FIRST AID EDUCATION

Participant Workbook

HLTAID003

Provide First Aid

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HLTAID003 - Provide First Aid

Contents

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Application of the Unit:
This unit of competency describes the skills and knowledge required to provide a first aid response to a casualty. The unit applies to all workers who may be required to provide a first aid response in a range of situations, include community and workplace settings.

Specific licencing requirements relating to this competency, including requirements for refresher training should be obtained from the relevant state/territory Work Health and Safety Regulatory Authority.

This Learning Guide/Workbook covers:

- *Respond to an emergency situation*
- *Apply appropriate first aid procedures*
- *Communicate details of the incident*
- *Evaluate the incident and own performance*

Learning Program
As you progress through this unit you will develop skills in locating and understanding an organisations policies and procedures. You will build up a sound knowledge of the industry standards within which organisations must operate. You should also become more aware of the effect that your own skills in dealing with people has on your success, or otherwise, in the workplace.

Knowledge of your skills and capabilities will help you make informed choices about your further study and career options.

Additional Learning Support
To obtain additional support you may:

- Contact First Aid Education and request to speak to your facilitator

Using this learning guide:
A learning guide is just that, a guide to help you learn. A learning guide is not a text book. This learning guide will

- describe the skills you need to demonstrate to achieve competency for this unit
- provide information and knowledge to help you develop your skills
- provide you with structured learning activities to help you absorb the knowledge and information and practice your skills
- direct you to other sources of additional knowledge and information about topics for this unit.

The Icon Key

Key Points

Explains the actions taken by a competent person.

Activity

Provides activities to reinforce understanding of the action.

Chart

Provides images that represent data symbolically. They are used to present complex information and numerical data in a simple, compact format.

Intended Outcomes or Objectives

Statements of intended outcomes or objectives are descriptions of the work that will be done.

1. Respond to an emergency situation

1.1 Recognise an emergency situation

1.2 Identify, assess and manage immediate hazards to health and safety of self and others

1.3 Assess the casualty and recognise the need for first aid response

1.4 Assess the situation and seek assistance from emergency response services where required

1.1 Recognise an emergency situation

In emergency cases, fast and efficient first aid can save lives. In many cases, first aid can reduce pain and discomfort, prevent further injuries from occurring, or stop an injury or illness from becoming worse. Competent first aiders can also help to calm and reassure the casualty thus reducing stress and anxiety.

The aim is to:

- preserve life
- prevent injury or illness from becoming worse
- protect the unconscious casualty
- promote a safe environment
- provide reassurance
- seek medical help
- help promote recovery.

All first aid procedures provided by the first aider should be limited by the extent of his/her role and skills. Where the first aid management or medical treatment required is beyond a first aider's level of competence, the first aider should seek assistance from trained professionals such as an ambulance officer, medical practitioner, or occupational health nurse.

In any first aid situation it is essential that you take precautions to ensure your own safety and the safety of others. Potential risks of illness and/or injury can present in any first aid situation and may result from:

- exposure to blood, vomit and other body fluids;
- acts of aggression;
- an unsafe scene, for example, oncoming traffic in a road accident, or fallen power lines;
- bystanders placing themselves and others at risk of injury;
- back, neck or shoulder injuries sustained when moving objects;

- the presence of smoke, fire or poisonous fumes.

Tips for taking care of yourself and others:

- always assess for any potential dangers and ensure the area is safe before approaching;
- use standard precautions, such as wearing gloves, to protect yourself from potential contact with blood and other body fluids;
- do not unnecessarily move the casualty or heavy objects;
- observe and manage bystanders;
- seek professional counselling and debriefing, if required.

Learning Activity 1: Car accident scenario

As part of your learning journey you will come across many situations. The accident scene above contains real or potential hazards. Can you find them? List them below;

_____

_____

_____

_____

_____

_____

Emergency First Aid

Priorities in an Emergency

In all emergency situations, the rescuer must:

- Assess the situation quickly
- Ensure safety for the rescuer, casualty and bystanders
- Call for help
- Commence appropriate treatment following the Basic Life Support Flow Chart.

Emergency Action Plan

- Call First, call Fast - Call for Help
- Stay with the Casualty - you should not leave an injured person alone, because if they become unconscious they will not be able to help them self

Your Action Plan should include the following:

1. Quickly assess the situation.
   a. Ensure safety for yourself and the casualty. Where there is danger, remove the cause of danger from the casualty or the casualty from the cause, without putting yourself in danger.
   b. Decide what you must do first, following the priority given under the **DRSABCD** of First Aid.
   c. Move the casualty as little as possible. The casualty should be moved with care only if:
      - in danger from fire, road traffic, hot road surfaces, electric current, drowning etc, providing it is safe to do so.
      - it is necessary to establish and maintain a clear airway or perform CPR
   d. Reassure the casualty.
   e. Let the conscious casualty rest in the position he finds most comfortable.

How to Call an Ambulance

1. Dial “000” (Triple Zero) in an emergency (if unsuccessful trying 000 on a mobile then try 112).
   f. Ask for ambulance.
   g. Give the location of where the ambulance has to go (that is, state, district or suburb, street, road, address). Give a cross-street reference, building or landmark.
   h. Give the phone number you are calling from and your name.
   i. Explain exactly what has happened.
   j. Possible number of casualties (people hurt or sick).
   k. How old the casualty is.

l. If the casualty is conscious/ breathing.

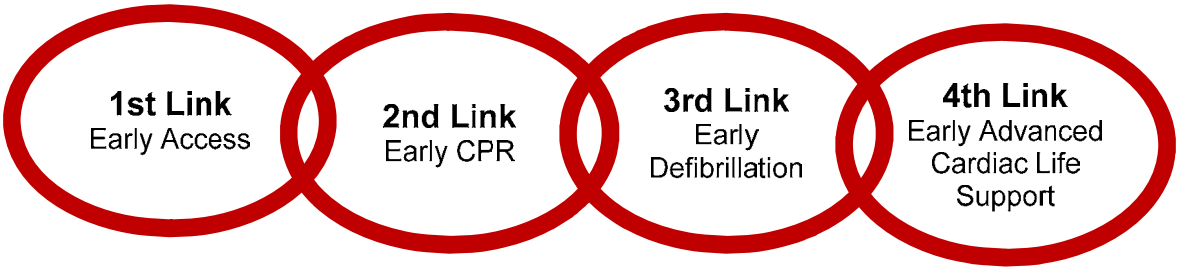
m. **DO NOT** hang up until the operator tells you to.

When calling for help, the **"call first"** approach is recommended. This is because in the vast majority of cardiac arrests, the arrest is due to ventricular fibrillation, which is treatable by defibrillation. Outcomes of these patients have significantly improved when the time to defibrillation is short. In cardiac arrests occurring in children, or where the arrest is due to airway obstruction or inadequate ventilation, (e.g. submersion, drug overdose) there is a potential benefit in commencing resuscitation before calling for help. In these cases, the **"call first call fast"** approach is recommended as in the next section. In many situations the call for help will occur at the same time as the commencement of resuscitation.

Where there is more than one casualty, the care of an unconscious casualty has priority.

The casualties that are calling out should not distract the rescuer; their needs are less urgent as they are able to breathe.

Figure 1: The Chain of Survival



Sudden cardiac arrest is the unexpected collapse of a casualty whose heart has stopped. Cardiac Arrest occurs suddenly and is closely linked with sudden chest pain. It is estimated that more than 95% of Sudden Cardiac arrest casualties die before reaching hospital. The casualty in cardiac arrest has only minutes from collapse until death is inevitable.

The 'Chain of Survival' is the term applied to a sequence of actions, which can be instrumental in resuscitating a casualty in cardiac arrest. While each action in the chain is unlikely on its own to revive a casualty, all of them used together effectively will provide a better chance for a successful outcome.

1st Link - Early Access

Call first - Call fast. Get to the cardiac arrest casualty quickly and call '000'

2nd Link - Early CPR

Early Cardiopulmonary Resuscitation (CPR) performed by a Carer can buy life-saving time.

3rd Link - Early Defibrillation

Early defibrillation is perhaps the most significant link of all

4th Link- Early Advanced Cardiac Life Support

This is provided by ambulance/paramedics.

Cross Infection

The risk of cross infection is low but diseases can pass between the casualty and Carer and between casualties. It is therefore a requirement of the Carer to take reasonable precautions to prevent cross infection.

It is essential that as a Carer, you approach all situations involving body fluids: saliva, vomit, blood, urine and faeces etc. as potentially infectious, adopting appropriate precautions to protect yourself.

In the event of Blood/Body Fluid Contact

If blood contact is made by a used needle stick:

- Allow the wound to bleed freely.
- Wash thoroughly with soap and water.

If blood/body fluids come into contact with your skin:

- Wash thoroughly with soap and water.

If eyes are contaminated:

- Rinse gently with water making sure to wash under the eyelids.

If mouth is contaminated:

- Spit out and rinse with water.
- Always seek medical advice for further treatment.

As a Carer, you are there to assist a person who has been injured or is suffering any form of illness and therefore you need to have a basic understanding of the human anatomy and how the body functions.

First Aid Hygiene

The risk of cross infection is very low. The Carer should take some precautions in all first aid situations. Protection such as gloves protects you and the casualty from infection. You must assume that in every emergency situation, everybody is a carrier of an infectious disease, such as HIV, hepatitis, or meningitis. Body fluid can enter your bloodstream through cuts or cracks in the skin, or through the mouth or eyes. Sneezing or coughing from the casualty could spray contagious substances onto you.

Using protection barriers between you and the casualty's body fluids can easily prevent transmission of these diseases. Examples of first aid barriers recommended are:

- Resuscitation masks,
- Gloves and eye or face shields.
- Additional washing before and after first aid is important and gives additional protection.

Before Treatment

Always wear gloves if available take care not to touch any unclean object when wearing gloves or once hands are washed.

- Wash hands with soap and water, or rinse with antiseptic.
- Ensure that hands are washed thoroughly between fingers and under nails.
- If possible, use a protective cover over clothing.
- Cover any adjacent areas likely to produce infection.

During Treatment

- Avoid contact with body fluids.
- Avoid coughing, breathing, or speaking over the wound.
- Avoid treating more than one casualty without changing gloves between each casualty.
- Use a face shield or mask with a one-way-valve, if available, when doing active resuscitation.
- Use only clean bandages and dressings.

After Treatment

- Wash hands and disposes of gloves.
- Clean up both casualty and yourself.
- Clean up the immediate vicinity.
- Dispose of dressings, bandages, gloves and soiled clothing correctly by burning.

Wash hands with soap and water even if gloves were used.

