Siyazama
Professional Management Services (Pty) Ltd
VAT No. 4410272175
Reg. No. 2010/019934/07

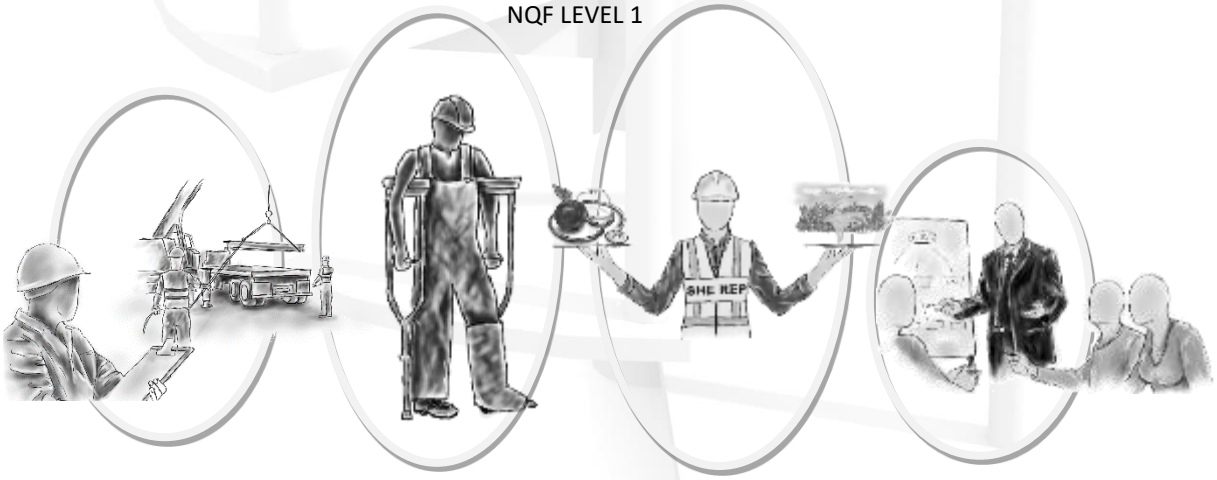
Physical Address: 85 Bank Street, Nigel 1490
Postal Address: P.O. Box 227, Nigel 1490
Tel: +27 11 814 1417
E-mail: info@siyazama-training.co.za
Website: siyazama-training.co.za

PERFORM BASIC LIFE SUPPORT AND FIRST AID PROCEDURES

Learner Handbook

US 119567 CREDITS: 5

NQF LEVEL 1



Contents

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

REGISTERED UNIT STANDARD:

Perform basic life support and first aid procedures

SAQA US ID	UNIT STANDARD TITLE			
119567	Perform basic life support and first aid procedures			
ORIGINATOR				
SGB Ancillary Health Care				
PRIMARY OR DELEGATED QUALITY ASSURANCE FUNCTIONARY				
-				
FIELD			**SUBFIELD**	
Field 09 - Health Sciences and Social Services			Curative Health	
ABET BAND	**UNIT STANDARD TYPE**	**PRE-2009 NQF LEVEL**	**NQF LEVEL**	**CREDITS**
Undefined	Regular	Level 1	NQF Level 01	5
REGISTRATION STATUS		**REGISTRATION START DATE**	**REGISTRATION END DATE**	**SAQA DECISION NUMBER**
Reregistered		2018-07-01	2023-06-30	SAQA 06120/18
LAST DATE FOR ENROLMENT		**LAST DATE FOR ACHIEVEMENT**		
2024-06-30		2027-06-30		

In all of the tables in this document, both the pre-2009 NQF Level and the NQF Level is shown. In the text (purpose statements, qualification rules, etc), any references to NQF Levels are to the pre-2009 levels unless specifically stated otherwise.

This unit standard replaces:

US ID	Unit Standard Title	Pre-2009 NQF Level	NQF Level	Credits	Replacement Status
9823	Perform basic life support and/or first aid procedures in emergencies	Level 1	NQF Level 01	5	Complete
116509	Apply primary emergency life support	Level 1	NQF Level 01	2	Complete
116511	Carry out basic first aid treatment in the workplace	Level 1	NQF Level 01	1	Complete

PURPOSE OF THE UNIT STANDARD

This unit standard is for persons required to assess the emergency situation and providing basic Life Support and basic First Aid in order to stabilise patients prior to transfer to the emergency services.

People credited with this unit standard are able to:
- Demonstrate an understanding of emergency scene management
- Demonstrate an understanding of elementary anatomy and physiology
- Assess an emergency situation
- Apply First Aid procedures to the life-threatening situation
- Treat common injuries

LEARNING ASSUMED TO BE IN PLACE AND RECOGNITION OF PRIOR LEARNING

- Communication at ABET level 3
- Mathematical Literacy at ABET level 3

UNIT STANDARD RANGE

- The recognition and management of a range of emergencies according to the prescribed protocols.
- Rendering basic First Aid to the community even if the required resources have to be improvised.

Specific Outcomes and Assessment Criteria:

SPECIFIC OUTCOME 1

Demonstrate an understanding of emergency scene management.

ASSESSMENT CRITERIA

ASSESSMENT CRITERION 1

Maintenance of personal safety is explained in terms of preventing injuries to self and infectious diseases.

ASSESSMENT CRITERION 2

Methods of safeguarding the emergency scene are explained in accordance with relevant practices and legislation.

ASSESSMENT CRITERION 3

Methods of safeguarding the injured person are explained in accordance with relevant practices and legislation.

ASSESSMENT CRITERION 4

The medico-legal implications of rendering First Aid are explained in terms of relevant legislation.

SPECIFIC OUTCOME 2

Demonstrate an understanding of elementary anatomy and physiology.

ASSESSMENT CRITERIA

ASSESSMENT CRITERION 1

The different systems of the human body are described in terms of their structure and function.

ASSESSMENT CRITERION 2

The manner in which the systems relate to each other is explained in accordance with basic medical science.

ASSESSMENT CRITERION 3

The way in which each system operates is explained in accordance with basic medical science.

SPECIFIC OUTCOME 3

Assess an emergency situation.

ASSESSMENT CRITERIA

ASSESSMENT CRITERION 1

The emergency situation is assessed in terms of priority treatments.

ASSESSMENT CRITERION 2

The cause of the emergency is identified in terms of main contributing factors.

ASSESSMENT CRITERION 3

The type of injury is identified in terms of broad classifications.

ASSESSMENT CRITERION RANGE

Fractures, burns, lacerations, difficulty with breathing, severe haemorrhage, head injuries, spinal injuries, level of consciousness, strains and sprains.

ASSESSMENT CRITERION 4

The situation is assessed in terms of the type of assistance required.

SPECIFIC OUTCOME 4

Apply First Aid procedures to the life-threatening situation.

OUTCOME RANGE

Cardio-Pulmonary (CP) arrest; cessation of breathing; severe haemorrhage.

ASSESSMENT CRITERIA

ASSESSMENT CRITERION 1

First Aid treatment applied is appropriate to the situation and the prevention of complications.

ASSESSMENT CRITERION 2

Equipment that is not readily available is improvised in terms of the First Aid procedure required.

ASSESSMENT CRITERION 3

Universal precautions are taken which are appropriate in terms of preventing infection.

ASSESSMENT CRITERION 4

First Aid is applied in accordance with current practice.

ASSESSMENT CRITERION 5

Cardio-Pulmonary Resuscitation (CPR) and Artificial Respiration (AR) is performed in accordance with accepted procedures.

ASSESSMENT CRITERION 6

Referral to medical assistance is done in accordance with the specific needs of the casualty.

SPECIFIC OUTCOME 5

Treat common injuries.

ASSESSMENT CRITERIA

ASSESSMENT CRITERION 1

Different types of injuries and conditions are identified and described in terms of their severity, cause and possible treatment.

ASSESSMENT CRITERION 2

Universal precautions taken are appropriate in terms of preventing infection.

ASSESSMENT CRITERION 3

Equipment that is not readily available is improvised in terms of the First Aid procedure required.

ASSESSMENT CRITERION 4

Referral to medical assistance is in accordance with the specific needs of the casualty.

ASSESSMENT CRITERION 5

Follow-up care is provided in accordance with the specific needs of the casualty.

UNIT STANDARD ACCREDITATION AND MODERATION OPTIONS

 Anyone assessing a learner against this unit standard must be registered as an assessor with the relevant ETQA the relevant ETQA or with an ETQA that has a memorandum of understanding with the relevant ETQA.
 Any institution offering learning that will enable achievement of this unit standard must be accredited as a provider through the relevant ETQA the relevant ETQA or with an ETQA that has a memorandum of understanding with the relevant ETQA.
 Moderation of assessment will be overseen by the relevant ETQA the relevant ETQA or with an ETQA that has a memorandum of understanding with the relevant ETQA, according to the moderation guidelines in the relevant qualification and the agreed ETQA procedures.

UNIT STANDARD ESSENTIAL EMBEDDED KNOWLEDGE

The following embedded knowledge is addressed in an integrated way in the unit standard:

1. Names & functions of:
 Anatomy and physiology of the human body
 Primary and secondary examinations
 Scope of practice, consent, recording

2. Attributes, descriptions, characteristics & properties:
 Confidence attained through repeated practical applications
 Willingness to assist in emergency situations

3. Sensory cues:
 Effective diagnosis and treatment and safety of the accident scene and bystanders

4. Purpose of:
 Precautionary measures for blood and body fluids
 Specific equipment and training aids
 Specific treatment

5. Events, causes and effects, implications:
 Events relating to injury mechanisms
 Safety requirements relating to the situation
 Transportation of patients, services available and cost implications

6. Categories:
 Adults, children and infants
 Sick or injured
 Emergency situations
 Disaster situations

7. Procedures and techniques:
 Evaluation of the patient's condition and severity of injuries e.g. critical, stable, level of consciousness etc
 Basic communication skills

8. Regulations, legislation, agreements, policies, standards:
 Standards set according to legislation as per the Occupational Health and Safety Act and other related legislation and policies

9. Theory, rules, principles, laws:
 Interdependence of the various systems of the body
 Specific treatments

10. Relationships, systems:
 Family, community, colleagues
 Emergency and disaster services

UNIT STANDARD DEVELOPMENTAL OUTCOME

N/A

UNIT STANDARD LINKAGES

N/A

Critical Cross-field Outcomes (CCFO):

UNIT STANDARD CCFO IDENTIFYING

Identify and solve problems related to the prevention of complications with regard to injuries and mechanisms of injuries sustained, treatment to be provided, improvisation where equipment is unavailable and referral systems.

UNIT STANDARD CCFO WORKING

Work effectively with others as part of a team, including other health workers including casualty and other referral services, emergency services including Fire and Ambulance and disaster services.

UNIT STANDARD CCFO ORGANISING

Organise and manage oneself and ones activities responsibly and effectively in a life support context.

UNIT STANDARD CCFO COLLECTING

Collect analyse organise and evaluate information about clients, family and community with regard to signs and symptoms and make a correct diagnosis.

UNIT STANDARD CCFO COMMUNICATING

Communicate effectively with other health workers including casualty and other referral services, emergency services including Fire and Ambulance and disaster services.

UNIT STANDARD CCFO SCIENCE

Use science and technology effectively with regard to information and communication systems and the correct use of available equipment.

UNIT STANDARD CCFO DEMONSTRATING

Demonstrate an understanding of the world as a set of related systems with regard to community and community structures in managing emergency situations.

UNIT STANDARD ASSESSOR CRITERIA

N/A

REREGISTRATION HISTORY

As per the SAQA Board decision/s at that time, this unit standard was Reregistered in 2012; 2015.

UNIT STANDARD NOTES

 This unit standard replaces unit standard 116509, "Apply primary emergency life support", Level 1, 2 credits.
 This unit standard replaces unit standard 9823, "Perform basic life support and first aid procedures", Level 1, 5 credits.
 This unit standard replaces unit standard 116511, “Carry out basic first aid treatment in the workplace", Level 1, 1 credit.

Supplementary information:
Specified requirements:
Legal:
 Work within the guidelines of the scope of practise of the ancillary health worker

Site specific:
By utilising their acquired skills the critical stages of treatment, e.g. 4-6 minutes for AR and CPR, immediate response for haemorrhage and the golden 6 hours for emergency treatment will be fully maximised, thus preventing further complications of emergencies and injuries.

