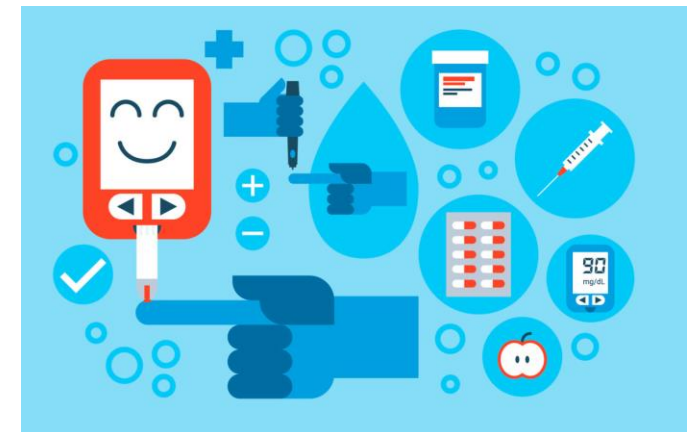
Diabetes is a life- long condition where an individual suffers from high blood sugar levels. The pancreas produces a hormone called insulin with the aim to remove glucose (sugar) from the blood cells after food has been digested. The glucose is then broken down to produce energy. Individuals diagnosed with diabetes are unable to adequately regulate their blood glucose levels.

There are two types of Diabetes: Type I Diabetes (insulin dependent) where the individual has to administer insulin injections daily to maintain safe blood sugar levels and normally develops early in life. Type II diabetes requires tablets and diet to maintain same and tends to develop later in life. Risk factors that can lead to developing Type II Diabetes are obesity and lack of exercise.

Either of these conditions can become life threatening at any given time and appropriate intervention is required. The inability to control the metabolism leads to diabetics having high or low levels of glucose in their blood. The First Aid treatment for diabetes is more likely for low blood sugar levels than for high levels – as blood sugar can drop very quickly if the person has missed a meal or done additional exercise that they hadn't anticipated.

Signs and Symptoms of high blood sugar levels (Hyperglycaemia):

- Rapid pulse and breathing
- Excessive thirst
- Erratic or mimicking drunk and intoxicated behaviour
- Ketoacidosis- a distinctive fruity odour on the breath
- Dizziness or having trouble keeping balance
- Altered states of consciousness
- Arousal such as hostility or mania
- Unusual nervousness
- Disorientation
- Confused when asked simple questions or confused in general about circumstances
- Sweaty with clammy perspiration



Management for Signs and Symptoms of Low Blood Sugar (Hypoglycaemia):

- Light-headedness/giddiness
- Sweating/clammy to touch
- Racing heartbeat/pulse (Tachycardia)
- Irritability/Aggression
- Nervous or anxious
- Confusion/Delirium
- Loss of consciousness

Management for Hyperglycaemia:

- Check to see if the casualty has a medical bracelet on the wrist/ankles or around their neck as a dog tag. Do they have an insulin pen/Glucagon pen etc. on them or in their luggage/handbag?
- Symptoms normally progress over a few days and in most instances, however in any event, call 112/999 and advise emergency services that you suspect hyperglycaemia.
- Wait for help to arrive but in the interim, monitor airway, respiratory function and pulse. Should the casualty lose consciousness commence Basic Life Support.

HYPOGLYCAEMIA

- Provide the casualty with a sugary drink/sweet, two teaspoons of sugar or if they in their possession, glucose gel/sachet. Ensure the casualty is sitting upright to avoid risk of aspiration or choking.
- If they start to show signs of improvement, continue to give them a sweet product. If they have their glucometer with them, you can check their blood sugar levels. Stay with them until you are satisfied they have recovered.
- Where there is no quick response following administration of a sugary product, carry out your secondary survey to try and establish another cause, if any and then call 112/999.