Learning Activity 2:

As part of your learning journey you need to be aware of your immediate area and its potential hazards. Look around your immediate area and identify 3 potential physical hazards and the potential effect that they may have on an individual.

1. _____

_____

2. _____

_____

3. _____

_____

Figure 2: Common Hazard Tool

Hazard	Typical Problems	Typical Injury/ Illness requiring first aid
Manual handling	Overexertion/Repetitive movement	Sprains, strains, fractures
Falls	Falls from heights, slips and trips on uneven surfaces	Fractures, bruises, cuts, dislocations, concussion
Electricity	Contact with electrical current	Shock, burns, loss of consciousness, cardiac arrest
Plant	Being hit by projectiles, striking objects, being caught in machinery, overturning vehicles.	Cuts, bruises, dislocations, fractures, amputation, eye damage.
Hazardous substances	Exposure to chemicals, e.g. solvents, acids, hydrocarbons	Dizziness, vomiting, dermatitis, respiratory problems, burns to skin or eyes.
Temperature, UV radiation	Effects of heat or cold from weather or work environment	Sunburn, frostbite, heat stress, heat stroke, hypothermia
Biological	Allergens, needle stick, exposure to infectious agents.	Severe allergic reaction, injuries, skin rash, infection
Occupational violence	Intimidation, conflict, physical assault	Nausea, shock, collapse, physical injuries
This tool is not a comprehensive guide to workplace hazards. it provides examples of typical problems created by workplace hazards, an some of the resultant injuries and illnesses. You may have hazards other than those listed here.		

Your own list of potential injuries and illnesses, and their likely causes, will be developed from information specific to your workplace and the type of work performed. Use this Tool as a starting point, to provide a framework for collecting the information you need.

Standard precautions

Standard precautions are a set of guidelines that assist first aid officers protect themselves from accidental exposure to blood or other body fluids during the provision of first aid. Standard precautions include wearing gloves when in contact with blood and body fluids and using a disposable mask when giving rescue breaths to the unconscious casualty who shows no signs of life.

General principles for protecting yourself as a first aider:

- Wear gloves whenever there is the potential for contact with blood or other body fluids;
- Wash hands or other skin surfaces thoroughly with soap and water if they are contaminated with blood or other body fluids;
- Wash eyes with running water if they are splashed with blood or body fluids;
- Avoid accidental injuries, for example, cuts from broken glass;
- Encourage the casualty to treat themselves where possible. For example, the casualty may be able to apply direct pressure to their own bleeding wound;
- Use Personal Protective Equipment (**PPE**) where available, for example, gloves, face shields, masks and goggles;
- Dispose of waste materials and sharps appropriately.

Observe and manage bystanders

Bystanders are the people who are in the immediate area of the accident scene. Many bystanders might have witnessed the incident and might be extremely anxious or in a state of shock and unable to protect themselves from any dangers. It might be necessary to assist bystanders to a safe place and to offer shelter, warmth and reassurance. Bystanders who are in shock and/or are grieving might need emotional support. Preferably this should be offered by a trained counsellor. Some bystanders have even been known to act heroically, placing their own safety at risk in order to assist in some way.

Some people act without thinking in emergency situations and try to implement first aid management that might be incorrect or even dangerous. It is important that bystanders are given clear directions and are made to feel that they can contribute to the management of the situation. Sometimes making suggestions as to how bystanders can help can prevent people from acting inappropriately.

Moving the casualty

Moving the casualty should be avoided in most circumstances. This is especially true if the casualty has sustained any potential injuries to the head, neck, back or spine. Moving the casualty unnecessarily may cause further injuries to the casualty and may cause back, neck or shoulder injuries to the people attempting the move. Moving the casualty should only take place if you are unable to provide life saving measures in the current position or if there are any immediate threats to life, for example, fire and explosion.

When and how to move a casualty

Movement, increasing pain, injury, blood loss and shock, may worsen the condition of a collapsed or injured casualty. A rescuer should only move a collapsed or injured casualty. To ensure the safety of both rescuer and the casualty, or where extreme weather conditions or difficult terrain indicate that movement of the casualty is essential to make possible the care of Airway, Breathing, and Circulation (e.g. turning the unconscious breathing casualty onto the side or turning a collapsed casualty on the back to perform cardiopulmonary resuscitation effectively) to make possible the control of severe bleeding.

All unconscious persons who are breathing must remain on their side.

The trained rescuer should stay with the casualty and send others to seek assistance. If movement is necessary, and help is available, the most experienced rescuer should take charge. Then explain clearly and simply the method of how movement of the casualty will happen to the assistants, and to the casualty if conscious.

Moving a Casualty

If possible, it is always better to move the danger away from the casualty rather than move the casualty away from the danger.
As the Carer does not know if the casualty is suffering from any injury, movement could aggravate the injury unnecessarily.

The Carer should **only move an unconscious or injured casualty** if:

- Danger is present to both the Carer and the casualty.
- Extreme weather conditions or terrain are present.
- The casualty is unconscious requiring them to be placed in the side position.
- Severe life threatening bleeding needs to be controlled.

If **movement of the casualty** is required:

- Avoid bending/twisting the casualty's back and neck.
- Avoid movement of the casualty's head.
- Drag the casualty rather than lift the casualty.
- Support any injured limbs.
- Gain the assistance of bystanders if possible.

Prior to shifting a casualty, **under normal circumstances** ensure:

- Completion of both the primary and secondary surveys and any subsequent treatment.
- Protection of all injuries while moving the casualty.
- The casualty is informed of the plan to move them.
- The lifting is smooth and follows a plan of action.
- Communication with all personnel helping to move the casualty.

Lifting / Moving Techniques

There are a variety of ways to lift a casualty. Following is a list of the more commonly used lifting techniques.

Dragging

Used when the casualty is in danger and needs to be moved quickly. This is dangerous to all involved. Drag the casualty by the shoulders avoiding any movement of the neck and spine. Support the casualty's head at all times.

Arm Assistance

Used for the casualty who can walk and support his or her own weight on both legs. The casualty places one arm across the Carer's shoulders and the Carer places one arm around the causality's back.

Carry Lift

This is normally used for children. The Carer carries the casualty in both arms.

Blanket Lift

The casualty is placed on a strong blanket that can be carried by two or more people.

Two-Handed Seat

The hands of two Carers are interlocked and the casualty can sit on the Carer's hands, placing their arms around the Carer's shoulders for further support.

Road accidents

Car accident

In most circumstances, try to provide first aid care to the casualties in the vehicle, but only if it is safe to do so. Removal of a casualty from a vehicle should only take place if you are unable to provide life saving measures in the current position or if there are any immediate threats to life such as fire and explosion.

Motorbike accident

Motorbike helmets can provide support to the head, neck and spine and should only be removed if it is impossible to maintain an open airway or give life saving measures with the helmet in place. If removal of the helmet is required, it is preferable that an ambulance officer or other trained person does this.

1.2 Identify, assess and manage immediate hazards to health and safety of self and others

A hazard is a condition or situation that exists with the potential to cause injury or illness. There are numerous types of hazards such as physical, chemical, ergonomic (low chairs, computers placed away from eye level), radiation (X-rays, alpha particles), psychological (shiftwork, repetitive tasks) and biological (HIV, hepatitis). In this topic we will concentrate mainly on physical hazards in the workplace.

A physical hazard is something that you can see that poses a risk to your health or your safety as well as to the health and safety of others.

Types of physical hazards

There are different types of physical hazards. These can include the following:

- excessive noise;
- high or low temperatures;
- anything that can cause slips, trips and falls, for example a wet floor, cords lying on the floor;
- mechanical, for example, poor lighting;
- electrical, for example frayed wires;
- layout of the workplace, for example, high shelves poorly-designed work stations;
- equipment in the workplace, for example, faulty equipment.

What hazards do you see as you walk around your workplace or even in your own home? Perhaps you see:

- a chair with a wobbly leg
- a frayed electrical cord
- a floor mat with the corner turned up
- a table with a sharp edge
- a rusty nail sticking out of a fence.

Types of physical hazards and how they can affect you

Let's revisit the examples of physical hazards listed above. Ask yourself, could these hazards cause injury or sickness?

The answer is yes, they could.

Take each example above and think of how each hazard could cause harm to you. Did you come up with the answers below?

- If you sat on a chair with a wobbly leg the chair could break, and you could fall off the chair and hurt yourself.

- If you used a frayed electrical cord, you could be electrocuted and cause serious harm to your body, particularly your heart.
- You could trip over the corner of the floor mat causing you to fall and injure yourself, perhaps breaking a bone or twisting your ankle.
- You could scratch yourself walking past a table with a sharp edge.
- You could puncture yourself with the rusty nail sticking out of a drawer.

Physical hazards cannot only cause injuries, they can also cause sickness. For example, poor lighting or lack of ventilation in the workplace can cause headaches or sickness. These conditions can lead you to feel tired and to become unproductive in your job and, ultimately, you could make mistakes which could possibly cause further injuries to yourself or others.

Learning Activity 3:

As part of your learning journey revise your reading by answering True or False to the following

a. A hazard has the potential to cause injury or illness. **True / False.**

b. A broken chair doesn't matter as no-one would sit in it anyway. **True / False.**

c. A cracked drinking glass is an example of a physical hazard. **True / False**.

Minimising immediate risk

There's not much point identifying and reporting a chair with a broken leg if that chair is going to remain where it is. We need to take a further step and minimise the immediate risk by removing the chair to prevent people from sitting on it and falling over.

A risk is the probability of a hazard that results in injury or illness. We need to ask ourselves how likely it is that this particular situation could occur and how serious it could be?

Types of immediate risks

Generally, risks may include:

- worksite equipment, furniture machinery and substances;
- environmental risks;
- bodily fluids;
- further injury to the casualty.

If you see a frayed electrical cord, this should alert you to the possibility that somebody could be electrocuted if they used it. This is very likely (high risk) and immediate action should be taken, such as removing the cord, thus prohibiting its use.

Case Study:

Let's look at the following example:

You are asked by your supervisor to clean the glass on the photocopier machine with a particular cleaning chemical. You think about the safety of using a cleaning solution without wearing gloves. You think of the risk of direct contact with the cleaning solution on your hands and its consequences. The chemical could be absorbed through your skin and into your blood stream possibly causing a burn to your skin and generalised poisoning.

Is there an immediate risk to you? Absolutely!

How could the risk be controlled? Your workplace needs to supply disposable gloves if it is expected that staff will use cleaning solutions.

Learning Activity 4:

As part of your learning journey read the following scenario and answer the question below. An individual has stumbled and fallen off the treadmill in the gym. They are unconscious on the floor after hitting their head and there appears to be some displacement of their knee. What would be your "first" priority in your plan of management?