Credit justification:

Total hours required by the learner to achieve the required outcomes:
Activity: Hours
Classroom learning: 20
On-the-job learning: 20
Self-directed learning: 5
Coaching required: 5
Other: 5
Total: 50

Credits achieved: 5

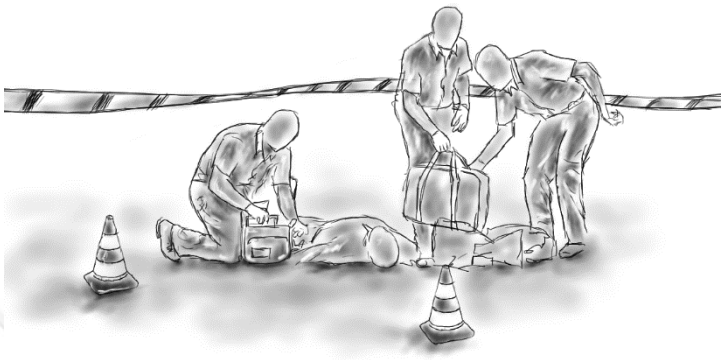
MODULE ONE: AN INTRODUCTION TO BASIC LIFE SUPPORT IN THE WORKPLACE

Definition of first aid

- First aid, also known as primary emergency care, is the emergency treatment given to injured or ill persons while waiting for advanced assistance

The first aider

- A First Aider is a person that has been trained in an approved and accredited training institution and has been found competent in both theory and practical.



- A First Aider should be able to:
- Apply the objectives of First Aid
- Promote healthy lifestyle
- Promote safe working practices to prevent injuries

Objectives of first aid

- The following are the main objectives of first aid.

1. **Preserve life**

   This objective can be achieved by ensuring that breathing, circulation is restored and severe bleeding is treated.

2. **Prevents the condition from worsening/ Further injuries**
   - Treatment of bleeding
   - Treatment of fractures
   - Treatment of shock

   Conduct Primary Management/ Survey.

3. **Promote recovery:**
   - Minimize discomfort of a patient by placing them in recovery position which is suitable for that injury
   - Conduct Secondary Management/ Survey

Legal Aspects of Rendering First Aid

- The Occupational health and safety act 85 of 1993, under General Safety Regulation 3 (a) i.e. 'that employer must provide first aid equipment according to the risk in the workplace'

According To the regulation, 'taking into account:

- The type of injuries that are likely to occur at the workplace,
- The nature of the activities performed and
- The number of employees employed.

The employer shall ensure that the first aid box/ bag contains suitable first aid equipment which includes, at least, the equipment listed below:

Contents of the First Aid Box

ITEM	DESCRIPTION
Item 1	Wound Cleaner / Antiseptic (100ml)
Item 2	Swabs for cleaning wounds
Item 3	Cotton wool for padding
Item 4	Sterile gauze

Item 5	1 pair of forceps
Item 6	1 pair of scissors, minimum size 100mm
Item 7	1 set of safety pins
Item 8	4 triangular bandages
Item 9	4 roller bandages (75mm x 5m)
Item 10	4 roller bandages (size 100mm x 5m)
Item 11	1 roll of elastic adhesive (25mm x 3m)
Item 12	1 Non-allergenic adhesive strip (25mm x 3m)
Item 13	1 Packet of adhesive dressing strips (min 10 of assorted sizes)
Item 14	4 First Aid dressings (75mm x 100mm)
Item 15	4 First Aid Dressings (150mm x 200mm)
Item 16	2 Straight splints
Item 17	2 pairs large and 2 pairs medium latex gloves
Item 18	2 CPR mouth pieces or similar devices
Item 19	Medical Spill Kit (absorbent material, disinfectant, disposable rubber gloves, impervious bag)
Item 20	C-collar
Item 21	Burn shield

TOPIC	**SPECIFICATION**
Appointment of First Aiders [**General safety regulation 3(4)]**	Where more than 10 employees are employed in a workplace the employer needs to appoint a first aider. A copy of the legal appointment must be available in the safety file
Ratio of First Aiders	Shops and offices - one first aider for every 100 employees. Other workplaces - one first aider for every 50 employees.
Competency Requirements	The first aider should be in possession of a valid first aid certificate, issued by a person or organisation approved by the chief inspector for this purpose.
Provision of First Aid Boxes	The regulation states that first aid facilities must be provided ''Where *more than five employees are employed* at a workplace''
Placement of First Aid Boxes	''The employer must provide a first aid box or boxes at or near the workplace, *available and accessible for the treatment* of injured persons at that workplace."
Quantities of First Aid Boxes	The number of boxes required should be determined by the employer, taking the following into account: · the type of injuries that are likely to occur at a workplace, · the nature of the activities performed · the number of employees employed at such workplace
Signage	An employer shall post a prominent notice or sign in a conspicuous place at a workplace, indicating where the first aid box or boxes are kept as well as the name of the person appointed of such first aid box or boxes.

Caring For And Replenishment Of The First Aid Kit.

- Any item used from the first aid box must be recorded and replenished immediately.
- Expiry dates on certain items must be checked regularly
- It is recommended that the first aider be held responsible for maintaining the first aid kit
- All boxes/kits should be clearly marked, the recommended marking being a white cross in a green background (Health and Safety Signs and Signals Regulation 1996)
- A formal register must be provided for the purpose of recording all incidents where first aid has to be provided.
- A name list of competent first aider(s) must be kept near or on the first aid kit. This will assist in identifying who to go to for assistance, as not everyone is allowed to temper with the first aid box/kit.

Additional legal aspects when rendering first aid

Providing first aid is a good thing because as a first aider you are covered under the reasonable man's act/ Good Samaritan law, providing humanity service to your community.

However, when providing first aid you should also consider legal implications should something go wrong?

When you've decided to provide first aid you should consider the following:

- Your safety and the safety of the patient
- Call for help where you cannot commit yourself
- Do not abandon the patient
- Help must be provided until advanced medical help arrives
- Get consent from the patient where possible and declare your level of competency

When applying first aid, consent might not be required in the following conditions:

- Family responsibility:
    - Family member might require medical assistance
- Duty to act:
    - as an appointed First Aider in the workplace it is always expected that you provide medical help

Consent

It is always required that before providing emergency assistance you need to obtain permission from the patient.

Permission which in medical term is consent, can be divided into three categories as follows:

1. **Informed consent:** This is the consent that can be obtained from a patient that is conscious who can respond verbally or by means of objection.
2. **Implied consent:** This type of consent is usually applied to patients that are unconscious, not responding to voice, stimuli or is irrational (disoriented). It is therefore implied that they would have accepted help.
3. **Minor consent:** this type of consent applies to children under the age of 16 years old, where someone is refusing for the child to be treated. The minor consent is obtained from the parents or legal guardian (legal guardian must have proof)

It is important that once having obtained consent you inform them what it is that you want to do

1.1 Responsibility of A First Aider Towards the Patient (Medico-Legal Implications)

The following are the key responsibilities:

- Restrict the emergency care given to that which was covered in the training you received. Do not change the procedures you were taught and do not administer any form of medication or treatments that do not fall within the ambit of first aid care.
- Maintain a high standard of care provided to your patient by revising the skills that you have learnt and remaining abreast with changes
- Avoid repercussions of negligence that can arise due to your omission of a step that you were taught or by commission i.e. doing something that was not in the procedure taught
- All people have a right to confidentiality and a right to their physical possessions that must be respected by the first aider. All assessments made should be documented and these records handed over to the qualified medical personnel when they arrive and take over the management of the patient

a) <u>Reasonable Man's Act</u>

The Reasonable Man's Act covers the first Aider to a certain degree in the event that someone is trying to sue you as a first aider. Implying that the court measures your actions another person of the same level of training and experience as you (first aider) and place them in the scenario you were in and asked what they would have done. Should that person answer in the same action as you, the charges will be dropped.

b) <u>Patient Rights</u>

According to the South African Constitution every patient has the right to patient/medical care. In the same breath, the patient also has the right to refuse care

c) Patient Confidentiality

As a first aider, you are not allowed to divulge any patient information to any other person, except the person to whom will be taking over the care of the patient such as the ambulance crew, hospital staff or doctor. Breaking the patient confidentiality clause is seen as an intentional invasion of a person's privacy and there are laws in place against confidentiality breeches.

d) Patient Abandonment

As soon as you are treating the patient, you may not leave the patient alone or unattended, as this will be seen as patient abandonment. Patient must be handed over to the same or higher qualified medical person.

KEY LEARNING POINTS

- ✓ **First Aid is any help rendered to any medical or trauma patient in the workplace**
- ✓ **Employees are trained to conduct first aid to others**
- ✓ **First aider must ensure the safety of him/herself and that of the casualty**
- ✓ **The main aim of fist aid measures is to ensure the patient gets better**
- ✓ **There are several legal to consider when managing first aid at work**
- ✓ **The first aider must be competent for the level of first aid to be rendered**
- ✓ **The first aid kit must contain a minimum number of components**
- ✓ **With COVID-19 employers and employees must take extra precautions**
- ✓ **In some cases, permission must be sought from the casualty before rendering first aid**

MODULE TWO: HUMAN ANATOMY AND PHYSIOLOGY

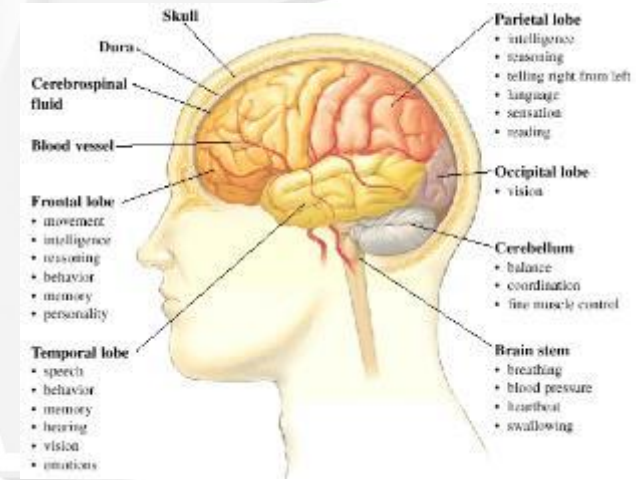
SECTION ONE (HUMAN ANATOMY AND PHYSIOLOGY)

What is human anatomy and physiology?

Human anatomy refers to the various part of the human body from head to toe. These can be external or internal. Human physiology refers to how the body functionsThere are ten (10) anatomical systems, with some more important to first aiders than others.

The most important systems are the following:

- the central nervous system
- the cardiovascular system
- the respiratory system



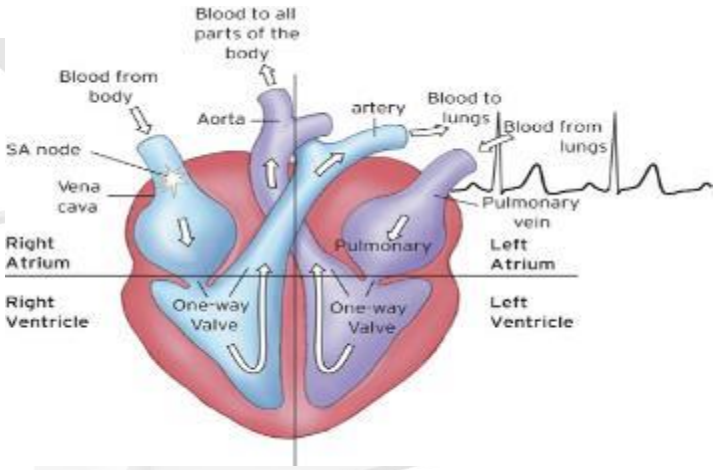
2.1 The central nervous system

- The Central Nervous System comprises the brain and spinal cord.
- This is the control center for all functions of the body and is the most complex of all body systems.
- The brain regulates all body functions, including the respiratory and cardiovascular systems.
- It is easy to see how damage to the central nervous system (e.g.: a spinal cord injury) can have disastrous effects to body functions.
- The motor and sensory nerves, which involve movement, are known as the Peripheral Nervous System, and these function as directed by the brain. Some peripheral nerves function without conscious thought, and these are known as autonomic nerves.
- Breathing is a function that is attributable to these nerves.