If you're unsure whether their blood sugar is high or low:

- If you're not sure whether someone has high or low blood sugar, give them something sugary anyway, as this will quickly relieve low blood sugar and is unlikely to do harm in cases of high blood sugar
- If they don't improve quickly, call 999 or 112 for medical help. If they lose consciousness at any point, open their airway, check their breathing and prepare to treat someone who's become unconscious.

WOUND MANAGEMENT:

In most instances, minor injuries involving bleeding wounds simply require cleaning and a dressing applied to minimise blood loss and risk of infection.

- S** Sit or lie the person down to prevent faint or shock
- E** Examine the area to see if there is a foreign body present. **DO NOT REMOVE IT!**
- E** Elevate the bleeding area above heart level.
- P** Apply pressure

In order to clean the wound and there are washing facilities nearby, wash and dry your hands thoroughly before attending to the casualty. If you have cuts or open wounds on your own hands, ensure these are also covered to avoid risk of cross infection to you and the individual concerned and then follow the steps below:

1. Wear gloves
2. Make sure the casualty is sitting or lying down.
3. If there is a foreign object in the wound. Leave it in situ as this is likely occluding the blood flow therefore reducing risk of blood loss.
4. Clean the wound with either running water or if not available, saline solution or antiseptic wipe which should be available in your first aid kit. Clean from the centre of the wound outwards in one swoop. This prevents re-introducing any dirt/grit back into the wound. Continue using fresh gauze/pads until you are satisfied there is no further evidence of dirt in or the wound.
5. Gently pat the area dry using a clean towel or a pad of tissues, but nothing fluffy such as a cotton wool ball, where strands of material can get stuck to the wound.
6. Apply a dry, preferably non-adherent dressing to the wound.
7. Secure the dressing with a bandage
8. If the blood seeps through the dressing, repeat steps 6 and 7.
9. Ensure that you have not applied too much pressure on the or around the wound as this can cause restricted blood flow to the extremities of the limb. To assess this, pinch the finger nail or toe nail depending on the site of the wound and then release. Colour should return to the area once the nail has been released (this is known as capillary refill), then there is no restriction in blood flow. If there is a delay or no evidence of area turning pink, then the dressing is too tight and should be reapplied with less tension.

WOUNDS WITH EMBEDDED FOREIGN OBJECTS

If you have attended a scene and you are faced with a casualty with a bleed, the main objective is to stop the bleeding. Excessive bleeding can lead to severe blood loss which can cause hypovolaemic shock where the heart is unable to pump enough blood around the body and vital organs, causing them to fail.

- Make sure you are wearing gloves. This will reduce risk of contamination through exposure to blood borne viruses.
- DO NOT REMOVE THE FOREIGN BODY. Instead apply, two rolled up bandages or a triangular bandage rolled up into a doughnut ring, and apply around the wound. Extracting the object will not only cause risk of infection but will cause more internal damage and potentially increase blood loss as the object may have been stemming the blood loss.

THE CASUALTY EXPERIENCING SHOCK:

Shock is a life-threatening condition which happens when the body isn't getting enough flow of blood. This means that the cells don't get enough oxygen to enable them to work properly, which can lead to damage of the vital organs like the brain and the heart.

Shock can be caused by anything that reduces the flow of blood, including;

- Heart problems, such as a heart attack, or heart failure
- Severe internal or external bleeding
- Loss of body fluids, from dehydration, diarrhoea, vomiting or burns
- Severe allergic reactions and severe infection

If someone has any of the conditions above, which can reduce the circulation or blood flow, they could develop shock, so you may need to treat them for this condition as well.

Signs and symptoms of shock include:

- Rapid pulse (tachycardia)
- Skin looking pale/ashened in colour; blue tinge on lips (cyanosis)
- Cold/clammy to touch
- Rapid, shallow breathing or gasping for breath
- Nausea/Vomiting
- Hypoxia (due to the brain being starved of oxygen). Individuals who are hypoxic will become restless and in some cases aggressive so approach with caution. Hypoxia also can lead to the casualty becoming unconscious and eventually unresponsive in which case resort to CPR.