How to minimise risks by controlling the hazards in accordance with WHS requirements

Policies and procedures

Duties under the Work Health and Safety Act 2011 should be met by developing and implementing policies and procedures to minimise the risk of workplace transmission of infectious diseases. Documented policies and procedures on infection control in first aid should at least cover:

- standard precautions;
- hygiene;
- management of a blood or body substance spillage;
- waste management;
- sharps management;
- laundry management;
- cleaning, disinfecting and sterilising first aid equipment;
- immunization;
- PPE, and;
- management of skin penetrating injuries and other blood or body substance exposures.

Hygiene

Hand washing is an important measure in preventing the transmission of infection. Adequate hand washing facilities should be provided at the workplace. Hands should be washed using soap and water before and after contact with an ill or injured person. They should also be washed before and after contact with blood, body substances or contaminated items and after removal of protective gloves. An alcoholic chlorhexidine hand wash (available from pharmacies) or equivalent should be used in emergency or field situations, where hand washing facilities are limited or not available.

Waterproof dressings should be provided to allow first aid personnel to cover cuts or abrasions. This reduces the risk of an injured person's blood or body substances coming into contact with a first aid person's broken skin.

First aid personnel who have skin problems, such as dermatitis, and who are exposed to blood and body substances, should seek medical advice regarding the risk of infection.

First aid personnel and workers should not eat, drink or smoke when working in an area where blood or body substances may be present.

Management of blood or body substance spillage

Spills should be attended to as soon as possible. Protective gloves should be worn. Absorbent material, such as paper towels should be used to absorb the bulk of the blood or body substance. These contaminated materials should then be disposed of in a leak-proof, sealed waste bag.

After this, the area should be cleaned with warm water and detergent and then disinfected. A suitable disinfectant is a freshly prepared 1:10 dilution of 5% sodium hypochlorite (household bleach) in water. Mops and buckets should be rinsed with warm water and detergent and stored dry.

After cleaning the contaminated area and equipment, reusable gloves and other protective clothing should be removed and disinfected. Hands should be washed after items have been disinfected and gloves have been removed.

If a spill occurs on carpet, as much of the spill should be mopped up as possible and the area then cleaned with a detergent. Where there is significant spillage, arrangements should be made to have the carpet shampooed with an industrial carpet cleaner.

Large spills, such as may occur after a road accident, may be safely hosed down with water, by workers wearing protective clothing.

A 'spills kit' should be available where there is a risk of blood or body substance spills. A 'spills kit' should contain:

- PVC, household rubber or disposable latex gloves
- cleaning agents
- disposable absorbent material, and
- a leak-proof bag.

Waste management

Contaminated waste should be placed in a leak-proof bag or container and sealed. The bag or container should not be overfilled. All waste should be handled with care, to avoid contact with blood and body substances. Gloves should be worn when handling contaminated waste bags and containers.

Where significant amounts of first aid waste are generated, contaminated items should be placed in clinical waste bags. These are yellow coloured plastic bags which display the international biohazard sign (available from medical suppliers). Waste disposal should comply with state or local government requirements.

Sharps

Sharps are a major cause of accidents involving potential exposure to biological hazards which can pose a risk of transmission of hepatitis B, C and the HIV virus. Where there is a risk of finding discarded sharps, tongs or a similar item should be available to pick up sharp items safely.

The person who uses a sharp should be responsible for its safe disposal. Sharps should be handled with care. They should not be bent, broken or reheated as these unsafe practices are common causes of sharps injuries.

Sharps should be disposed of in a puncture resistant sharps container. Sharps containers should be located as close as possible to the area where sharps are used. Disposal of sharps containers should be in accordance with local government requirements.

Laundry

Soiled linen should be identified as such and kept separate from other linen. PVC, latex or household rubber gloves and protective clothing should be worn when handling soiled linen. Heavily soiled linen should be placed in a leak-proof bag and securely closed.

Examples of minimising the risk by controlling the hazard

Here are some examples of minimising risks by controlling hazards:

- The chair has a wobbly leg - remove the chair and report the hazard.
- An electrical cord is frayed - take the cord away and report the hazard.
- The corner of the floor mat is turned up - tape it down or remove the mat, and report the hazard.
- A table has a sharp edge - pad the corner or remove the table, and report the hazard.
- A nail is sticking out of a drawer - pad the nail, then stay away from the drawer and report the hazard so that it can be fixed.

How can we control the risk?

Here are some suggestions:

- people can be separated from the risk;
- personal protective clothing can be worn (eg goggles, gum boots and gloves);
- staff can be trained and better informed;
- lifting equipment can be used;
- power tools can have guards;
- safety switches can be used;
- air driven tools can be used to reduce the need for electricity;
- office furniture can be carefully selected;
- signs can be erected (in other languages besides English, if required);
- work health and safety policies and procedures should be followed.

Remember that if the hazard cannot be removed then we need to control the risk.

Exposure to blood, vomit and other body fluids

If you have been exposed to blood or other body fluids follow the procedures outlined below.

Needle stick injury

- Squeeze the needle stick injury site to express as much blood as possible;
- Thoroughly wash the site with soap and water;
- Keep the needle or object that caused the injury, but only if it is safe to do so;
- Follow any additional workplace policies and procedures. Note: You can phone the Needlestick Injury Hotline on 1800 804 823 even if the injury does not occur in the workplace;
- Seek medical advice.

Blood or other body fluid splashes to the mouth, nose or skin

- Immediately flush the affected mouth, nose or skin area with running water.
- Wash any outer skin surfaces with soap and water.
- Follow any additional workplace policies and procedures.
- Seek medical advice.

Blood or other body fluid splashes to the eyes

- Flush the eyes with clean or sterile water, as available.
- Follow any additional workplace policies and procedures.
- Seek medical advice.

Assess casualty

Ask yourself these questions whenever you observe a casualty:

- What do I see? You may see blood, a swollen hand or a bruise.
- What do I hear? You may hear, crying, moaning or heavy breathing.
- What do I smell? You may smell vomit or urine.
- What is my intuition? This person may need attention quickly. You may need to inform your supervisor immediately.

Assessment of casualties needs to be carried out quickly and thoroughly according to workplace procedures so that appropriate action can be taken and help can be sought immediately.

Signs of life

If you find yourself in a situation where someone requires first aid for any reason, it is important not to panic but, rather, briskly assess for signs of life and call for help. Make sure it is safe to approach the casualty, and check for the following signs of life:

- Is the casualty conscious or unconscious (unresponsive)?
- Is the casualty breathing?
- Is the casualty moving?
- Consciousness (responsiveness).

You are conscious now because you are awake and reading this topic, and you are able to respond to the doorbell or the telephone ringing. If people are unable to respond to questions and other stimuli because of sickness or injury, however, they are unconscious, and this requires urgent medical care.

Can you think of some situations in which a person could become unconscious? Below are some situations that could lead to unconsciousness. Did you think of some of these situations?

- Electrocution;
- Drowning;
- funnel web spider bite;
- car accident;
- head injury;
- exposure to extreme heat or cold;
- explosion;
- poisoning;
- epileptic fit;
- burns.

Make sure it is safe to approach the casualty and that you are not putting yourself or others at risk, before you assess whether the casualty is conscious or not. You can do this touching the casualty's shoulders. Ask them in a loud voice 'Are you alright?'

Figure 3: Checking casualty for consciousness

If there is a response, that is, the casualty squeezes your hand or opens their eyes or moves in some other way, and perhaps speaks, then the casualty is conscious. If there is no response, that is, the casualty does not move or speak, then the casualty is unconscious.

Whether the casualty is conscious or not, do not move the casualty unless:

- they are in danger if they stay where they are, or;
- they need to be moved to receive first aid.

Whether the casualty is conscious or not, call for help. If the casualty is unconscious, an ambulance should be called urgently. Being in an unconscious state can be life threatening.

Conscious person

A person is conscious if they have a state of awareness with the ability to respond to voice and/or touch.

Unconsciousness

Unconsciousness is defined in Guideline 3 from the ARC (28/11/2012) as being "*in a state of unrousable, unresponsiveness, where the victim is unaware of their surroundings and no purposeful response can be obtained."*

Causes of unconsciousness

The causes of unconsciousness can be classified into four broad groups:

- low brain oxygen levels;
- heart and circulation problems (e.g. fainting, abnormal heart rhythms);
- metabolic problems (e.g. overdose, intoxication, low blood sugar);
- brain problems (e.g. head injury, stroke, tumour, epilepsy).

Combinations of different causes may be present in an unconscious victim e.g. a head injury victim under the influence of alcohol.

Recognition

Before loss of consciousness, the victim may experience yawning, dizziness, sweating, change from normal skin colour, blurred or changed vision, or nausea.

Assess the collapsed victim's response to verbal and tactile stimuli ('talk and touch'), ensuring that this does not cause or aggravate any injury. This may include giving a simple command such as, *"open your eyes; squeeze my hand; let it go".* Then grasp and squeeze the shoulders firmly to elicit a response.

A person who fails to respond or shows only a minor response, such as groaning without eye opening, should be managed as if unconscious.

Management

If the victim is unresponsive and not breathing normally, follow Australian Resuscitation Council and New Zealand Resuscitation Council Basic Life Support Flowchart (Guideline 8).go to http://resus.org.au

Any unconscious casualty who remains on his or her back is at risk of an obstructed airway through either inhaling fluids, or by having the upper airway blocked by a relaxed tongue. The most effective first aid method of protecting an unconscious casualty's airway is to put the casualty onto their side. This is a position of comfort in which the casualty has their head down and tilted in such a way as to cause any fluid to drain out onto the ground, and the tongue to move away from the back of the airway giving an open airway.

By turning the casualty on the side, gravity will assist foreign material to drain from the mouth. If possible use the casualty's fingers to clear visible material from the casualty's mouth.

In an unconscious casualty, care of the airway takes precedence over any injury, including the possibility of spinal injury. (See ARC Guideline 9.1.6) All unconscious casualties should be handled gently, with no undue twisting or forward movement of the head and spine.

1. Ensure safety of victim and rescuer.
2. Assist victim to the ground and position the victim lying on the side. Ensure the airway is open (See ARC Guideline 4). Do not leave the victim sitting in a chair nor put their head between their knees.
3. Call an ambulance.
4. Stop any bleeding promptly (See Arc Guideline 9.1.1).
5. Constantly re-check the victim's condition for any change.
6. Ideally, the most experienced rescuer should stay with the victim

If necessary, it is acceptable to gently move the head into a neutral position to obtain a clear airway. Where possible, an assistant should support the head when an injured casualty is being moved, but time should not be wasted in detailed positioning. The rescuer should not give an unconscious casualty anything by mouth and should not attempt to induce vomiting.