Functions of Central Nervous System

- To detect changes and feel sensation
- To initiate appropriate response to change
- To organize information for immediate use and store it for future us

2.2 The cardiovascular system



The cardiovascular system also known as the circulatory system consists of three main elements

1. The heart
2. Blood vessels (arteries, veins, and capillaries)
3. Blood

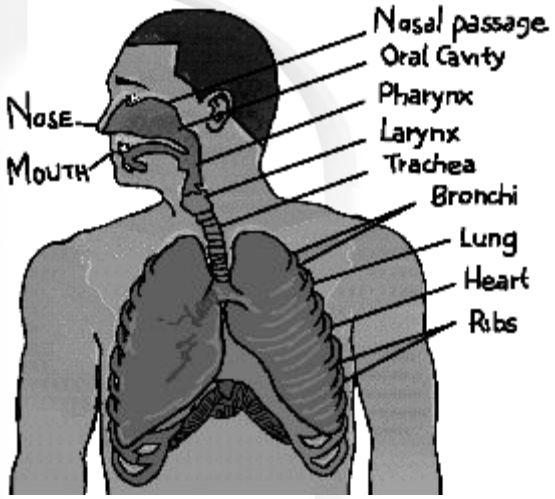
The function of this system is to transport blood to the body

Function of blood in the human body

- Transport oxygen to the body
- Transport nutrients to the body
- Transport waste and carbon dioxide away from tissues
- Regulate body temperature
- Protection of the body against foreign substances

- As the heart pumps blood a pulse beat can be felt at various locations in the body, and each pulse beat corresponds to one heartbeat.
- The heart rate of the average adult at rest is between 60 to 80 beats per minute, depending on age, medical conditions, and general fitness.
- The most accessible pulse points are the carotid (neck) and radial (wrist) arteries.
- A working knowledge of the locations of these pulse points is important for the first aid provider. However, finding a pulse can sometimes be extremely difficult, and looking for other signs of circulation, such as skin color, warmth, movement, or coughing is essential.

2.3 The respiratory system (Breathing)



This system is the one that facilitates breathing in the human body

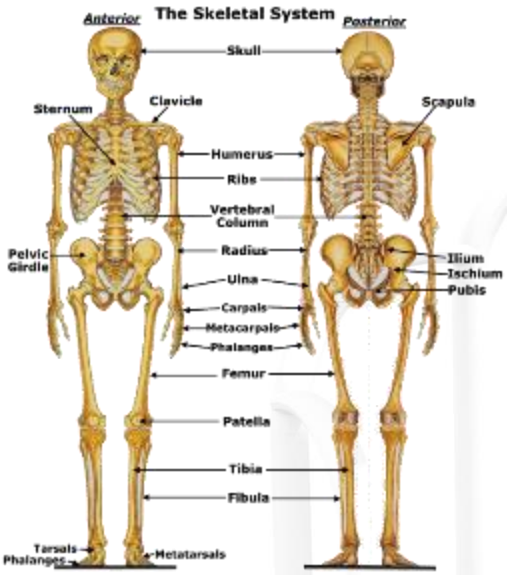
It consists of three main elements

1. Lungs
2. Bronchial tubes
3. Alveoli
4. Trachea
5. diaphragm

- This system is composed of the airway (mouth, nose, trachea, larynx, bronchi, and bronchioles) and the lungs (including the small air sacs called alveoli).
- The function of the respiratory system is to provide oxygen to the blood and take away the waste product called carbon dioxide.
- Oxygen is extracted from the air that is inhaled via the airway and is passed into the blood stream through the membranes of the lungs. For the first aid provider, the maintenance of a casualty's airway is of primary importance.

2.4 The Skeletal System

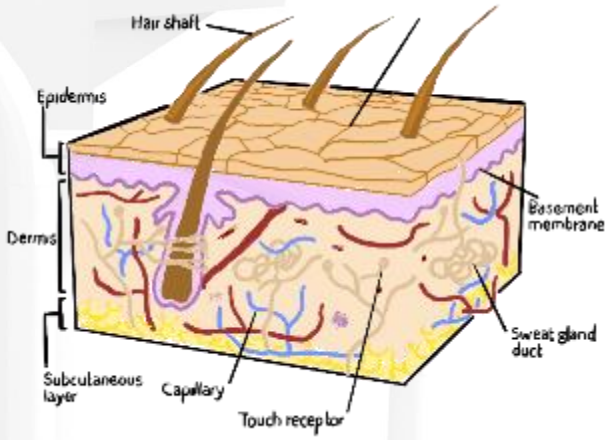
Bones are hard, dense connective tissue that forms most of the human skeleton, which is the support structure of the body. In the areas of the skeleton where bones move (for example, the ribcage and joints), cartilage, a semi-rigid form of connective tissue, provides flexibility and smooth surfaces for movement. The skeletal system is the body system composed of bones and cartilage and performs the following critical functions for the human body:



- supports the body
- provides us with a framework
- facilitates movement
- protects internal organs
- produces blood cells
- stores and releases minerals and fat

2.5 The integumentary system (The skin and its functions)

- This is the system that includes skin, hair, finger and toenails. Their pigmentation (color) and growth are linked to the endocrine system.
- The skin is the body's largest organ and plays an important role in protecting the body from infections.
- In addition, the skin performs a number of other functions such as acting as a shield against injury and keeping body fluids in.
- The skin is made from tough, elastic fibers which can stretch without tearing easily.

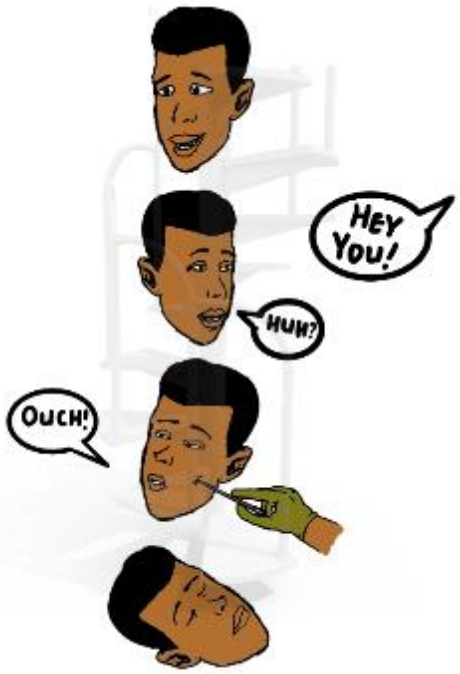


SECTION TWO (VITAL SIGNS AND TRIAGE)

Vital Signs

- As part of anatomy and physiology of a human body, it is particularly important that we know what vital signs are and what the importance of monitoring the vital signs is.
- Vital signs help you keep a continuous check on the patient.
- They are a measure of a person's condition.
- We use them to determine a casualty's condition so that we can render first aid

VITAL SIGN	OBJECETIVE FOR CHECKING	WHAT DO I CHECK FOR?
Level of consciousness	The situation will be different from patient to patient.	AVPU ALERT VERBAL STIMULI

	A patient who is alert is one who is well orientated, he/she is aware of the surroundings. The verbal stimuli patient would respond to voice and pain stimuli patient would then respond to pain(touch). The unresponsive patient however, does not respond to any of the above mentioned. This does not mean that the patient is dead, simply means the patient might be unconscious.	PAIN STIMULI UNRESPONSIVE
Temperature 	In order to check the skin temperature, you will need to touch the patient, either on the forehead or cheeks, with your backhand. We use our backhand because there's a lot of heat from the forehand. Normal body temperature is 37°C. **NB: under COVID-19 employers must give first aiders thermometers to avoid physical contact**	Too Hot: Could be environmental condition, or it could be fever Too Cold: Could be environmental condition or a sign of shock.
Pupil of the eye 	There are three abnormal phases which the pupil can undergo, constricted, and dilated and unequal. Any one of the three phases will indicate for you as a first aider, what the patient could be suffering from.	Unequal: One pupil will be bigger than the other which indicates head injury or stroke Constricted: Both pupil sizes went smaller. This could indicate a bright light, drug overdose or poisoning. Dilated: Indicates Darkness, head injury and shock, also bear in mind that dead people's pupils dilate.

Skin Colour	Purpose of doing this exercise is so that we can determine what the patient could be suffering from. There are five colours in total that will assist you in monitoring the patient. See column on right,	Pink: The colour pink will indicate to you that the patient is well and healthy. Red: Caused by extreme heat, poisoning or fever. Too White: A sign of server blood loss and/or shock. Bluish: Caused by difficulty/lack of breathing. Simply means that there is not enough oxygen in the body. Yellow: Cause by liver disease, mainly jaundice.
 **Pulse**	When assessing a pulse, you check for the heartbeat, which is showing you that there is circulation of the blood.	Rate: Adult is 60-80 bpm Child is 80-100 bpm Infant is 100-120 bpm
Breathing	Breathing is essential for everyone to stay alive, as it supplies us with the oxygen that we need in our bodies.	Rate: Normal Breaths for an adult = 12-20 per minute Normal breath for a child=20-30 per minute Normal breath for an infant=30-60 per minute

Triage

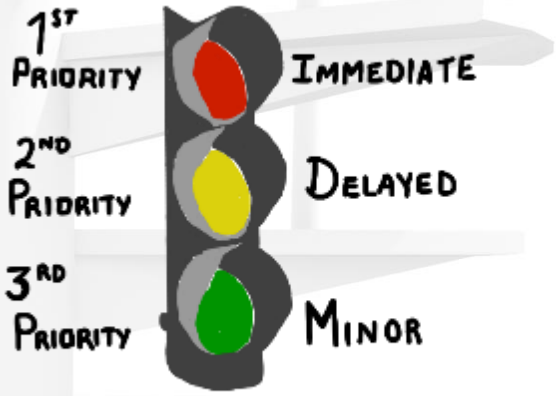
- Triage is the sorting of multiple patients, into order of priority, based on the severity of their condition, whether injured or ill.
- When you have more than one patient, it is always important that you don't just treat the first patient you find, but rather to TRIAGE your patients, by assessing them, to determine who will need assistance first, in comparison to the other, based on your findings when assessing.

Methods of using triage

Triage can be performed rapidly by assessing the following:

- Ability to walk
- Ability to talk

If the patient is able to talk back and answer questions, it means that the airway is open and not obstructed.
Therefore, there is no risk of the patient losing or running out of oxygen, because as it stands, the very patient is using that oxygen to talk.



Four Categories OF Triage

P1
P2
P3
P4

Category	Definition	Treatment	Examples
P1	These are life threatening conditions	Requires immediate treatment	Severe Bleeding Lack Of heartbeat Lack of breathing
P2	These patients are suffering from extreme pain	Urgent treatment required but it can wait for the P1.	Broken bones, insect bites
P3	Minor Injuries	Delayed	Sprained ankle, small cuts, bruises.
P4	Dead	Ignore	Head missing

Key Learning points

- **Human anatomy refers to the structure of the human body**
- **Human physiology refers it the functions of the human organs such as the brain and the heart**
- **There are several human physiological systems**
- **The key human systems for a fist aider include the respiratory system, the nervous system as well as the circulatory system also called the cardiovascular system**
- **When human body systems are not working well one can see this through vital signs**
- **A first aider must check for vital signs like temperature, pupil of the eye. Level of consciousness, pulse as well as rate of breathing**
- **At an emergency, a first aider must sort his/her patients according to their conditions and start helping those with life threatening conditions first. This is what is called triage**

MODULE THREE: MANAGING THE EMERGENCY SCENE (PRIMARY EXAMINATION AND TREATMENT)

SECTION ONE (THE EMERGENCY SCENE)

3.1. Primary survey (examination) of the emergency scene

- When arriving at a scene of an emergency your priority is to secure the area in which the emergency has happened so as to ensure the safety of yourself, the patient and any bystanders.
- Failure to do this effectively will result in additional injured people that require emergency assistance.
- This is achieved by applying **DRCAB or DRABC,** lets understand what this means:

Primary survey (new approach)

Danger
Response
Circulation
Airway
Breathing

Primary survey (old approach)

Danger
Response
Airways
Breathing
Circulation

Danger(hazards)

Dangers to look out for include:

- Fire or the possibility thereof
- Smoke or toxic fumes
- Potential electrical contact
- Unstable structures
- Working in elevated positions that add a risk of falling from heights
- Traffic
- Dangerous or unpredictable animals

Response

Once you have secured the area apply the DR ABC or CAB approach

- Danger
- Response
- Airway
- Breathing
- Circulation

OR

- Danger
- Response
- Circulation
- Airway
- Breathing

A more detailed Primary survey is detailed in the table below

Hazard (SSSS)
History
Hello (check for level of consciousness… LOC or AVPU)
Help
Airway opening
Breathing
Circulation

Hazard (SSSS)
History
Hello (LOC or AVPU)
Help
Circulation
Airway
Breathing

Important things to note or do during primary survey

- Recognise the emergency
- Take charge and delegate
- Gather information
- Alert EMS
- Support casualty until arrival of EMS
- Hand over casualty to EMS

SECTION TWO (FIRST AID FOR BLOCKED AIRWAY IN ADULTS, CHILDREN AND INFANTS)

3.2 Choking (Airway Obstruction)

Choking is the obstruction of the flow of air from the environment into the lungs. Choking prevents breathing, and can be partial or complete, with partial choking allowing some, although inadequate, flow of air into the lungs. Prolonged or complete choking results in asphyxia which leads to anoxia and is potentially fatal. Oxygen stored in the blood and lungs keep the victim alive for several minutes after breathing is stopped completely

Signs And Symptoms:

- Not able to speak
- Patient uses distress signal
- No breath (look, listen & feel)
- Extreme breathing efforts
- Blue coloration to lips, tongue, fingernails or earlobes
- Anxiety

a) *Back Blows*

Adults:

A rapid series of 5 blows with the heel of the hand over the spine and between the shoulder blades can be delivered with the patient, standing, sitting, or lying down.