Treatment for Shock:

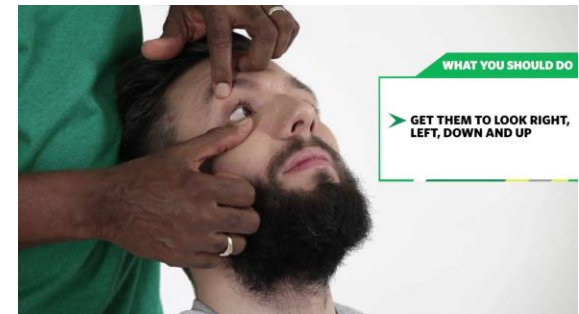
- Lay them down with their head low and legs raised and supported, to increase the flow of blood to their head.
- Call 999 or 112 for medical help and say you think they are in shock, and explain what you think caused it (such as bleeding or a heart attack).
- Loosen any tight clothing around the neck, chest and waist to make sure it doesn't constrict their blood flow
- Fear and pain can make shock worse, by increasing the body's demand for oxygen, so while you wait for help to arrive, it's important to keep them comfortable, warm and calm. Do this by covering them with a coat or blanket and comforting and reassuring them
- Keep checking their breathing, pulse and level of response.
- If they lose consciousness at any point, open their airway, check their breathing, and prepare to treat someone who has become unconscious.

EYE INJURIES:

Any injury to the eye, prompt action is required to prevent more serious or permanent visual impairment/loss of sight. Whilst the eye has the function to remove or discard debris without causing damage to the sclera (white part of the eye), residual dirt/chemicals/grit can remain in situ and this requires urgent attention to reduce risk of long term damage.

- As the first aider in attendance, encourage the individual to wash their eye under clean running water if available.
- Ensure the individual does NOT rub their eyes as this will increase the risk of causing permanent damage to the surface of the eye and potential loss of vision.
- Should the individual not be able to run the eye under water, ask them to lift the upper lid and pull the lower lid to allow you to irrigate the eye with sterile water and to roll the eye about at the same time.
- Repeat the previous step to ensure all debris is removed and refer to hospital for immediate medical attention.

If you are attending a candidate who has sustained a chemical splash to their eye wash immediately with saline water and aim is to transfer them directly to hospital. Make sure you wear gloves to avoid potential skin contact to yourself, rinse with running water if no sterile saline available for at least 10 minutes and cover the eye with a plain non adhesive dressing or eye shield. Ensure to inform medical team of what chemical exposure the casualty has had.



MANAGEMENT OF BURNS

Immediate and appropriate first aid management is required when you are treating a casualty with a burn or scalds injury in the work place. This is to minimise the skin damage and also reduce risk of infection. Causes of burns can vary from incidents caused by spillage of hot liquids such as grease, oil, boiling water, to electrical burns and contact with exposure to flames.

Before attending to treat a casualty who has sustained a burns injury, first protocol is to ensure that there is no risk to you as the first aider. Any potential contact with flames, ensure you douse the fire with either fire extinguisher or water if available, or smother the flames with a blanket. Once the area is deemed safe, the following steps should be followed:

- Remove loose clothing and jewellery near the area that has been affected, but avoid removing any clothing that is stuck to the burnt skin.
- Cool or run the area affected under cold to luke- warm water for approximately 20 minutes. **DO NOT APPLY ICE OR OTHER GREASY LUBRICANTS SUCH AS BUTTER OR CREAMS AS THESE OILS RETAIN HEAT WHICH WILL HAVE THE OPPOSITE EFFECT OF WHAT YOU ARE TRYING TO ACHIEVE.**
- Once the affected area has cooled, wrap the burn carefully with cling film or a plastic bag. This helps to reduce risk of infection and also reduces pain should the burn be exposed to air.
- If severe, call 112/99 or if a minor injury, take to Accident and Emergency for medical assessment and further management.