Side Position

- Prepare the casualty by removing bulky and sharp items from pockets
- Kneel beside the casualty and make sure that both legs are straight
- Place the arm nearest to you out at right angles 90o to the body
- Bring the other arm across the chest, and place the hand against the casualty's cheek nearest you
- Using your other hand, grasp the far leg just above the knee and pull it up ensuring the foot stays on the ground and knee bent

Keeping the hand against the casualty's cheek, pull on the far leg to roll the casualty towards you onto their side

Adjust the leg so that both the hip and knee are bent at about right angles

- Tilt the head back using jaw support to make sure the airway remains open and clear

  Jaw Support is supporting the jaw at the point of the chin in such a way that there is no pressure on the soft tissues of the neck. To use Jaw Support you fold three finger into your hand (Middle, Ring and Little fingers) having Thumb and Index finger pointed out. You place the knuckle of the index finger under the point of the jaw, the index finger is placed along the jaw line and the thumb grips the top of the point of the jaw.

- Adjust the hand under the cheek to maintain the head tilt
- Maintain observing casualty's breathing and pulse

Objectives of Resuscitation

To work efficiently, the human brain requires a constant supply of oxygen. A person who has stopped breathing will start to suffer irreversible brain damage within 3-4 minutes. It is with this in mind that a Carer aims to provide basic life support to the casualty by administering an adequate supply of oxygen to the casualty until breathing and/or circulation returns, or until professional medical assistance arrives e.g. the ambulance or doctor.

When calling for help the 'phone first' approach is recommended in life threatening situations. This allows for quicker response time for the Ambulance and is especially important for casualties suffering from a serious injury or illness such as a cardiac arrest. Outcomes for these casualties are significantly improved the quicker treatment is given.

NOTE: Where there is more than one casualty, the care of an unconscious casualty has priority.

Calling for help is easy. Any person can call for an ambulance in an emergency situation. The operator is specially trained in receiving emergency calls. If needed, he/she has access to ambulance officers who can give the correct medical advice over the phone if you are unsure of what to do.

DIAL 000 - (On most mobile phones if "**000**" does not work dial "**112**")

You will be asked if you want Ambulance, Fire or Police and then switched through to the appropriate service. The emergency operator (Ambulance, Fire or Police) will then ask for information on the following:

- The suburb;
- The address of the incident/casualty;

- The nearest cross street;
- What is the emergency (car accident, chest pain etc)?
- What is the casualty's condition (conscious/unconscious)?
- Your name and the phone number you are calling from, and;
- Any other information that the operator may request.

DO NOT hang up until instructed to do so by the emergency operator and keep the phone line free in case there is a need for the Ambulance to call you back.

NOTE: When the ambulance arrives, **DO NOT** stop treatment until instructed by the ambulance officers. This allows the ambulance officers time to quickly prepare their equipment.

Casualty Assessment

Assessment of the situation, a methodical approach based on the priorities of first aid establishes the safety of all concerned and the correct treatment to be given to the casualty. This is summarised with the letters **DRSABCD**. The Primary Survey is designed to detect any life threatening conditions that require immediate attention.

Figure 4: Primary Survey

D	**Danger**: Is there any danger (actual or potential) to self, bystander or casualty? If there is danger, it is preferable to move the danger away from the casualty. In some circumstances this will not be possible e.g. fire etc. In these situations the casualty needs to be carefully moved away from the danger.
R	**Response**: Is the casualty conscious or unconscious? If unconscious, the casualty needs to be placed in the side position.
S	**Send for Help**
A	Is the **airway** clear or blocked? If blocked, the airway needs to be cleared. Opening the airway (look for signs of life - Call **000**/resuscitation team)
B	Normal **breathing?** (give two rescue breaths if not breathing normally);
C	Give 30 chest **Compressions**: 2 breaths (if unwilling/unable to perform rescue breaths continue chest compressions
D	Attach AE**D** as soon as available and follow its prompts (If available) (AED – Automated External **Defibrillator**)

Figure 5: Basic Life Support Flow Chart

Basic Life Support Flow chart

D Check for **Dangers**

Check for: Hazards
Risks
Safety

R **Responsive**? or Unconscious?

Send for Help, Call 000
Resuscitation Team

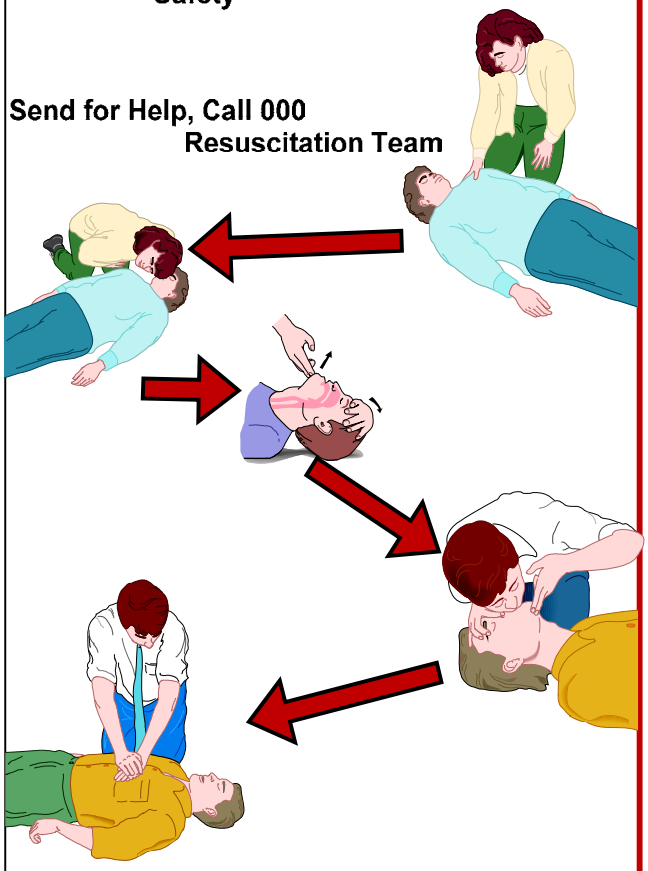
S **Send** for Help

A Open **Airway**
Look for signs of life

B Normal **Breathing**?

C 30 Chest **Compressions: 2 breaths**
if unwilling / unable to perform rescue breaths continue chest compressions

D Attach **Defibrillator (AED)** as soon as available and follow its prompts (if available)



Continue CPR until qualified personnel arrive or signs of life returns (responsiveness or normal breathing returns)

NO SIGNS OF LIFE:= Unconscious, Unresponsive, not breathing Normally, Not Moving
AED = Automated External Defibrillator

Open airway

1. Place one hand on casualty's forehead;

2. Place finger tips of the other hand under the casualty's chin;

3. Tilt head back gently and lift the chin to open airway;

4. Put on your gloves and remove any visible foreign matter, for example, broken teeth;

5. Check for signs of life, for example, unconscious, not answering questions, not breathing normally, not moving.

Breathing

Breathing is vital to sustain human life. When we breathe in, we use the oxygen from the air to keep our cells and organs alive. To put it very simply, without oxygen, we will die.

Once you have determined whether the casualty is conscious or unconscious, quickly determine whether the casualty is breathing. To do this, you will need to get close to the casualty even if it means getting down onto the floor with them. Place one hand close to their mouth and nose and your other hand on their chest, then place your ear close to their nose while observing at their chest. Look, listen and feel for signs of breathing for about 10 seconds.

- Look for rising of the chest.
- Listen for breathing (either breathing in or out) from the nose or mouth.
- Feel for breathing from the nose or mouth and for rising of the chest.

Figure 6: Checking casualty for breathing

Whether the casualty is breathing or not, call for help. If the casualty is not breathing, an ambulance should be called urgently.

Airway

General Principles

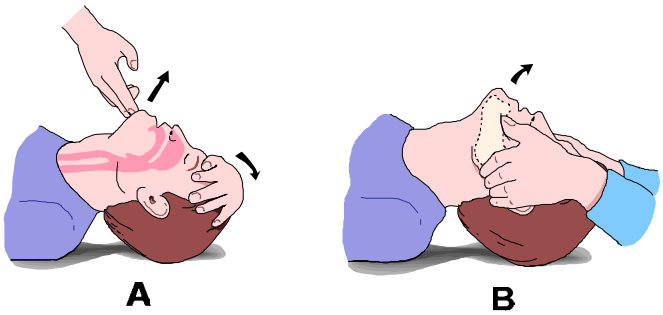
When a casualty is unconscious, all muscles are relaxed. If the casualty is left lying on the back, the tongue, which is attached to the back of the jaw, falls against the back wall of the throat and blocks air from entering the lungs. Other soft tissues of the airway may worsen this obstruction. The mouth falls open but this tends to block, rather than open the airway.

The obstruction to the airway by these soft tissues may be overcome by Backward Head Tilt together with the Chin Lift.

Figure 7: Backward Head Tilt and Chin Lift

(A) Open the victim's airway by tilting his/her chin gently with one hand, while pushing back on his/her forehead with the other hand.

(B) If you suspect a neck injury, put your fingers behind the jawbone just below the ear, and push the jaw forward to open the victim's mouth.



The unconscious casualty is further at risk because of being unable to swallow or cough out foreign material in the airway. This may cause airway obstruction, laryngeal irritation or foreign material may enter the lungs. For this reason, the rescuer should not give an unconscious casualty anything by mouth, and should not attempt to induce vomiting.

If foreign material irritates the vocal chords, a protective reflex muscular spasm (laryngeal spasm) prevents the entry of material into the lungs. This may result in partial or complete airway blockage of the entrance of the trachea (windpipe) with the casualty often making a “crowing” noise during attempts to breath. Airway closure due to the laryngeal spasm can be complete; then there is no “crowing” because there is no airflow into or out of the casualty. That can persist until the casualty becomes blue or unconscious from the lack of oxygen. When consciousness is lost, spasm usually relaxes.

In an unconscious casualty, care of the airway takes precedence over any injury, including the possibility of spinal injury. All unconscious casualties should be handled gently with no twisting or bending of the spinal column and especially the neck. If it is necessary, move the head gently to obtain a clear airway. Where possible, an assistant should support the head when an injured casualty is being moved, but no time should be wasted in detail positioning.

The casualty should not be routinely rolled onto the side to assess airway and breathing. Assessing the airway of the casualty without turning onto the side (i.e. leaving them on the back or in position in which they have been found) has the advantages of simplified teaching, and taking less time to perform and avoids movement.