Infants:

I. If chest does not rise with each artificial breath, hold infant face down over your arm, with your hand supporting the jaw.
II. Rest your arm on your thigh, with the infant's head held down.
III. Slap the infant's back firmly between the shoulder blades with the heel of your hand ... up to 5 times.
IV. If object not dislodged, turn infant face up onto your other arm head supported in the palm of the hand.
V. Perform up to 5 chest thrusts with your fingers in the midline just below the infant's nipples.
VI. Remove object carefully under vision.
VII. Look, listen and feel for breathing.
VIII. If not breathing, give two slow breaths and check pulse
IX. Call the emergency services and repeat the sequence or start CPR if necessary.

b) Abdominal thrusts

Adults (Conscious Adult)

I. Position yourself behind the victim.
II. Hold the victim by wrapping your hands around his abdomen. Have the victim to lean forward slightly.
III. With your one hand make a tight fist. Place it slightly above the patient's navel.
IV. Now hold that fist with the other hand tightly.
V. Press hard against the patient's abdomen using the tightly grasped fist; with upward thrusts as if you are lifting the person.
VI. In this way, perform five abdominal thrusts. If still foreign object is not dislodged, you can repeat the manoeuvre.

Adults (unconscious Adult)

To perform abdominal thrusts (Heimlich manoeuvre) on someone else:

- **Stand behind the person.** Place one foot slightly in front of the other for balance. Wrap your arms around the waist. Tip the person forward slightly. If a child is choking, kneel behind the child.
- **Make a fist with one hand.** Position it slightly above the person's navel.
- **Grasp the fist with the other hand.** Press hard into the abdomen with a quick, upward thrust — as if trying to lift the person up.
- **Perform between six and 10 abdominal thrusts** until the blockage is dislodged.

SECTION THREE (FIRST IAD FOR LIFE THREATENING SITUATION: AN UNCONCIOUS CASULTY)

3.3 Cardio-Pulmonary Resuscitation – CPR

- There are certain conditions which may cause a persons' heart to stop beating (cardiac arrest).
- One of the most common causes of the heart stopping in an adult; is a 'heart attack'.
- A patient, who is breathing adequately, should have a heartbeat.
- For this reason, you should assess breathing in an unconscious patient, before assessing the patient for signs of circulation.
- To assess a patient for signs of circulation, you should look to see if the patient is coughing, moving, or breathing adequately.
- CPR is a process whereby you administer rescue breathing to fill the lungs with air, and chest compressions to press the heart, thereby circulating blood to the brain.
- By doing CPR 100% you only supply the body with 33% of the normal output.
- CPR is sufficient in buying valuable time for the patient until more advanced help arrives.
- It is thus particularly important to practice your CPR skills on a regular basis and **only on an appropriate manikin.**
- CPR need not be started in case of obvious death, such as decapitation or if rigor mortis (the stiffness of death) has set in.

Causes of cardiac arrest include:

- Electrocution
- Drug overdose
- Coronary artery disease
- Injury to the heart
- Trauma
- Loss of too much blood

a) Adult CPR Procedure

CAB CPR

Hazard
History
Hello
Help
Circulation
Airway opening
Breathing

ABC CPR

Hazard
History
Hello
Help
Airway
Breathing
Circulation

When you decide to start **CPR on an adult,** find the correct position for your hands on the lower half of the breast-bone between the nipples.

- Place the heel of one hand on the patients' chest, and interlock the fingers of your other hand above that
- Position your shoulder directly above the patients' chest and straighten both arms
- Start to compress the chest of an adult **30** times at a rate of at least 100 per minute to a depth of **5 cm**

Remember:

- **Push hard**
- **Push fast (rate of at least 100 per minute)**
- **Allow for full recoil between each compression**
- **Minimize interruptions in compression**
- Tilt the patients' head back, and while blocking the nose, give two effective ventilations with a mouthpiece in place.
- Repeat the process of 30 chest compressions and two effective ventilations until help arrives, or until the patient shows signs of life.
- If a definite pulse is present but no breathing then proceeds to give rescue breaths at a rate of **1** breathe every **5** seconds. Check the pulse every 2 minutes.

b) Child CPR (over 1 year up to 8 years)

Should you have to perform CPR **on a child,** after having used the Hazards, Hello, Help, CAB/ABC approach, find the correct position for your hands on the patients' breastbone.

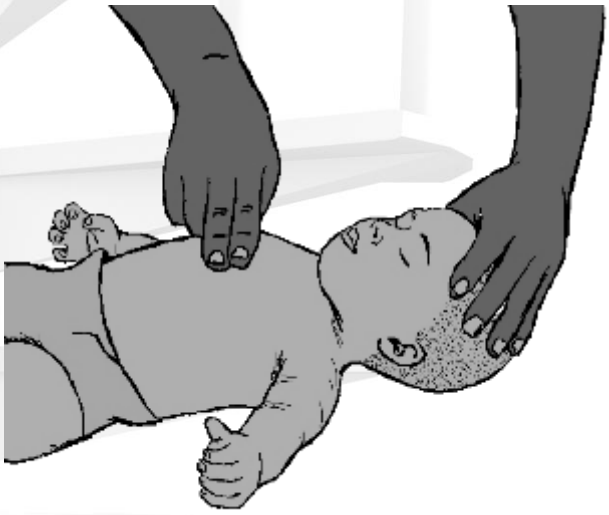
- Use the same hand position as in an adult patient
- **Only one hand is used**
- Place the heel of one hand on the patients' chest, and straighten your arm
- Start to compress the chest of a child **30** times at a rate of at least **100** compressions per minute to a depth of **2-3 cm**

- Tilt the patients head back, and while blocking the nose, give two effective ventilations with a mouthpiece in place
- Continue with this proves for as long as the patient continues to show no signs of circulation, or until help arrives.

- If a definite pulse is present but no breathing
- Then proceed to give rescue breaths at a rate of **1** breath every **3** seconds. Check the pulse every 2 minutes.

c) CPR for an infant (below 1 year)

Should you have to perform CPR **on an infant,** after having used the Hazards, Hello, Help, CAB/ABC approach, find the correct position for your 2 fingers on the patients' breastbone.



- Use the same position as in an adult patient or child compressions
- **ONLY TWO FINGERS ARE USED**
- Place the two fingers on the patients' chest, and compress the chest
- Start to compress the chest of a child **30** times at a rate of at least **100** compressions per minute to a depth of **2-3 cm**
- Tilt the patients head back cover both the mouth and the nose, give two effective (puffs) ventilations.
- Continue with this proves for as long as the patient continues to show no signs of circulation, or until help arrives.
- If a definite pulse is present but no breathing, then proceed to give rescue breaths at a rate of **1** breath every **3** seconds. Check the pulse every 2 minutes.

CONTINUE WITH CPR UNTIL:

a) Your patient is breathing
b) The pulse is back but there is no breathing
c) Too exhausted to continue
d) You are relieved by a qualified person e.g. paramedic or a medical doctor
e) The situation or area becomes too dangerous to continue.
f) Written proof is given that the person is dead

SECTION FOUR (FIRST AID FOR SEVERE EXTERNAL BLEEDING)

Severe bleeding

- Severe internal bleeding is a potentially life-threatening condition.
- While the blood may not be obvious it is still lost from the circulatory system and the casualty is therefore highly likely to go into shock.
- Bleeding can be internal or external
- It's not easy for first aider to treat and manage internal bleeding
- A first aider can manage external bleeding
- Internal bleeding may also cause a build-up of pressure that, in areas such as the skull or around the heart, can cause serious problems, loss of consciousness and, if untreated, lead to death.

The three types of blood vessels:

1. **Arteries** which carry blood away from the heart (oxygenated);
   - **Arterial bleeding** is profuse, may spurt or pump, and is bright red.

2. **Capillaries** which allow the exchange of blood between the arteries and veins.

Capillary bleeding oozes slowly and can be dark or bright red.

3. **Veins** carry the blood back to the heart (deoxygenated);
- **Venous bleeding** flows at a constant rate and is dark red

Signs and symptoms

- Pain and tenderness around the affected area.
- Swelling and/or bruises.
- Signs and symptoms of shock.
- Blood may appear from one of the body's orifices.
- Blood speckled froth at the mouth

Points to note

- Blood clotting takes place in approx. 6 - 8 minutes.
- Slow bleeding over a long time may be as serious as profuse bleeding over a short time.
- Therefore, it is important to control bleeding as fast and effectively as possible to minimise the detrimental effect it could have on the casualty.

Internal Bleeding

- Treat for shock.
- Keep the casualty warm.
- Place him in a comfortable position, preferably lying down with the legs slightly raised.
- Reassure him.
- Treat any external bleeding or bleeding from orifices.
- **Call for an ambulance as soon as possible and explain what has happened**
- Monitor and record the casualty's pulse and breathing rates.
- This information will be useful for the medical staff in determining the extent of the injury.
- Put the casualty in a shock position.
- If the casualty becomes unconscious, place in the recovery position and monitor airway and breathing.
- Be prepared to resuscitate if necessary.

External Bleeding

- This is when blood leaves the human body
- That is, external bleeding can be seen, whereas in internal bleeding, no blood can be seen.

Signs And Symptoms

- Visible (Arterial - bright red and pumping out, Veins - dark red and flowing out, Capillary - red and seeping out)
- Pain
- Shock

VERY IMPORTANT: <u>ALWAYS</u> WEAR GLOVES!!!

- Bleeding must be controlled so that the body can stop the bleeding.
- Bandages and dressings only minimise bleeding and prevent infection.

Management Of External Bleeding (Wound Dressing)

- Regardless how severe, all bleeding can be controlled. If left uncontrolled, bleeding may lead to shock or even death.

- Most bleeding can be stopped before the ambulance arrives at the scene.
- Stop the bleeding

a) STOPPING BLEEDING

1. With your gloves on take a swab or gauze and apply direct pressure on the bleeding part
2. If blood continues to come apply indirect pressure on a part on which bleeding is coming from
3. The other option is to elevate or raise the body limb if possible

b) DIRECT PRESSURE METHOD

Pressure Points for Severe Bleeding

- If severe bleeding does not stop with direct pressure and elevation, apply direct pressure to an artery.
- Use direct pressure on an artery along with elevation and direct pressure on the wound.
- There are specific major arteries in the body where pressure should be placed (see illustration below).
- When you apply pressure to an artery, you stop bleeding by pushing the artery against bone.
- Press down firmly on the artery between the bleeding site and the heart.
- If there is severe bleeding, also apply firm pressure directly to the bleeding site.
- To check if bleeding has stopped, release your fingers slowly from the pressure point, but do not release pressure at the bleeding site. If bleeding continues, continue to apply pressure to the artery.
- Continue until the bleeding stops or until help arrives.
- After bleeding stops, do not continue to apply pressure to an artery for longer than 5 minutes.

Nose Bleeding

- Let the casualty sit down.
- Do not let the casualty raise his/her head.
- Advise the casualty to breathe through the mouth and to pinch the soft part of the nose (**NOSE BRIDGE) OR DO IT YOURSELF**
- Tell the casualty not to swallow any blood but to spit it out, because it may cause nausea and vomiting.
- You can rub the nose bridge with ice wrapped in a gauze
- If the bleeding has not stopped after 30 minutes seek medical help.

Bleeding from the ear

- Put the casualty in a half-sitting position with the head towards the injured side so that any fluid can drain from the ear.
- Cover the ear with a sterile dressing
- Check pulse and breathing rate.
- Treat for shock

Bleeding scalp

- Control the bleeding using direct pressure
- If the casualty is conscious lay, he/she down with the head and shoulders slightly raised.
- Check casualty's vital signs at 10-minute intervals.
- If the casualty becomes unconscious, place him/her in the recovery position.