SEVERITY OF BURNS

There are several factors that contribute to the how severe a burn is considered:

- **S** - Size of the area affected; the larger the area, the more severe
- **C** - Cause; determining the cause will assist with the appropriate management going forward
- **A** - Age; vulnerable age groups such as babies/young children and the elderly are considered more serious
- **L** - Location; burns to the face, neck, chest are most likely to cause pulmonary complications. Injury hands or feet will cause severe pain due to the superficial nerve and vascular system, and likely to require intense rehabilitation etc.

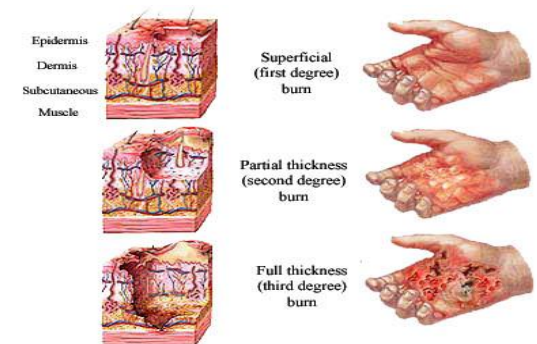
Depth

- 1st Degree burns: superficial burns affect the top layer of skin (Epidermis) only but can cause significant pain and discomfort. Normally does not present with a blister but area will be red.
- 2nd Degree burns: Partial thickness burns involves the epidermis and dermis area. Blister will be evident and erythema around the site. Will be moist to touch and extremely painful due to the distribution of the nerves supplied to the tissue.
- 3rd Degree burns: Full thickness burns that extend through the dermis. Skin will have a leather texture to it and in most cases, pain is minimal as the nerves have been damaged during the incident. Recovery following full thickness burns can take months due to the extensive damage and may cause contractures.

ELECTRICAL BURNS

Electrical burns are caused by an individual with direct contact with electricity such as an exposed electrical cable, lightning or home electric current. They will always be presented with an entry and exit wound, and the pathway of the current via these points may be damaged so be aware of respiratory, cardiac and neurological complications such as increased confusion, seizures, difficulty in breathing, cardiac arrhythmias etc.

- Before attending the casualty after an electric shock, ensure the power supply has been shut off and not touching the casualty.
- Do not approach the casualty until it is safe to do so and all hazards have been eliminated.
- Call for help immediately if the accident has been caused by a high voltage or where lightning has been the source.
- Unless the individual is in imminent danger, DO NOT MOVE.
- Priority is to treat shock, loss of consciousness and potential risk of respiratory arrest before treating wounds
- Begin CPR if the person shows no signs of circulation, such as breathing, coughing or movement.
- Try to prevent the injured person from becoming chilled.
- Apply a bandage. Cover any burned areas with a sterile gauze bandage, if available, or a clean cloth. Don't use a blanket or towel, because loose fibres can stick to the burns.
- Continue to assess until emergency services arrive.



BREAKS/FRACTURES AND SPRAINS

Breaks and sprains are very common injuries both in and outside the work place. According to HSE statistics (2014/15), falls, slips & trips, combined, account for more than a third (36%) of employee injuries. They accounted for nearly six in ten specified injuries (59%) and almost three in ten (29%) over-seven-day injuries to employees (RIDDOR).

It is difficult to differentiate a broken bone from a sprain, unless the limb is a very unusual shape or in an awkward position or in more serious cases where the bone is protruding through the skin and exposed (known as open compound fracture). Otherwise diagnosis can only be confirmed with an x-ray.

Signs and Symptoms of a sprain injury:

A sprain is an injury where the ligament has been twisted or torn, normally caused by sudden movement or abnormal twisting of the joint. Should you suspect someone has sustained a sprain injury, there are three key symptoms to look for:

1. Pain and tenderness around the area
2. Difficulty to apply pressure or limited ROM (range of movement).
3. Swelling and bruising

Broken (Fractured) bones are more serious as there is a risk of the casualty going into shock. For adults and where bones are fully grown, a significant amount of force is required to sustain a break.