The exceptions to this would be in submersion injuries or where the airway is obstructed with fluid (vomit or blood). In this instance the casualty should be promptly rolled onto the side to clear the airway.

The mouth should be opened and turned slightly downwards to allows any obvious foreign material (e.g. food, vomit, blood and secretions) to drain using gravity. Loose dentures should be removed, but well-fitting ones can be left in place. Visible material can be removed by the rescuer's fingers. Cases series reported the finger sweep as effective for relieving Foreign Body Airway Obstruction (FBAO) in unconscious adults and children and more than 1 year.

If and when breathing commences the casualty may be left on side with the appropriate head tilt. If not breathing, the casualty should be promptly rolled on the back and resuscitation commenced as appropriate.

Airway Management

Airway management is required to provide an open airway when the casualty:

- Is unconscious;
- Has an obstructed airway;
- Needs rescue breathing

The techniques most commonly used are Backward Head Tilt in combination with Chin Lift. (See Figure 7)

One hand is placed on the forehead or the top of the head. The other hand is used to provide Chin Lift. The head is tilted backwards (NOT the neck) It is important to avoid excessive force, especially where the neck injury is suspected. When the casualty is in the lateral position, the head will usually remain in this position when the rescuer's hands are withdrawn. Chin lift is commonly used in conjunction with Backward Head Tilt. The chin is held up by the rescuer's thumbs and fingers in older to open the mouth and pull the tongue and soft tissues away from the back of the throat.

Children and Infants

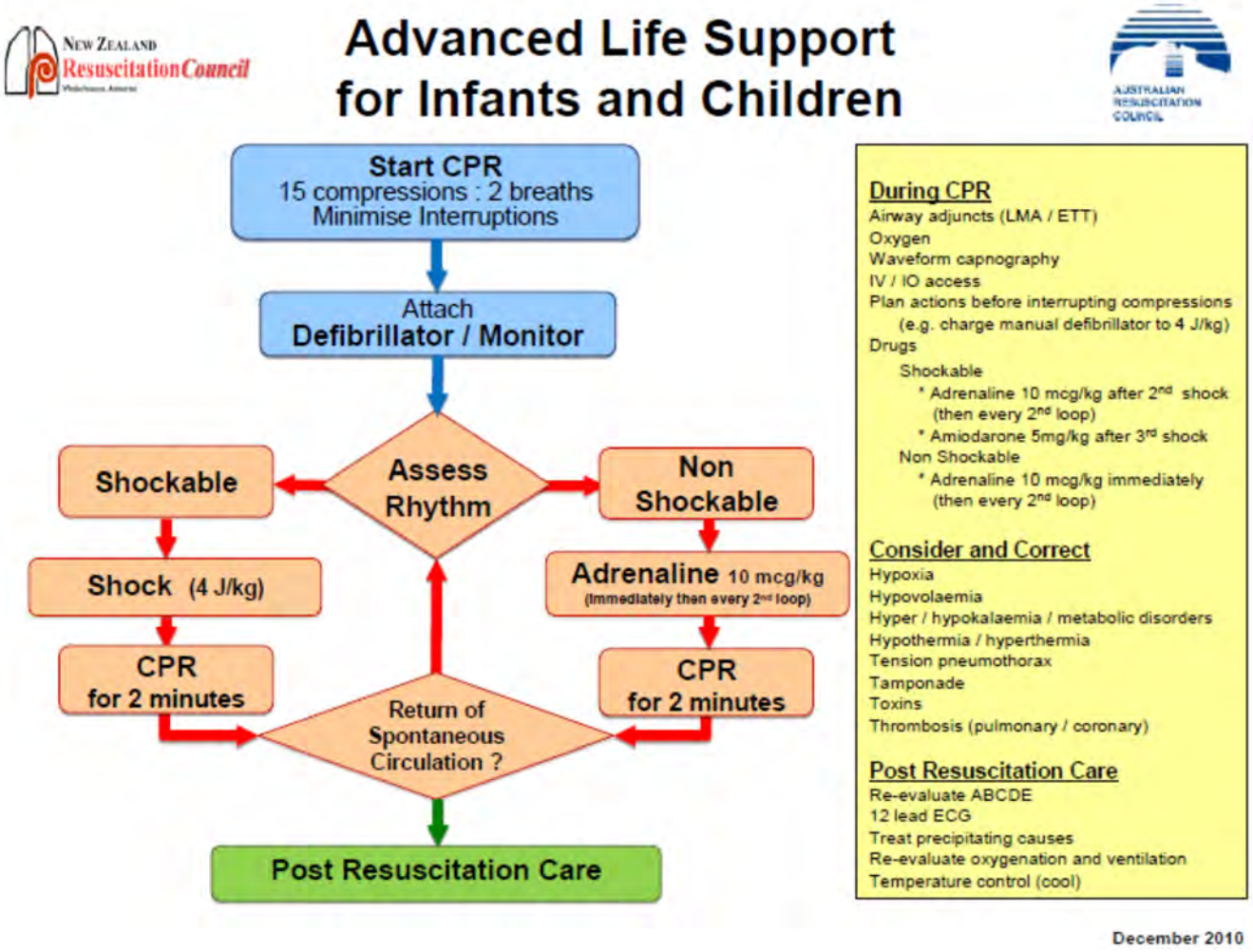
An infant is defined as younger than one year, a child as one to eight years of age.

Maintain an open airway

- The upper airway in infants is easily obstructed because of the narrowness of the nasal passages, the entrance to the windpipe (vocal chords) and the trachea (windpipe). The trachea so soft and pliable and may be distorted by the excessive backward head tilt or jaw thrust. Therefore, in infants the head should be kept neutral and maximum head tilt should not be used. The lower jaw should be supported at the point of the chin with the mouth maintained open. There must be no pressure on the soft tissues of the neck. If these manoeuvres **DO NOT** provide a clear airway, the head may be tilted backwards very slightly.

Figure 8: Advanced Life Support for Infants and Children

(as per http://www.resus.org.au – accessed 28/11/2013)



Recognition of Upper Airway Obstruction

Airway obstruction may be partial or complete and may be present in the conscious or the unconscious casualty. Some typical causes of airway obstruction may include, but are not limited to:

- Relaxation of the airway muscles due to unconsciousness;
- Inhaled foreign body;
- Trauma to the airway ;
- Anaphylactic reaction.

The signs and symptoms of obstruction will depend on the cause and severity of the condition. Airway obstruction may be gradual or sudden in onset and lead to complete obstruction within a few seconds. Consequently the casualty should be observed continually. In the conscious casualty who has inhaled a foreign body, for example, there may be extreme anxiety, agitation, gasping sounds, coughing or loss of voice. This may progress to the universal choking sign (clutching the neck with the thumb and fingers). Airway obstruction will cause the diaphragm muscle to work harder in order to achieve adequate ventilations. The abdomen will continue to move out but there will be loss of the natural rise of the chest (paradoxical movement), and in drawing of the spaces between the ribs above the collar during inspiration.

Partial Obstruction

- Breathing is laboured;
- Breathing may be noisy;
- Some escape of air can be felt from the mouth.

Complete Obstruction

- there may be efforts at breathing;
- there is no sound of breathing ;
- there is no escape of air from nose or mouth.

Airway obstruction may not be apparent in the non-breathing unconscious casualty until rescue breathing is attempted.

Management of Foreign Body Airway Management (Choking)

A Foreign Body Airway Obstruction (FBAO) is life threatening emergency. Chest thrusts, back blows or abdominal thrusts are effective for relieving FBAO in conscious adults and children older than 1 year of age, although injuries have been reported with the abdominal thrust.

Therefore, the Australian Resuscitation Council does not recommend the use of abdominal thrusts in the management of FBAO, and instead recommends that back blows and chest thrusts are used.

Assess Severity

The simplest way to assess severity of a FBAO is to assess for ineffective or effective cough.

Effective Cough (Mild Airway Obstruction)

A casualty with an effective cough should be given reassurance and encouragement to keep coughing to expel the foreign material. If the obstruction is not relieved the rescuer should call an ambulance (000).

Ineffective Cough (Severe Airway Obstruction)

Conscious Casualty

If the casualty is conscious, call an ambulance (000) and perform up to five sharp back blows. This should be done with the heel of one hand in the middle of the back between the shoulders blades. Check to see if each back blow has relieved the airway obstruction. The aim is to relieve the obstruction with each blow rather than give all five blows. An infant may be placed in a head downwards position prior to delivering back blows, i.e. across the rescuer's lap.

If back blows are unsuccessful the rescuer should perform five lateral chest thrusts. Check to see if each chest thrust has relieved the airway obstruction. The aim is to relieve the obstruction with each chest thrust rather than give all five chest thrusts. To perform side chest thrusts on adults and children, turn the patient onto their side, place your hands over the ribs just under the arm pit, and give five chest thrusts. These are similar to chest compressions but sharper and delivered at a slower rate. The infant should be placed in a head downwards supine position across the rescuer's thigh. If the obstruction is still not relieved, continue alternating five back blows with five side chest thrust.

Unconscious Casualty

The finger sweep can be used in the unconscious patient with an obstructed airway if solid material is visible in the airway. It is preferable to use the patient's fingers where possible. Call an ambulance and commence CPR.

Breathing

Causes of Ineffective Breathing of Acute Onset

Breathing may be absent or ineffective as result of:

- Direct depression of/or damage to the breathing control centre of the brain;
- Upper airway obstruction;
- Paralysis or impairment of the nerves and/or muscles of breathing;
- Problems affecting the lungs
- Immersion

Assessment of Breathing

After an unconscious casualty's airway is cleared, the next step is to check whether or not the casualty is breathing (more than occasional gasp). The rescuer should:

- LOOK and FEEL for the movement of the upper abdomen or lower chest, and;
- LISTEN and FEEL for the escape from nose and mouth.

Learning Activity 5:

Answer True or False to the following;

Consciousness can be determined by checking the casualty's skin colour. **True / False**

1.3 Assess the casualty and recognise the need for first aid response

Physical condition

In order to identify the casualty's condition or evaluate the extent of injuries, a quick and thorough physical assessment is required from head to toe. This is based on signs and symptoms. A head to toe assessment is only done if the casualty is conscious, or if unconscious, is breathing.

Signs and symptoms

Physical assessment can be divided into two parts: signs and symptoms.

A **sign** is something another person can see, hear, or smell, such as vomit, blood, sweating, smoke and fire.

A **symptom** is something the casualty can feel and can tell you about such as headache, blurred vision, dizziness and pain. In other words, you will be relying on the casualty to tell you their symptoms. If the casualty is unconscious, you will have to rely purely on signs and information given to you by witnesses.