- If breathing and heartbeat stop, begin resuscitation.
- Remove to hospital.

NB: **The head bandage is not intended to apply direct pressure for the control of severe bleeding.**

SECTION FIVE (WOUNDS AND WOUND DRESSING AT AN EMEREGENCY SCENE)

Wounds And Dressing

- Wound is damage to the living tissues in the body cause by either a sharp object or blunt object.

The different types of wounds.

a. **Abrasion** - Also called a graze or mat, this is caused by transverse action of a foreign object against the skin, and usually does not penetrate below the epidermis
b. **Excoriation** - In common with Abrasion, this is caused by mechanical destruction of the skin, although it usually has an underlying medical cause
c. **Laceration** - Irregular wound caused by blunt impact to soft tissue overlying hard tissue or tearing.
d. **Incision** - A clean 'surgical' wound, caused by a sharp object, such as a knife.
e. **Puncture Wound** - Caused by an object penetrated the skin and underlying layers, such as a nail, needle or knife.
f. **Contusion** - Also known as a bruise, this is a blunt trauma damaging tissue under the surface of the skin.
g. **Gunshot wounds** - Caused by a projectile weapon, this may include two external wounds (entry and exit) and a contiguous wound between the two
h. **Amputation** - separation of any part of the extremities from the body.
i. **Evisceration** - protruding intestines or organ, usually abdominal.

The Basic Principles Of Hygiene In Wound Management:

- Use a clean pair of gloves per casualty to prevent cross-contamination.
- Work as cleanly as possible as permitted under circumstances.
- Do not let dressings / gloves lie around and contaminate an emergency scene.
- Wash your hands immediately after rendering first aid.

Dressing A Wound

A dressing is used to cover a wound to assist with control of further bleeding and prevention of further contamination.

There are three types of dressings that should be part of any first aid kit namely adhesive, pressure and gauze dressings.

As it comes in direct contact with the wound it should be:

- sterile or as clean as possible;
- absorbent, to soak up body fluids such as blood or any discharge;
- soft and compressible, so pressure can be distributed over the wound;
- Non-fluffy, so the material will not stick to the wound. **NO** cotton wool.

Bandages And Slings

- The main types of bandages are triangular and roller bandages.
- They are used to:
- Secure the dressing and assist in control of bleeding.
- provide support to a limb or joint;
- Hold splints in place and immobilise parts of the body.

If a bandage is applied, it should:

- Cover the whole dressing and do not remove once it is in place.
- If it becomes saturated with blood, apply another one on top so that clotting that has already taken place will not be disturbed.
- There should always be a pulse distal to the site of the bandage.
- Where possible, the nail beds must be kept uncovered to enable detection of inadequate distal circulation.

- Should signs of inadequate distal circulation be visible as observed from skin temperature and colour, loosen the bandage and re-apply.

Commercial dressings, bandages and slings can be replaced with improvisations:

- Dressings : napkin, clean cloth, sanitary pad, towels.
- Bandages : strips of material, ties, scarves, shoe laces;
- Slings : tie, rope; belt, scarves.

Burn wounds

The skin is the most affected by burns.

Respiratory problems may develop from the inhalation of smoke and poisonous fumes.

Signs and symptoms of asphyxia may be present because of burn injuries to the airway.

Shock may develop.

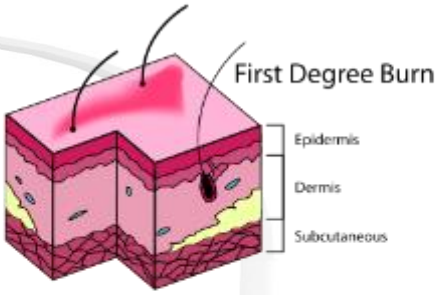
Type Of Burns

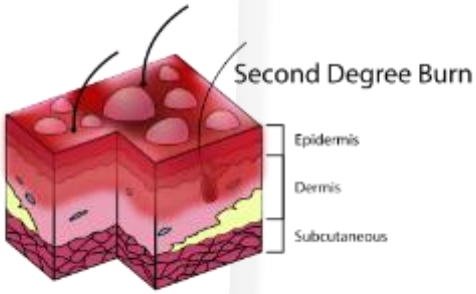
- Thermal (wet or dry)
- Chemicals (acids or alkali)
- Electrical (electricity, lightning)
- Radiation (sun, x-rays)
- Light (welding, snow-blindness

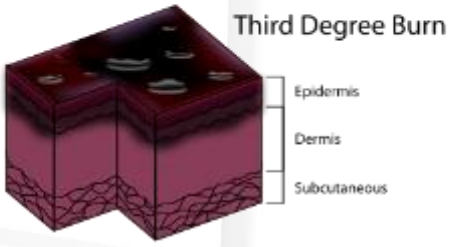
Classification of burns wounds

The following are the classes of burns.

1) **First-degree (superficial) burns**. First-degree burns affect only the epidermis, or outer layer of skin. The burn site is red, painful, dry, and with no blisters. Mild sunburn is an example. Long-term tissue damage is rare and usually consists of an increase or decrease in the skin colour.
2) **Second-degree (partial thickness) burns**. Second-degree burns involve the epidermis and part of the dermis layer of skin. The burn site appears red, blistered, and may be swollen and painful.
3) **Third-degree (full thickness) burns**. Third-degree burns destroy the epidermis and dermis and may go into the subcutaneous tissue. The burn site may appear white or charred







A. First Degree Burn

Limited only to the epidermis or outer layer of the skin.

- Limited to the epidermis
- Present with red colour and minimal swelling
- Mild discomfort
- Commonly treated on outpatient basis

B. Second Degree Burns

- Swelling and painful
- Involves the epidermis and superficial portion of the dermis
- Often seen with scalding injuries
- Presents with blister formation and typically blanches with pressure
- Sensitive to light touch or pinprick
- Commonly treated on outpatient basis; heal in 1-3 weeks.

C. Third Degree Burns

- Deep degree burns
- Involves the epidermis and the dermis

- Appears white or poorly vascularised; charred
- Less sensitivity to light touch and pinprick than superficial form
- Extensive time to heal (3-4 weeks)

Treatment Of Burns

- Check safety for yourself!
- Stop the burning process with running water for 15 – 20 minutes!
- Do not put ice directly on the wound, it can cause further damage.
- NEVER put folk medicine on a burn. It will have to be removed at a hospital.
- Remove clothing to evaluate the burn.
- Remove jewellery before the area swells and interferes with blood circulation.
- Cover the wounds, after the cooling process, with wet, preferably sterile, dressings. Use non-fluffy pads to separate burnt fingers and toes.
- Do not break any blisters!
- Electrical burns may have two burn sites and can cause cardiac arrest.
- Chemicals burns: - **chemicals** in the eyes must be flushed for 10 – 15 minutes with running water.
  - **Dry chemicals** must be brushed off and not flushed with water. Cover with dry, preferably sterile dressing.
  - **Wet chemicals** must be flushed with water for 15 -20 minutes. Cover with wet, preferably sterile dressing.
- Monitor the casualty continuously!

Key learning points

- **A first aid emergency requires the first aider to follow procedures**
- **These procedures are called primary survey or examination**
- **The purpose to is to check for any condition that requires immediate attention**
- **In principle the first aider must check for hazards(danger), ask for history and then proceeded to assist if safe to do**
- **The first aider must then check if the casualty is responding**
- **This is then followed by calling for external help**
- **Any emergency condition identified must be Treated by the first aider based on the Triage**
- **The most critical condition that a first aider must administer is CPR**
- **CPR is rendered to person that have no pulse**
- **A person who has a pulse is not always breathing and this is why you can just do what is called rescue breathing**
- **CPR for Adults is done with both hands**
- **CPR for children is done with one hand**
- **CPR for infants is don with only two fingers**
- **There is compression only CPR in which there is no need to give oxygen (ventilation with the mouthpiece, also called mouth to mouth ventilation**
- **There is also CPR done with ventilation and compression**
- **First aiders are recommended to do Compression only CPR if you are sure the casualty has just become unconscious just a while**

- **In cases where you are not sure how long the casualty has been unconscious; it is recommended to do CPR with the two ventilation per cycle**
- **Chocking is when a person‘s airway is blocked by an object and the first aider must administer back blows. Abdominal thrusts and chest thrusts depending on the age or condition of the casualty**
- **Bleeding is a key fist aider role**
- **First aiders must address internal bleeding and external bleeding**
- **Wounds must be dressed correctly and only after stopping bleeding**
- **Burns are of three types, first to third degree and a burns shield or water can be used to manage burns**
- **Nose bleeding and ear bleeding have their own first aid protocols**

MODULE FOUR: SECONDARY EXAMINATION AND OTHER FIRST AID MEASURES

SECTION ONE (SECONDARY EXAMINATION)

What Is Secondary Examination?

- This is the examination for a casualty from head to toe to check for any other conditions not checked during primary examination
- Having discussed primary survey, you have learnt how to do a safe and effective scene survey, and how to treat a patient for life threatening injuries (CAB's).
- Now you manage other less critical, but important factors
- Second

Secondary Survey Consists of the Following Five Steps:

- Taking and recording a full set of vital signs
- Doing a detailed head to toe examination and taking a SAMPLE history
- Treating less serious injuries and shock
- Taking and recording a second set of vital signs within 5 to 10 minutes
- Handing over the patient to EMS with a full report
- A set of **vital signs** should be taken as a **first step** in Secondary Survey.
- The reason for this is to gain continuous, valuable information about the condition of the patient as well as clues about the cause of the patients' condition and possible internal injuries.
- Taking a recording vital signs also warns of the onset of shock so that treatment for shock can be started.

SAMPLE

- **S**igns and Symptoms
- **A**llergies that the patient may have
- **M**edications currently prescribed for the patient.
- **P**ast medical history that is relevant to the situation.
- **L**ast oral intake (When and what did the patient eat last.)
- **E**vents leading up to the emergency

Head-To-Toe Examination

	Vital Sign	**Examples of what to look for**
Head	LOC (AVPU)	DOTS, burns.
Ears		CSF, Battle signs.
Mouth	Breathing (Rate, rhythm, Depth)	Burns, Broken teeth.
Eyes	PEARL	Racoon eyes, Bloodshot, Swelling.
Nose		CSF, Blood, DOTS
Face	Skin colour / temperature	DOTS
Neck		DOTS Distended neck veins Tracheal deviation Subcutaneous emphysema

Shoulders and clavicles		DOTS
Chest		DOTS Abnormal sounds Unequal expansion
Abdomen		DOTS Pain and bruising
Pelvis		DOTS Pain and bruising Bladder failure
Arms + Hands	CSM and pulse	DOTS (Rate, rhythm + strength)
Legs + Feet	CSM	DOTS
Back		Pain and DOTS

The Medic-alert Bracelet or Necklace

Record all information on such a sheet if available or on a separate piece of paper

SECTION TWO (FIRST AID FOR HEAD AND SPINAL INJURIES)

4.1 Head and Spine Injuries

Head Injuries

- Head injuries are common in motor vehicle accidents, contact sports, extreme sports, and brawls.
- A common head and face injury is a nosebleed.
- Certainly, one of the most dangerous complications of a head injury is the possibility of a neck or spine injury, because the head rests upon the neck (cervical spine).
- Thus, head and spine injuries are dealt with together.

Nosebleeds (Epistaxis)

- When the blood vessels within the nose rupture due to various reasons, blood may flow from the nose.
- Blood may even run into the back of the throat and become an airway obstruction or be swallowed.

Treatment

- Keep the patient sitting up with their head forward
- Pinch the patients' nostrils
- Apply a cold pack on the back of the patients' neck
- Release the nostrils and check if the bleeding has stopped each 3 to 5 minutes
- Transport the patient to hospital if bleeding is difficult to stop

Scalp injuries

- Scalp injuries are the most common type of head injuries and may be minor or serious.
- The scalp has a rich supply of blood and may bleed profusely.
- Check for signs of an underlying skull fracture

Treatment

- Support the patients' head and cervical spine
- Control bleeding by applying gentle pressure using a ring pad
- Monitor vital signs
- Check for signs of concussion

Concussion

- This is a temporary loss of part of the brains' ability to function.
- Memory vision and even breathing may be affected for a short while.
- No permanent damage results, but a loss of consciousness, even if brief should be considered serious.

a) **Skull fracture**

- A skull fracture is a break or crack in the cranium and may be classified as **open or closed.**
- A skull fracture may leave the brain itself exposed and direct pressure should not be applied to a suspected skull injury.
- Instead a **ring bandage** should be applied so that pressure is applied only around the perimeter of the suspected skull fracture. An impaled object is a sure sign of a skull fracture.
- You should not remove an impaled object, but rather stabilise the object in place with ring pads or bulky dressings.