Assessment of the casualty's physical condition should take place quickly yet carefully. Important information can be found by taking the time to thoroughly check the casualty. Start at the head and work towards the feet and pay close attention to the casualty's general appearance and behaviour. Use your gloved hands to:

- gently slide under the casualty's back (if possible) to check for signs of bleeding
- gently feel for swelling, tenderness, wounds, broken bones.

Figure 9: Basic list of abnormal signs and symptoms

	Abnormal signs	Abnormal symptoms
General appearance	• Pale, grey, flushed • Slight tremor to seizure	
General behaviour	• Anxious, tense, confused, restless • Irrational • Disoriented to time or place	• Feeling confused • Premonition ie flashing lights, halos • Weakness or can't move or feel limbs
Head	• Cut, bruise, swelling, blood • Blue around lips • Pinpoint or large pupils • Pupils are not equal in size • Pupils do not constrict with light • Blood or clear ooze coming from ears • Blood from nose or eyes • Foaming at the mouth	• Headache • Blurred or double vision • Dizziness
Skin	• Sweating • Hot or cold to touch • Redness	• Feels hot or cold • Pain
Breathing, chest	• Wheezing or laboured • Rapid • Coughing (particularly blood) • Both sides of chest do not move together	• Difficult or painful breathing • Tight chest
Back, neck		• Pain
Abdomen	• Vomiting (particularly blood) • Protruding organs	• Nausea, pain • Hunger or thirst
Limbs	• Deformity • Swelling, bruising • Cannot move fingers or toes	• Pain • Can't feel fingers or toes • Weakness

Obviously those with appropriate qualifications would be able to do a more comprehensive physical assessment.

Remember; do not move the casualty unless:

- they are in danger if they stay where they are; or
- they need to be moved to receive first aid.

Importance of obtaining a history

As well as assessing the physical condition, it is also vital to obtain as much information as possible surrounding the accident or incident. Sometimes the nature of the illness or injury will become quite apparent from the information and history alone. You can do this by either asking the casualty or any witnesses' questions such as:

- What exactly happened?
- When did this happen?
- How did it happen?

Learning Activity 6:

Answer True or False to the following;

a. An example of a sign is vomiting. **True / False**

b. An example of a symptom is bleeding **True / False**

c. It's normal for clear ooze to spill from the ear but not blood. **True / False**

Secondary assessment of the casualty

During a secondary assessment of the casualty you should use a systematic head-to-toe approach to your assessment, carefully observing each body region for any signs and symptoms of illness or injuries.

Check in order:

- head, face and neck;
- shoulders, arms and hands;
- chest and collarbones;
- abdomen;
- pelvis and buttocks;
- legs, ankles and feet.

During a head-to-toe assessment check each region of the body for both general and region-specific signs and symptoms.

Figure 10: General- and region-specific signs and symptoms

General signs and symptoms (all body regions):	
• Bleeding or bruising • Burns • Pain, tingling or numbness • Rashes	• Swelling • Fractures or deformity • Reduced movement • Bites or sting marks
Region-specific signs and symptoms:	
Head and Face	**Abdomen and Pelvis**
• Noisy breathing • Changes to speech • Changes to hearing	• Rigid stomach muscles • Loss of bladder or bowel control • Pregnancy in women

• Changes to vision • Skin colour and temperature • Sweating • Changes to vision Skin colour and temperature • Broken teeth • Fluid from ear, nose or mouth	**Arms and Legs** • Medical alert bracelet • Movement in all limbs • Strength of all limbs • Colour and warmth
Neck • Artificial airway (stoma) • Medical alert necklace	**Back and spine** • Tingling • Pins and needles • Loss of movement
Chest • Noisy breathing • Equal rise of chest with breathing	

Caution – Examination of the neck, back and spine If a neck, back or spinal injury is suspected do not move or roll the casualty unnecessarily. If no neck, spine or back injury is suspected you can assess the back and spine by gently rolling the casualty into the recovery position to look for any signs and symptoms of injury or illness.

Learning Activity 7:

Prioritise the treatment of the following casualties from the most urgent to least urgent by numbering 1 - 4.

A casualty with a sprained ankle	
An unconscious casualty who has no breathing and no pulse	
A casualty with chest pain and shortness of breath	
An unconscious casualty who is breathing	

A copy of the first aid record should accompany the injured or ill person if the person is transferred to a medical service or hospital. A worker should be given a copy of their first aid record or have access to that record on request. The original copy of the first aid record should be retained at the workplace.

When recording information relating to first aid, consideration should be given to including the following in any record:

- name, address, date of birth and sex of injured or ill person
- contact phone number/s
- basis of employment, for example, full time, part time, casual, visitor
- occupation
- nature of injury or illness, for example, fracture, burn, respiratory difficulties
- bodily location of injury or illness
- how the injury or illness occurred
- time and location of the incident which caused the injury or illness
- details of treatment, for example, the first aid treatment given and/or referral to ambulance, doctor, hospital or elsewhere
- subsequent injury/illness management
- any other relevant details such as witnesses to the incident, and
- name and signature of person completing the record.

Confidentiality of information

Personal information about the health of a worker is confidential. This information includes details of medical conditions, treatment provided and the results of tests. Disclosure of personal information, without that person's written consent, is unethical and in some cases may be illegal.

Health professionals should not be asked to disclose personal information about the health of a worker. The release of such information would contravene the profession's code of ethics.

1.4 Assess the situation and seek assistance from emergency response services where needed

Heart Conditions

Each year, thousands of people in Australia die from heart disease. Early Treatment may be able to reverse or reduce the damage to the heart and decrease the number of deaths from heart disease.

With today's life styles, the chances of heart disease are increased by:

- Obesity;
- Smoking;
- Stress;
- High cholesterol;
- High blood pressure;
- Family history;

- Age and/or gender.

Cardiac Arrest

This is where the casualty's heart is not beating. The casualty would therefore present with NO SIGNS OF LIFE. Regardless of how this was caused, if the casualty has NO SIGNS OF LIFE then CPR must be commenced immediately.

Heart Attack

The heart requires oxygenated blood in order to function effectively, the chances of somebody having a heart related illness increase in older persons. People who have a family history are also at higher risk. A lot of built up fatty deposits inside the blood vessels causes a narrowing effect, which reduces the amount of blood flow to the heart, tissue and cells. This reduces the ability of the heart and other organs to function correctly. When blood flow to the heart muscle is interrupted, a person is said to be *"having a heart attack".* A casualty who has a heart attack is also known as a *"myocardial infarction"*, this may or may not result in death. To reduce the chance of sudden death from heart attack urgent medical care is required. *"Every minute counts. Dial 000".*

Signs and Symptoms

- Medications and rest **DO NOT** relieve the pain.
- Pain does not change on inhalation or movement.
- Pain or heaviness to the chest radiating to the neck, shoulder and/or arm lasting for more than 10 minutes.
- Pulse can be irregular, weak, fast or slow.
- Sudden onset of pain, with or without exertion.
- The casualty can be pale, cold and sweaty.
- The casualty can be short of breath.
- The casualty may have nausea or vomiting.

Special Consideration must be looked at in regards to the following two points:

2. Not all heart attacks are accompanied by chest pain some casualties just look and feel unwell.

n. People who experience a heart attack may pass off their symptoms as 'just indigestion'.

In the two above situations **DO NOT** think that they may not be having a heart attack. Always assume the worst, if you think there may be a 'possibility' that

the individual is having a heart attack, please follow the treatment for heart attack.

The Warning Signs for a heart attack usually last at least 10 minutes. But if the warning signs are severe, or get worse quickly, DO NOT wait act immediately.

Treatment for Heart Attack

- **DRSABCD**
- Call 000 for an ambulance. (Call First and call Fast)
- Rest and reassure the casualty, preferably in a sitting position.
- **DO NOT** walk the casualty (this increases the load on the heart).
- Encourage the casualty to stop what they are doing and rest in a position they feel comfortable
- Loosen any tight or restrictive clothing.
- Assist the casualty to self Administer his/her own medications, as per doctor's instructions.
- The casualty must be seated or lying before taking their medication as this type of medication can cause the casualty's blood pressure to drop and cause a faint.

- Monitor the casualty's vital signs: pulse, respirations, and level of consciousness.
- If the casualty becomes unconscious commence **DRSABCD** immediately and if the casualty's breathing and pulse has stopped commence CPR.
- While waiting for the ambulance, advice may be given by the ambulance control operator over the telephone.
- If directed you are allowed to administer the casualty Aspirin (300mg). But only if directed to do so.

Angina

Angina is caused by a temporary lack of oxygen to the heart. The coronary arteries may have become narrow over time and therefore blood flow is reduced. This is a temporary condition resulting in chest pain, generally triggered by physical exertion resulting in an inability to supply sufficient oxygenated blood to the heart. Normally there is no damage to the heart once the casualty has been rested and has self-administered their medications. The casualty's medications are designed to dilate the arteries allowing more blood to reach the heart. They also help reduce the casualty's blood pressure, reducing the load on the heart. The most common medications are Nitro lingual spray and Arginine tablets.

Signs and Symptoms

- Pain does not change on inhalation or movement.
- Pain occurs on exertion.

- Pain to the chest, radiating to the neck, shoulder or arm.
- Pulse can be irregular, fast or slow.
- The casualty can be pale, cold and/or sweaty.
- The casualty can be short of breath.
- The casualty can have nausea or vomiting.
- The casualty's pain is relieved with rest and their own medications.

Treatment for Angina

- **DRSABCD**
- Rest and reassure the casualty.
- Assist the casualty to self-administer his/her own medications as per doctor's instructions making sure the casualty is sitting or lying down before taking their medication as this type of medication can cause the
- casualty's blood pressure to drop and cause a faint.
- If the chest pain lasts longer than 10 minutes or if unsure, call 000.
- Loosen any tight or restrictive clothing.
- Monitor the casualty's vital signs: pulse, respirations, and level of consciousness.

Heart Failure

This is an inability of the left side of the heart to pump effectively, causing pressure to build up within the circulatory system. This pressure build up allows fluid to move from the blood vessels to the air sacs of the lungs (Alveoli). In severe cases this will lead to respiratory failure.

Signs and Symptoms

- Onset is more common at night.
- Shortness of breath that increases if lying down.
- The casualty may cough up frothy fluid.
- The casualty may have chest pain, radiating to neck and arms.
- The casualty will generally have a long history of heart problems.
- The Carer may hear gurgling sounds.

Treatment for Heart Failure

- **DRSABCD**
- Call 000 for an ambulance. (Call First and call Fast)
- Sit the casualty upright.