Signs and symptoms

- Pain and DOTS
- Poor level of consciousness
- CSF (Cerebral-spinal fluid) leaking from the ears and/or the nose
- PEARL affected
- Neck and/or back pain
- Bruising and discoloration behind ears and under eyes (Battle signs)
- Penetrating wound (Impalement)
- Paralysis and shock
- Nausea and vomiting

Treatment

- Manage CAB's
- Cover with sterile dressing
- Immobilise the patients' neck by supporting the head and neck by hand or with a collar
- Keep the patient in the position found.
- Apply direct pressure on the edge of an open skull fracture with a ring pad
- Monitor vital signs

Note

- Do not stop the flow of CSF from ears or nose with plugs
- Do not remove an impaled object rather stabilise with bulky dressings
- Do not clean an open skull fracture

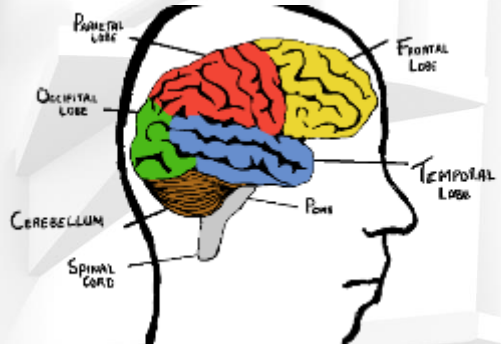
b) Brain Injuries (Compression Injuries)

A brain injury can be a result of:

- A blunt impact (contusion) causing bruising and swelling of the brain
- Bleeding (hematoma) causing a build-up of pressure
- The above will cause pressure **(compression)** on the brain and interfere with normal brain function

Signs and symptoms

- Poor level of Consciousness (AVPU)
- Neck and/or back pain
- Vomiting and nausea
- Vision problems (Double vision)
- Eyes fixed and do not move
- PEARL is affected
- Weakness, loss of balance, paralysis
- Fits
- Patient is combative
- Blood and CSF from the patients' ears and nose
- Memory loss



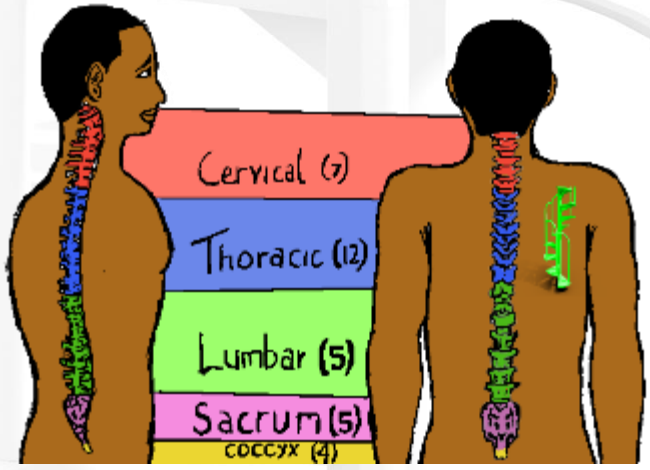
Sections of the Brain

Treatment

- Summons EMS immediately
- Monitor CAB's
- Provide support for the patients' head and neck by manually holding the head and neck and applying a cervical collar
- Treat bleeding as you would an open skull fracture
- Be wary of patient vomiting suddenly
- Treat shock (Neurogenic shock)

Spinal Injuries

- Spinal injuries are to be assumed with all severe accidents because many other parts of the body such as the pelvis, ribcage (thorax) and the skull are attached to the spinal column.
- Fractured vertebrae of the spinal column may do damage to the nerves in the spinal cord, and these could have serious effects such as causing paralysis or even affect a patients' ability to breathe.



Spinal Column

Patients' with suspected neck and spine injuries should only be moved if:

- The patient is completely immobilised with the appropriate equipment, such as spine board and head blocks, by trained personnel
- Conduct Primary Survey and secondary with the patient in their current position.
- The rescuer must evacuate the patient rapidly if there is dangerous impending situation.
- The patient must be left in their current position and turn them using the correct log roll technique

The Log Roll Technique Used To Turn A Patient

- Two or more rescuers should be available to turn the patient.
- Once rescuer stabilizes the head and neck and co-ordinates the log roll.
- The second rescuer kneels next to the patients' side and places the arm furthest from him over the patients' chest.
- He also places the arm nearest him at 90 degrees to the patients' body.
- A third rescuer should hold position himself next to the second rescuer.
- He should then gasp the patients' waist and knees.

- In a co-ordinate effort, the patient should be rolled onto their side as a unit, keeping the head, neck and spine in line with each other.
- The patient should always be rolled towards the rescuers.
- Place the upper elbow and the upper knee of the patient on the ground to prevent the patient from rolling onto his face.
- The patients' head must still be held and stabilized in its new position by the first rescuer.

Signs and Symptoms

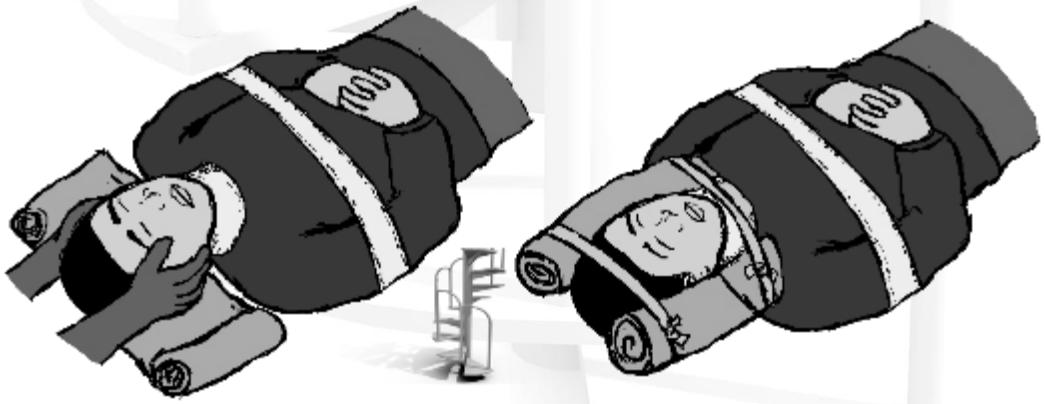
- Loss of sensation or movement in the extremities may not be with all patients
- Pain in the neck and/or back
- Painful movement of arms and legs
- Numbness, tingling, or burning sensation in extremities
- Deformity of neck and back
- Sustained erection (Priapism) in males
- Hands up position or arms crossed
- Breathing with stomach muscles. (Diaphragmatic breathing)
- No apparent symptoms at all

Treatment

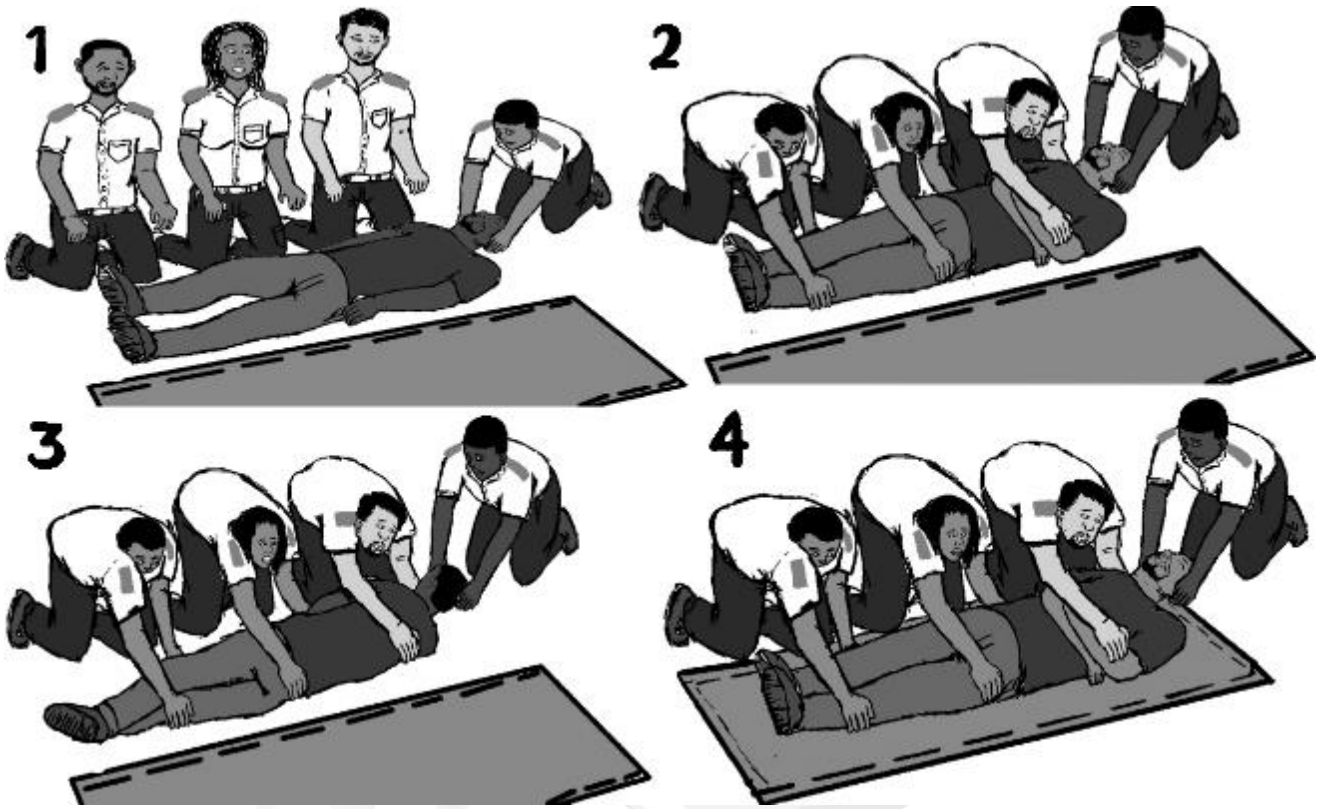
- Summons EMS
- Monitor CAB's
- Tell patient not to move and do not move the patient unnecessarily
- Apply a cervical collar
- Perform full spinal immobilisations if patient must be transported
- Treat symptoms of shock (Neurogenic shock)

Note:

- The cervical collar does not immobilize the head and neck, but only gives added support.
- Always maintain manual support of the head and neck even after a cervical collar has been applied.
- Only once the patients' head is secured between two cushions, may the rescuers hands be taken away.



Blanket Roll



Moving a Victim to a Longboard

4.2 Chest Injuries

- Chest injuries may prove to be dangerous because they can severely affect a patient's ability to breathe and can damage vital underlying organs such as the heart, lungs and large blood vessels within the chest cavity
- A person not wearing a seatbelt in a motor vehicle accident stands a good chance of suffering a chest injury as forward momentum causes the chest to slam up against the steering wheel, or sideways momentum causes the ribcage to be pounded against the structures within a vehicle.

Types of Chest injuries:

- Rib Fractures
- Flail chest
- Impaled objects
- Sucking chest wound
- Blast injuries

a) Rib Fracture

- A **rib fracture** may be because of a blunt impact to the chest (contusion) causing ribs to break.
- Damage to the lungs and underlying organs may also result, adding to the seriousness of the condition.

Signs and symptoms

- Painful breathing
- Bruising of the chest
- DOTS in and around the ribcage
- Unequal movement of the chest wall as the patient breathes indicating flail chest
- Coughing up blood in severe cases

b) Flail Chest (Impaled object)

Flail chest is classified as fractures **of two or more consecutive ribs** fractured in **two or more places** and is characterized by the flail segment moving outwards while the patient breathes out and vice versa.

This is called paradoxical breathing. Flail chest can be caused by blunt trauma (contusion) to the chest and is serious. Suspect possible injuries to underlying organs e.g. the lungs.

This condition can lead to low levels of oxygen in the bloodstream (hypoxia), and its associated signs and symptoms.

Treatment

- Calm and reassure the patient
- Stabilise the fracture with a pillow splint and transport bandage
- Encourage the patient to breathe deeply
- Allow the patient to lie on or towards the injured side
- Seek medical attention immediately
- An impaled object, or any puncture wound for that matter may cause damage to underlying organs.
- In this case vital organs such as the heart, lungs, large blood vessels and the trachea may be damaged. a damaged lung may collapse leading to a shortage of oxygen in the patient's bloodstream.
- The severity of an impaled object is determined by the length and depth of the offending object, the direction in which it has penetrated and its position.