- Reassure the casualty.
- Assist the casualty with his/her own medications if necessary, following the doctors' directions on the medications.

Shock

Shock is a term used to describe the result of the loss of an effective circulation. What this means is that the circulatory system (heart, lungs and blood vessels) are unable to circulate a sufficient supply of oxygenated blood to the cells of the body. This leads to the inability of the cells and tissue to function correctly. If untreated, shock can result in death. This is not to be confused with emotional distress/surprise which is not life threatening. The three main causes of shock (3) main categories:

- Absolute fluid loss.
- Relative fluid loss.
- Cardiac failure.

Absolute Fluid Loss - low blood volume (Hypovolaemia)

Absolute fluid loss can result from either internal or external bleeding where there is damage to the circulatory system or loss of body fluids through severe burns, severe vomiting, or severe diarrhoea, etc. This can lead to an inadequate supply of oxygenated blood to the cells and tissue. The onset of shock starts to occur when a casualty loses approximately 15% (approximately 750ml for an adult) of the circulating blood volume.

Relative Fluid Loss

Relative fluid loss occurs when there is an abnormal increase in the size of the circulatory system (arteries, veins and capillaries) within the casualty's body.

This can be due to:

- Severe allergic reaction (anaphylaxis).
- Chemicals or drugs.
- Severe infections.
- Nervous responses.
- Severe brain/spinal cord injury.

The volume of blood stays the same but the size of the circulatory system actually increases (arteries, veins and capillaries dilate). The effect of this increase in size can be a dramatic drop in blood pressure which can be life threatening.

Cardiac Failure (Cardiogenic Shock)

Cardiac failure occurs when the heart is suffering from either injury or disease and is unable to pump effectively or efficiently. The heart has its own blood supply coming from the coronary arteries. If this blood supply is interrupted by blockages or narrowing, as occurs in a heart attack, the heart will not be able to function correctly. The result is a lack of oxygenated blood to the cells and tissue.

The Body's Compensation Mechanism

When the supply of oxygenated blood to the cells and tissue is insufficient for the body to function correctly, the body automatically tries to compensate (homeostasis). Both the breathing rate (respirations) and the heart rate

increase in an attempt to supply oxygenated blood to the cells and tissue. Blood vessels around the skin and muscles will constrict, directing the blood away from the body's extremities. This allows more of the oxygenated blood to be directed to the vital organs such as the heart, lungs, brain etc. By the body attempting to compensate in this manner, it is effectively reducing the size of the circulatory system to maintain the body's blood pressure and provide oxygenated blood to vital organs.

The body can only compensate, by how much the heart's ability responds to increased demand. When the body is unable to compensate any further, the cells, tissue and vital organs (heart, lungs and brain) will be unable to function efficiently or effectively. If the cause of shock in the casualty is not rectified the vital organs will cease to function causing death.

Signs and Symptoms of Shock

The casualty's condition will depend on the severity of the underlying cause and may include.

- Increased breathing rate and depth;
- Increased heart rate with a weak pulse;
- Pale, cold and sweaty skin (caused by the blood vessels constricting);
- Weakness and/or dizziness;
- Nausea and vomiting;
- Confusion leading to unconsciousness;
- Slowing of the heart rate and respiration's as the condition deteriorates, leading to death.

Treatment of Shock

As a Carer, you can reduce some of the factors that lead to the shock process by:

- Conducting **DRSABCD** (primary survey);
- Controlling bleeding;
- Conducting a secondary survey

Head to Toe

- **Laying** the casualty down flat.
- **Elevating** the casualty's legs unless they are fractured or cardiogenic shock is suspected.
- **Treating** burns and other wounds.
- **Treating** fractures.
- **Reassuring** the casualty.
- **Loosening** any restrictive clothing.
- **Protecting** the casualty and keeping them comfortable.

- **Monitoring** vital signs (respirations, pulse rates and level of consciousness) at regular intervals.
- **Calling 000** for an ambulance.

A burn can be life threatening, especially if it involves the face, airway and lungs. Burns can lead to shock and infection.

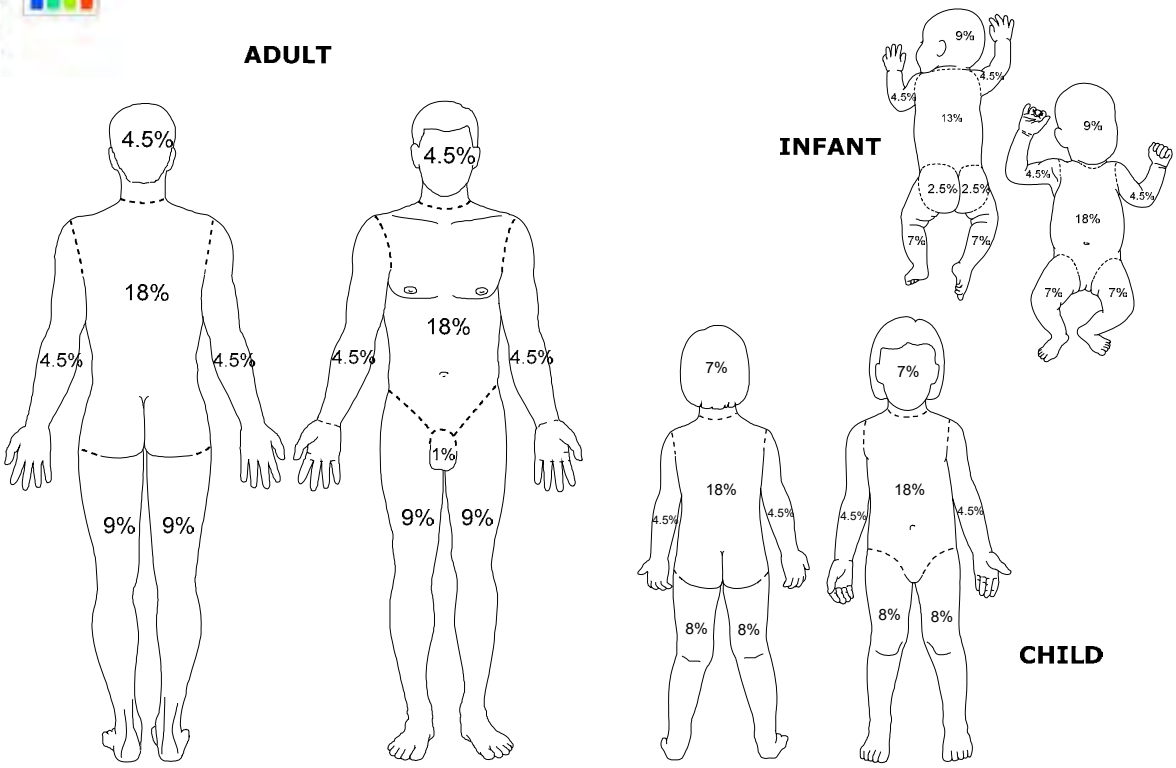
Burns

Area of burns

The rule of 'nines' is used to estimate the amount of burnt area. The body is divided into areas with a percentage for each area to assist in estimating the burnt area.

- Chest 9%;
- Abdomen 9%
- Head 9%
- Upper Back 9%
- Lower Back 9%
- Arm 9%
- Genital Area 1%
- Front Leg 9%
- Back Leg 9%

Figure 11: Rule of nines for body surfaces



Types of burns

- *HEAT:* Flames, steam and/or liquids.
- *ELECTRICAL:* Damaged/faulty cable, power points or lightning.
- *CHEMICAL:* Acids, caustic soda etc.
- *FRICTION:* Any friction generating heat e.g. rope, carpet.
- *RADIATION:* Sun.

There are two (2) methods used to determine the severity of a burn. Both these methods need to be used together.

Depth of Burns

The burn is classed as Superficial, Partial thickness or Full thickness.

- **Superficial Burn** - where the top area of skin is damaged. E.g. light sun burn
- **Partial thickness** - burns affect the outer layers of skin.
- **Full thickness** - burns can affect all layers of skin, tissue, muscle and bone.

Significant Burns

A Significant Burn is considered as:

- Burns greater than 10% of total body surface area

- Burns of special areas - face, hands, feet, perineum, and major joints
- Full thickness burns greater than 5% total body surface area of the casualty
- Electrical burns
- Chemical burns
- Circumferential burns of the limbs of chest
- Burns to a very young or very old casualty
- Burns to a casualty with a pre-existing medical condition that would complicate management, prolong recovery or increase mortality
- Burns with associated trauma

ALL infants or children with burns should be medically assessed.

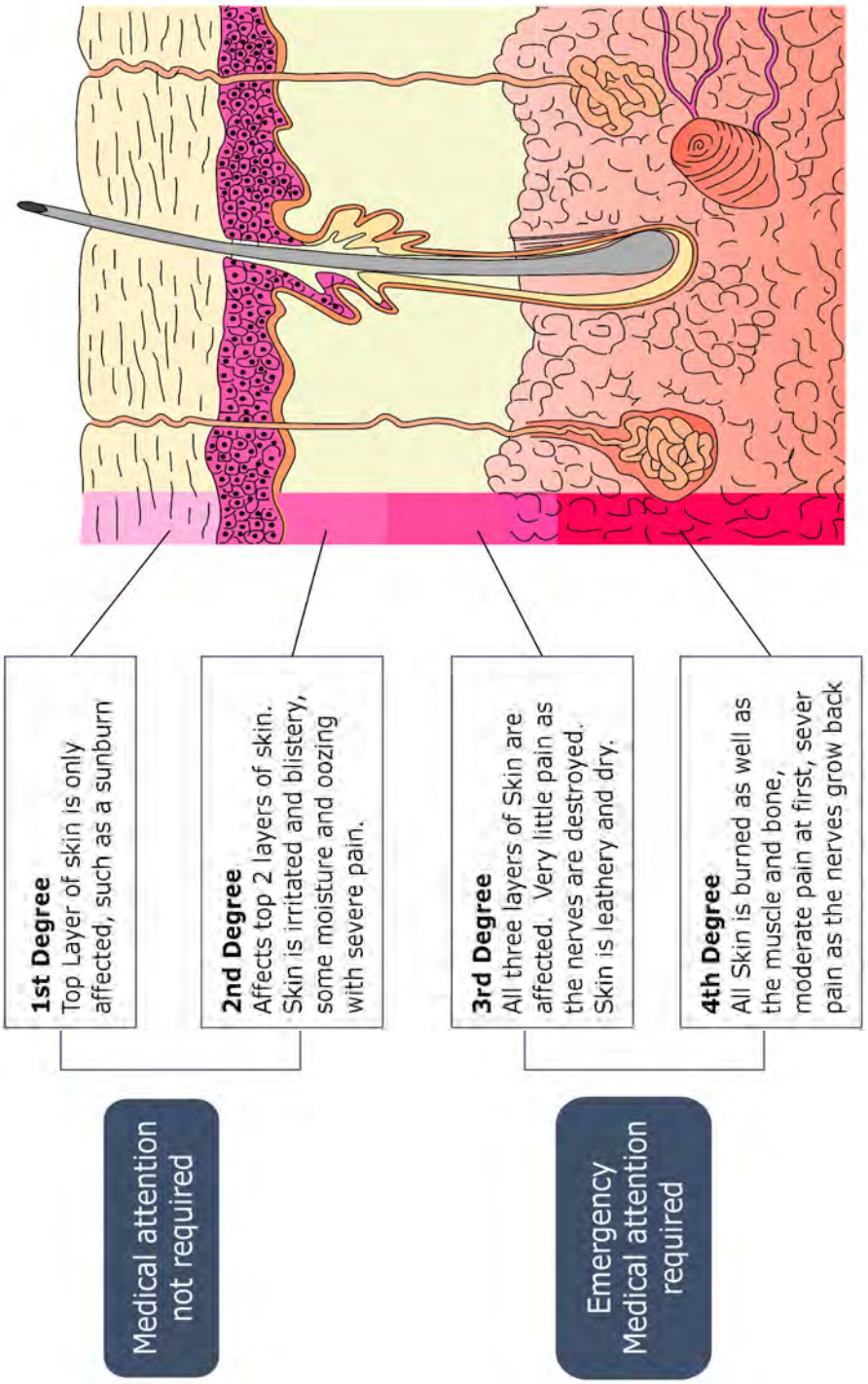
Signs and Symptoms of Partial Thickness Burns