SECTION THREE (FIRST AID FOR FRACTURED BONES)

Bones and fractures

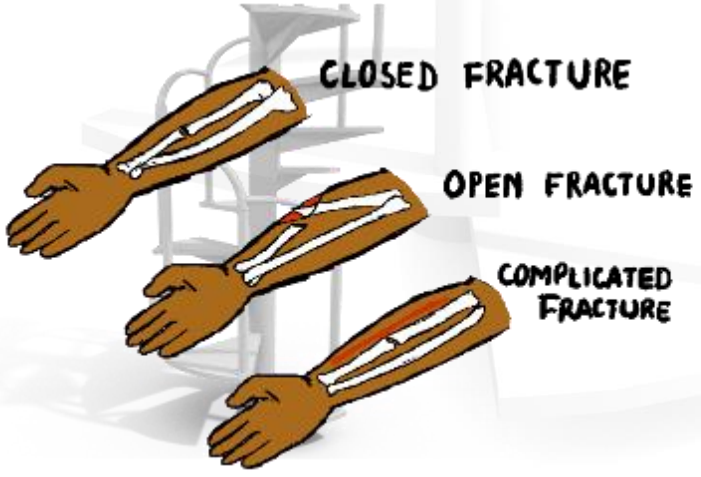
A fracture refers to a brake or crack in bone. Fractures may be classified into 3 different types:

- Closed Fracture
- Open Fracture
- Complicated Fracture. (May be open or closed, but which may have damaged underlying organs or blood vessels)

Signs and Symptoms

- Localised extreme pain
- Shock
- D.O.T.S. (Deformity, Open wounds, Tenderness, Swelling)
- Loss of power and movement
- Crepitus (A grating sound caused two ends of a broken bone rubbing together)
- History (hearing or feeling bone snap)
- Shortening of the limb

4.3 Types of Fractures



Treating fractures may be done in various ways, as long as the following OBJECTIVES are met:

- Stop any **bleeding** from an open fracture
- **Immobilize** the affected part
- Alleviate the patient's **pain**
- Maintain **circulation and sensation** below the fracture

Treatment

- Stop bleeding. (Use a ring pad for protruding bone)
- Avoid moving a fracture, especially one in a joint
- Immobilise the fracture by using or improvising a **splint**
- Check perfusion and pulse below a fractured extremity
- Treat shock and position patient correctly and comfortably
- Transport patient to hospital as soon as the fractures are stabilised

Properties of a Good Splint - A good splint should be:

- Clean
- Straight
- Supportive
- Correct size
- Lightweight

Splints may be improvised by using:

- Rolled newspaper or magazines
- Broomsticks
- Vegetable box planks

4.4 Complications of Fractures

- Some types of fractures are more serious than others.
- A **complicated fracture** should always be very serious.
- Fractures occurring in joints such as the wrist, knee, and elbow, are very serious and should be kept as still as possible and splinted in position. Do not apply traction to a suspected fracture in a joint.
- Always check distal circulation before and after splinting an extremity.
- Immobilising the wrist for example should be done by placing the forearm and hand on a splint, placing padding between the natural hollows of the arm, and securing the splint in place.
- Some other fractures considered serious are those of the long bones such are the upper arms (humerus), and the upper legs (femurs).

Femur Fracture Complications

A femur fracture can have serious side effects as any of the following may happen:

- Significant amount of blood loss may occur, even with a closed fracture
- Damage of nerves and blood vessels along the femur shaft may result
- Bone marrow may enter the bloodstream, causing blockage in another part of the bodies' circulation. This is known as a fat embolism

Pelvic Fracture Complications

- A pelvic fracture may be caused by either a **direct** crush trauma such as being struck by a motor care or heavy weapon, or it may be caused by **indirect** impact such as falling from a height onto the feet and the shock is transferred to the pelvis.
- Pelvic fractures are usually serious and should be treated with great care as severe **internal bleeding**, or damage to the urinary **bladder** may result.
- In elderly people a pelvis fracture may be the result of a simple fall.
- When medical services are nearby, allow the patient to lie still and monitor the patient until EMS arrives.

Signs and Symptoms

- Pain in lower back or abdomen

- Loss of bladder control
- Internal bleeding leading to hypovolemic shock
- Blood in urine
- Loss of movement in one or both legs
- Foot on the injured side turned outwards or angled inwards

Treatment

Manage CAB's

- Treat patient for a spinal injury always
- Treat the patient for shock
- Place padding between patients' thighs and legs and tie the patient's ankles, knees and thighs together
- Place padding under patients' knees if they are bent
- Patient should be secured on a spine board it they must be transported
- Do not move the patient unnecessarily and monitor distal circulation

SECTION FOUR (FIRST AID FOR EYE AND EAR INJURIES)

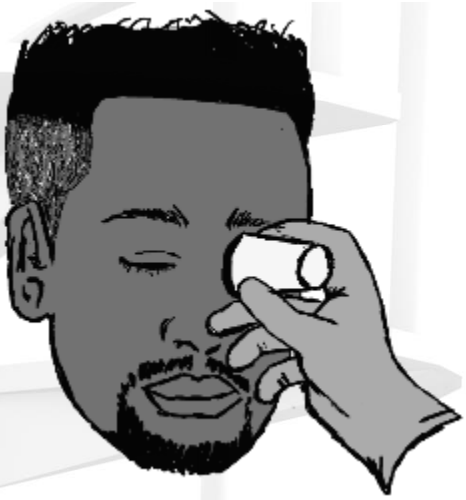
Eye and Ear Injuries

4.5 Types of Eye Injuries

Eye injuries may be divided into the following types:

- Penetrating injuries: An object impaled into the eye
- Eye contusions: A blunt impact to the eye or nearby
- Eye knocked out
- Eye avulsions and cuts
- Foreign objects: Such as metal shavings or splinters

- Eye burns: From intense light, fire and chemical spills



Treatment

Penetrating injuries

- Seek immediate medical attention
- Protect the injured eye with a paper cup,

  Cardboard, ring pad or similar
- Cover the uninjured eye to prevent sympathetic

Blunt Trauma (Contusions)

Apply an ice pack for 15 minutes, but do not exert pressure on the eye and seek medical attention in case of pain, reduced vision or discoloration.

Cuts and Avulsions

- Bandage both eyes lightly
- Seek medical attention

Chemical Burn to the Eye

- Use fingers to **carefully** keep the eye open
- If possible, use warm water to flush the eye continuously and gently for 20 minutes
- Irrigate from the nose side to the outside side of the eye to avoid flushing material into the healthy eye
- Tell patient to roll the eyeball to help wash out as much as possible
- Loosely bandage both eyes with moist dressings and seek medical attention

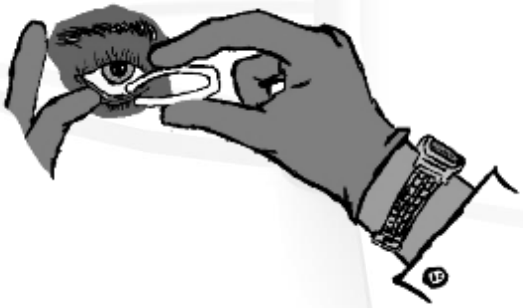
Eye Knocked Out

- Cover the eye with a moist, sterile dressing
- Treat as with a penetrating injury

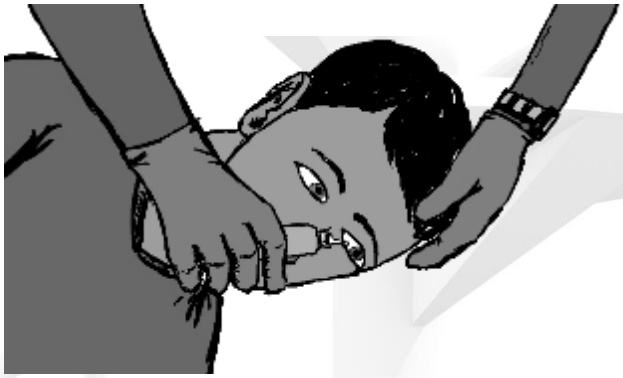
Foreign Objects

- Flush eye with warm water
- Check under upper and lower eyelids for objects and remove with moist cloth

NB: Do not attempt to remove suck foreign objects such as hot metal shaving



Removing a Foreign Object / Polystyrene Cup Protective Eye



Flushing out Eye

4.6 Ear Injuries

- **S**hould be treated as any soft tissue injury would be treated. Bandage the injured ear lightly and transport the patient to a physician.
- Torn off parts of the ear should be treated as described in the **treatment of amputation** section of this book.
- If blood or CSF, or both are draining from **inside the ear,** do not try and bandage the ear or try to plug the ear hole. Allow the fluid to drain naturally and seek medical attention straight away.

Key Learning points

A first aider must not just address primary emergency measures that are critical

- **After making sure the critical conditions are treated or managed the first aider must proceed to carry out secondary examination**
- **Generally, secondary examination is done through a process called SAMPLE in which one must consider**
    1. **Symptoms**
    2. **Allergic reaction**
    3. **Medication being taken by patient**
    4. **Past medical history**
    5. **Last meal**
    6. **Event leading to the emergency**
- **Secondary examination is the process of checking the casualty from head to the toe to see if there are any other conditions that needs first aid before the arrival of advanced life support team**
- **Some of these measures include the treatment of head injuries**
- **Treatment of spinal cord injuries**
- **Fractured bones**
- **The treatment of the eye and the ear**

Each of these first aid measures requires the first aider to identify the symptoms and follow the treatment procedure outlined for each to avoid complications

MODULE FIVE: ENVIRONMENTAL ILLNESSES (FIRST AID FOR HEART RELATED EMERGENCIES)

SECTION ONE (HEART RELATED FIRST AID MEASUERS)

Heart Attack

Heart attack is one of the leading causes of death in people over the age of 40. Heart attack may be caused by coronary heart disease brought on by age, an unhealthy lifestyle, high blood pressure, high levels of cholesterol, excessive stress, diabetes and lack of exercise.
Heart attack occurs when the blood vessels that supply the heart with oxygen rich blood become blocked and hardened, therefore less oxygen is supplied to the heart muscle.
When the heart does not receive the oxygen it needs, it may begin to cramp and even be damaged.

5.1 Common types of 'heart attack':

- Angina pectoris
- Acute Myocardial Infarction
- Congestive Cardiac Failure

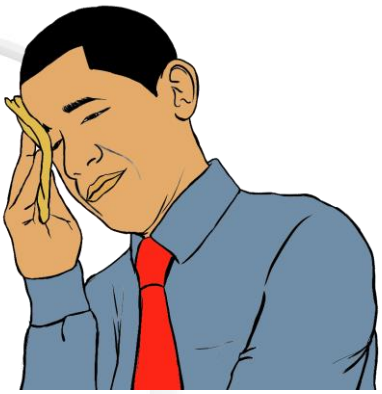
Angina Pectoris (Heart Cramps)

- Partial blockage of the coronary arteries causes a shortage of oxygen rich blood to the heart muscle.
- This may occur during times of physical activity, stress and even cold weather and is sometimes predictable.

Acute Myocardial Infarction (AMI)

- A far more serious blockage or spasm of the coronary arteries supplying the heart muscle with oxygen rich blood. This may occur at any time of the day or night regardless of circumstances.
- Illegal drugs such as cocaine may also cause heart attack.

Signs and Symptoms



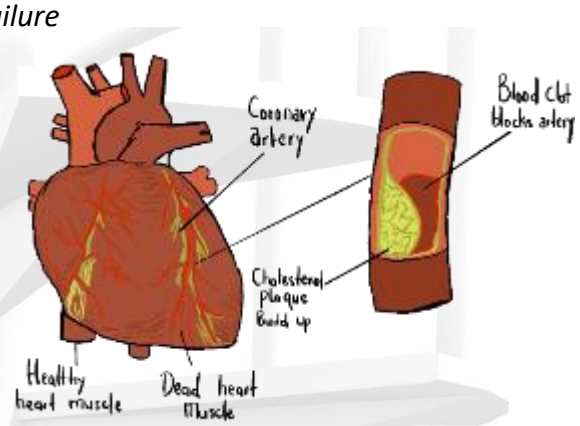
- Tightness and squeezing pain in chest
- Pain continuously last a few minutes, disappears and reappears
- Pain spreads to the shoulders, neck and arms
- Pain between the shoulder blades
- Sweating, dizziness and nausea
- Shortness of breath
- Denial, and refusing to believe that it could be a heart attack
- A feeling of indigestion or heartburn
- Some diabetics may experience heart attack without any pain!

Treatment

- Summons EMS!
- Calm and reassure the patient
- Allow the patient to rest
- Primary Survey
- Place patient in a comfortable semi-sitting position it the patients LOC allows
- Loosen tight clothing around chest and neck
- Let patient take his prescribed heart medication
- Monitor vital signs and take an AMPLE history
- Treat shock (Cardiogenic shock)

Congestive Cardiac Failure

- In brief, this is caused when a defect in the heart prevents the heart from pumping out the same amount of blood that is coming in.
- This condition may affect either the right of the left side of the heart, or both. Treat this condition as you would a heart attack.



Signs and Symptoms

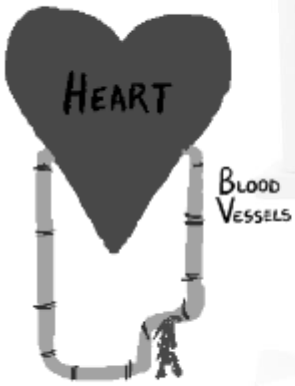
- Coughing up pink frothy sputum
- Distended neck veins
- Swelling of the feet, ankles and waist

5.2 SHOCK

It is the failure of the circulatory system to provide sufficient circulation to the body.
This is caused by injury or illness, which reduces the blood volume in the body.

SHOCK OCCURS WHEN THE BLOOD PRESSURE DROPS, IF:

- The heart fails to act as a pump
- There is severe blood or fluid loss
- There is enlargement of blood vessels
- Insufficient oxygen is carried by the blood to the body tissues.



The following are the main types of shock;

Type of shock	Description and conditions	Treatment
Cardiogenic Shock	Cardiogenic shock is caused by inadequate myocardial contractility from acute myocardial infarction, coronary artery disease, or mechanical factors (valvular regurgitation, low output syndrome, arrhythmias). In Cardiogenic shock, the left ventricle has been injured in some way, leading to impaired pumping. Because the pumping is ineffective, less blood is pushed out with each heartbeat, leading to a decreased stroke volume. The heart rate increases to compensate for a low cardiac output and blood pressure but will eventually	• Treat as heart attack • Do your primary survey • Ask the casualty the following questions • Have you ever experienced this before? • Do you take any medication for your heart? • Give the patient medication if he has. • Only give prescribed medication

	be insufficient to compensate for the decreased stroke volume. The tissues begin to be inadequately perfused.	• Calm casualty and place the casualty in a semi seated position Should the casualty fall unconscious, start with your ABC procedure.
Hypovolemic Shock	Most common), plasma loss due to burns, dehydration, traumatic shock due to blood loss and major tissue damage. The pathophysiologic process of hypovolemic shock is straight-forward. Blood and/or fluids have left the body, causing a decreased amount of volume in the blood vessels.	• In case of a bleeding wound: • You will have to **RED** the patient • **R**est • **E**levate • **D**irect pressure • **Rest** • You will need to rest the patient in order to slow down the heart rate • This minimises flow of blood, hence reducing more blood loss. • **Elevate** • Elevate the affected area to reduce the flow of blood to the open wound • This also reduces swelling and pain • **Direct Pressure** With a gloved hand, apply direct to the wound to minimize/stop the flow of blood
Neurogenic Shock	Neurogenic shock is caused by the loss of sympathetic control (tone) of resistance vessels, resulting in the massive dilatation of arterioles and venules. Neurogenic shock can be caused by general or spinal anaesthesia, spinal cord injury, pain, and anxiety.	• Because this affects the central nervous system, you as a first aider will need to check for signs of broken neck and spine injuries. • Immobilize the affected area. • Do not move the patient • Tell the patient not to move • Stay with the patient until help arrives.

Type of shock	Description and conditions	Treatment
Anaphylactic Shock	Shock due to the severe allergic antigen antibody reaction to substances such as drugs, contrast media, blood products, or insect or animal venom is called anaphylactic shock.	• This type is a rare phenomenon that occurs when a person receives an injection of a foreign protein but is highly sensitive to it. The blood vessels and other tissues are affected directly by the allergic reaction. Within a few minutes, the blood pressure falls and severe dyspnoea develops. The sudden deaths that in rare cases follow bee stings or injection of certain medicines are due to anaphylactic reactions.
Metabolic shock	**Metabolic acidosis** is a condition that occurs when the body produces excessive quantities of acid or when the kidneys are not removing enough acid from the body. ... **Acidosis** refers to a process that causes a low pH in blood and tissues.	Treat for shock in general and control any external possible causes
Psychogenic shock	Shock caused by stress or any receipt of information that is not easily well acceptable to manage or inability to resolve personal issues	Person needs psychological help but the first aider may offer cancelling or remove the victim form any potential cause of the stress if available

SECTION TWO (FIRST AID MEASURES FOR ASTHMA AND DIABETIC CONDITIONS)

5.3 Asthma

- Asthma is a chronic lung disease which usually starts with breathing difficulty (dyspnoea).
- Asthma attacks are usually brought on by an allergy, or physical exertion, or even a viral infection of the lower airway such as croup.
- When an asthma episode begins, the air passages in the lungs (bronchi) become narrower (constrict) due to spasm.
- This will lead to breathing difficulty. Also, the air passage may become inflamed, and a build-up of mucous occurs.
- This, in turn leads to coughing and wheezing.

Signs and Symptoms

- Difficult breathing
- Coughing
- Cyanosis (bluish skin colour)
- Pausing for breath while speaking
- Nostrils flare
- Wheezing
- Decreased level of consciousness in severe attacks

Treatment

- Monitor CAB's
- Keep patient in comfortable seated upright position
- Help patient administer **prescribed** medication
- Seek medical help in extreme attacks

5.4 Diabetic Emergencies

- Diabetes is a condition in which insulin, a hormone produced by the pancreas is ineffective or lacking.
- Insulin makes it possible for the sugar in food to be absorbed by the cells in the body for energy.

- The body wants to maintain a balance between the sugar and insulin levels in the body. For various reasons this balance may be disturbed, and a person may have too high blood sugar levels **(hyperglycaemia)** or too low blood sugar levels **(hypoglycaemia).**
- Some people need external insulin per medication, because they have **Type 1 juvenile onset** or **insulin dependent diabetes** from a very young age.
- Other diabetics control their sugar levels with diet and exercise and have **Type 2** or **non-insulin dependent diabetes**.

The sugar and insulin levels in the body are affected by:

- Physical activity or lack of it
- Overeating or skipping meals
- Alcohol
- Stress and hormonal problems
- When the balance between sugars in insulin levels is incorrect, a person may suffer from a diabetic emergency.
- Refer to the following table for signs, symptoms and treatment of a diabetic emergency.

Diabetic Emergencies

Hypoglycaemia Low Blood Sugar	Hyperglycaemia High Blood Sugar
Insulin Shock	Diabetic Coma
Signs & Symptoms	Signs & Symptoms
Sudden onset Poor co-ordination Anger / Irritable Pale Confused & Disorientated Hunger Cold and clammy skin Trembling Eventual unconsciousness	Gradual onset Drowsiness Frequent urination Extreme thirst Hot and dry skin Vomiting Fruity smelling breath Heavy breathing Eventual unconsciousness

Treatment: Cold and wet, sugar I get. Hot and dry, insulin I cry.
When in doubt…

- Give food or drink containing sugar
- Treat symptoms
- Transport victim to hospital in no improvement is seen within 15 minutes

5.5 What is Fainting?

- Fainting is a sudden and temporary, loss of consciousness.
- It is medically termed as Syncope
- It may be caused by a variety of factors including decreased blood sugar in the body, certain drugs, alcohol abuse, and complications related to the heart

Causes of Fainting

The common (less serious) conditions for Fainting include:

- Heat exhaustion
- Prolonged standing
- Stress
- Dehydration
- Hyperventilation (anxiety/panic attacks)
- Low blood sugar (hypoglycaemia)
- Pregnancy
- Certain medications may drop one's blood pressure and cause Fainting spells

The more serious conditions that cause Fainting include:

- Seizures
- Heart arrhythmias (abnormal heart rhythm)
- Choking
- Drug, alcohol use (or abuse)
- Stroke
- Heart attack

What are the Signs and Symptoms of Fainting?

The signs and symptoms of Fainting include:

- Sweating
- Face may appear pale
- Faster rate of heartbeat (palpitations)
- Nausea
- Dizziness or light-headedness
- Loss of balance leading to falls
- Vision problems

How is First Aid administered for Fainting?

If the individual is Fainting:

- Have him/her sit down with head between knees,
- make them lie down

If the individual has fainted:

- Lay the individual down, flat on their back
- Check airways for signs of breathing. If they are not breathing or moving, start cardiopulmonary resuscitation (CPR) and call 911/112 or your local emergency number
- If there is any vomiting or bleeding from the mouth, turn the person onto their side, in order to prevent them from choking
- Slightly elevate their feet
- Loosen their clothes
- DO NOT move the person, if they have sustained any obvious neck or back injuries, while Fainting (or falling)

Call 10111 (or your local emergency number), if the individual:

- Does not regain consciousness within 1-2 minutes
- Is not breathing or moving
- Has sustained serious injuries while Fainting
- Has problem talking or seeing
- Is experiencing a chest pain

How can Fainting be prevented?

A few helpful tips to avoid/prevent Fainting include:

- Take (work) breaks, when working for long periods of time
- Drink enough fluids (especially during summer), to avoid dehydration
- Breath into a paper bag, when breathing rapidly; in case of hyperventilation from anxiety/panic attacks
- Check blood glucose levels regularly; particularly if you are prone to have abnormal blood glucose levels
- Check blood pressures regularly, if you have a history of high or low blood pressures
- Wear medication alert bracelets

SECTION THREE (HANDING OVER A CASUALTY)

THE EMERGENCY REPORT

How to Report an Incident to EMS

- When we call the Emergency Services, the call center agent at the end of the line will be trained to prompt you for the information they require but sometimes we won't have the benefit of their skills and experience to help us.
- If we are reporting an incident via a third person or bystander then we must give them the information they will need to pass on and answer the Call center agent questions fully and accurately.
- The recording and reporting of information is of critical importance in the effective management of an Incident and any casualties involved.
- Simple mnemonics focus our attention on the most important factors which helps ensure the most relevant information is communicated quickly and clearly.

Information to be supplied

1. **Exact Location:** In an urban setting this would be the room number and floor of the building and postcode.
2. **Type of Incident:** industrial chemical, vehicle collision, drowning etc
3. **Hazards**: Both current and potential.
4. **Access**: Best route to the scene following - or avoiding - particular features.
5. **Number of Casualties:** Ideally following triage: Delayed, Urgent, Immediate or Dead.
6. **Emergency Services**: Required and already present.

Reporting on a casualty after treatment

- When requesting medical support, it is essential that relevant and accurate patient information is provided; a correct request for medical support avoids unnecessary delay and provides the next echelon of care so they can begin to diagnose and plan their treatment before arrival.
- The report needs to be clear and concise yet transfer all relevant information.
- The recommended format for giving a casualty report can be remembered using the acronym **ASH-ICE**.
- **A**ge
- **S**ex

- **H**istory - A brief description of the accident or incident including the mechanism of injury, if appropriate.
- **I**llness or injury - What are the main problems?
- **C**ause for concern - Which problem is threatening life? Are there any other factors that will inhibit the progress of the rescuers or the recovery of the casualty?
- **E**.T.A. (Estimated time of arrival) - If you are transporting the casualty, how long will you take to get there? If you are requesting help, ask for this information.

Key learning points

- **First aiders must treat other environmental illness as well**
- **Heart attack related require the first aider to detect the symptoms and proceed to re-assure the casualty and put him/her in a heart attack recovery position**
- **The key is for the first aider to detect the symptoms**
- **Most heart attack conditions are managed through resting the casualty in a heart attack recovery position and reassuring them**
- **Some heart attacks may end up in the casualty becoming unconscious and needing CPR**
- **First aid for shock and fainting must be done as soon as possible to prevent the condition deteriorating**
- **The fist aider must also assist person with an asthmatic condition through the use of inhaler**
- **Diabetic emergencies are best handled through giving sugar to the patient**
- **Fainting is a condition that requires one to render first aid promptly to prevent situation getting worse**
- **In all these measures the first aider must observe COVID-19 health measures related to distancing and use of full PPE**