- The affected area is red;
- Blistering;
- Pain around the affected area;
- Skin may peel;
- There may be clear fluid (plasma) oozing from the burn;
- A hoarse voice if the airway is burnt;
- Breathing difficulties;
- Swelling of the airway, leading to a blocked airway.

Signs and Symptoms of Full Thickness Burns

- The affected area can be black, charred in the middle and have a waxy centre with reddening on the edges;
- Can have blisters;
- There may be very little or no pain due to nerve damage. However, it may be painful on the edges of the burn;
- There may be clear fluid (plasma) oozing from the burn;
- Pale, cold or clammy skin;
- A hoarse voice if the airway is burnt;
- Breathing difficulties;
- Swelling of the airway leading to a blocked airway.

Figure 12: 4 Degrees of Burns



Treatment of Burns

- **DRSABCD**;
- If the casualty is on fire, drop and roll the casualty or use a fire blanket or water;
- Cool the burnt area with gentle running, clean, cool water for a minimum of ten (10) minutes;
- Immediately remove any jewellery, rings, watches, etc;
- Cover the burnt area with a clean sterile non-stick dressing or sheet;
- Continue running water over the dressing if pain persists;
- Monitor the casualty's vital signs, pulse, respirations and levels of consciousness;
- Reassure the casualty;
- **Call 000** for an ambulance;
- If the airway is burnt, give small sips of cool clean water;
- You can apply cold compresses to the neck area.

DO NOT remove clothing that is stuck to the skin.

DO NOT over cool the casualty. If the casualty shivers or gets goose bumps, the body naturally starts to produce heat and we do not want this to happen!

DO NOT apply lotions, oils or butter.

DO NOT pull burning smouldering clothing over a casualty's head.

DO NOT use cotton wool or any adhesive tapes/plaster.

DO NOT underestimate burns, especially when the airway is involved.

DO NOT break any blisters.

Electric Shock

An electric shock occurs when a person comes into contact with an electrical energy source. Electrical energy flows through a portion of the body causing a shock. Exposure to electrical energy may result in no injury at all or may result in devastating damage or death.

Burns are the most common injury from electric shock

Electrical burns

- Always be aware of danger to yourself, casualty and bystanders.
- Look for and treat both entry and exit wounds.

- Monitor the casualty's Airway, Breathing & Circulation closely, as the heart can stop at any time.
- Treat as per burns.

- Be aware that the casualty could have internal injuries caused by the electricity.
- Complete a head to toes (Secondary Survey) if the casualty has been thrown, looking for other injuries.

Cold burns

Treat as per burns except use warm water to try and bring the cold burn back up to a normal temperature.

Chemical Burns and Splashes

- Avoid contact with any chemical or contaminated material (e.g. use gloves)
- If available, refer to the Material Safety Data Sheet (MSDS) for specific treatment
- Refer to instructions on the container for specific treatment
- Call Poisons Information Centre on 13 1126
- Remove the chemical and contaminated clothing as soon as practical
- Brush powdered chemicals from the skin
- IMMEDIATELY run cool tap water directly onto the area for 20 minutes
- If chemical enters the eye, open and flush affected eye(s) thoroughly with water for at least 20 minutes and refer the casually to urgent medical attention. (Call for Help)

Radiation Burns

- The most common type is sunburn.
- Remove the casualty from the sun.
- Treat as for a burn.
- **DO NOT** over cool the casualty.

Phosphorus Burns

- Dress wounds from phosphorus injured casualties with saline soaked dressings to prevent ignition of the phosphorus by contact with air
- Phosphorus may be found in flares, fireworks and weapons made in chemical laboratories. When exposed to air, phosphorus may ignite spontaneously.

Hydrofluoric acid

Hydrofluoric acid is used as a cleaning agent by jewellers, in glass etching and in other industries. It is one of the most dangerous and corrosive acids which cause a full thickness burn and excruciating pain: even a small area of persistent pain needs urgent medical assessment and may become life threatening if untreated.

Early and copious irrigation with water is needed. If available, it is critical to apply calcium gluconate as soon as possible. Calcium gluconate should be available at all worksites where hydrofluoric acid is used.

Bitumen

Bitumen should not be removed from the victim's skin, as this may cause more damage. Bitumen continues to hold heat therefore irrigation with water should continue for at least 30 minutes. Consider scoring or cracking the bitumen if it is encircling a limb of digit.

Petroleum Products

Petroleum (not flame) may cause chemical burn due to direct toxic effects. Prolonged contact has been associated with organ failure and death. Copious irrigation with water is required.

Smoke Inhalation

- This can cause burns to the airway due to the heat of the air and smoke.
- Smoke could contain toxic chemicals.
- Ensure the casualty is removed from the smoky environment.
- Place the casualty in an area with plenty of fresh air.
- If the airway is burnt, give small sips of cool clean water.
- Monitor **DRSABCD**.
- Call 000 for an ambulance.

The body requires a constant supply of blood, which is pumped around the body via the heart through a closed system consisting of arteries, veins, and capillaries. When this system is damaged (internal/external bleeding) and not controlled, clinical shock can result which can be life threatening.

Sunburn

Australians love the outdoors but on a fine summer's day skin can burn in as few as 15 minutes. On average, 5.7million Australians get sunburnt every summer. It's the ultraviolet, or UV, rays that do the damage, and because the rays aren't influenced by temperature their levels can be high even on cool or cloudy days. When skin is affected, sunburn will show within two to six hours and continue to develop over the next 24-72 hours. Mild sunburn, which causes skin to redden, is called first degree sunburn. More serious reddening with blisters is second degree sunburn. Third degree sunburn requires medical attention.

The first thing to do in an emergency

- Get the person out of the sun and sponge cold water onto the affected skin.
- Give first aid for burns and scalds.

Trauma Accidents

Some accidents can be very traumatic when a Carer is faced with the gruesome reality of the extent of injuries, the many decisions to be made

and the priorities that need to be determined. The personal impact on the Carer can be very dramatic. If at any time a Carer is suffering from a posttraumatic incident contact the local community health department or the Carer's local doctor.

What to Do First

- **DRSABCD**;
- Call 000 for an ambulance. (Call First and call Fast);
- Ensure the safety of yourself, bystanders and the casualty/casualties;
- Protect the casualty/casualties at all times;
- If road accident you must avoid oncoming traffic and organise for bystanders to stop or slow the traffic;
- Turn on the hazard lights of your vehicle and those of any vehicles involved in the accident if possible;
- Park your car to protect the scene;
- Ensure that there are no electrical lines down. If there is, stay well clear from the incident wait for the emergency services to make safe;
- Check how many casualties are involved;
- For vehicles involved in the accident turn the ignition off, apply the handbrake, remove the keys and leave them on the floor;
- **DO NOT** disconnect the battery of a damaged vehicle;
- **DO NOT** allow casualties or bystanders to smoke.

General Treatment for Trauma Accidents

- Carry out a primary survey on all casualties to help determine priorities of treatment;
- Treat all life threatening injuries first;
- Carry out Secondary Survey and any subsequent Treatment;
- Monitor the casualty's vital signs and inform the ambulance officers when they arrive.

Motorbike Accidents

Be aware of the increased risk when treating a casualty from a motorcycle accident because of the chance of the casualty having a life threatening injury. A conscious casualty can remove their own helmet, otherwise leave the helmet on the casualty unless they are having breathing problems or are unconscious and the Carer needs to carry out **DRSABCD**.

- **DRSABCD**;
- Where possible two people should assist in removing the helmet. One person should support the casualty's neck while the other removes the helmet;
- Hold and support the casualty's neck with the least amount of movement possible;
- Pull the helmets fastener straps outwards. This compresses the padding and stretches the helmet out;
- Remove the casualty's helmet by slowly lifting the chin of the helmet up and back over the casualty's face and head;
- Always maintain a neutral head/neck position.

Triage

Triage is used to give priority to a number of injured people who will benefit from your limited first aid resources. Triage is used in the first aid situation to prioritise who will be treated in what order. You are therefore with limited resources providing the greatest good to as many people as possible...

To effectively provide the best treatment for the neediest, some seriously injured casualties may have to be temporarily ignored. The requirement is for your limited first aid resources to be given to the casualties who will survive because of it, and not to those who are likely to die.

To triage an incident, your approach has to be objective.

You should ask yourself three questions:

1. Who needs treatment to save their life?

2. Who will really benefit, and who won't?

3. If I treat one person, will others suffer seriously from lack of attention?

DRSABCD, control of severe bleeding, treatment for shock, and treatment for burns, are still the priorities when attending multiple casualties with little or no assistance.

Casualties in cardiac arrest are only given CPR if there are no other seriously injured casualties requiring life-saving treatment. If you become concerned with a casualty in cardiac arrest, you will be fully committed performing CPR (usually to no avail), at the expense of another who may be saved by your first aid treatment.

An unconscious casualty on his back, a person with severe bleeding, a casualty with a head injury going into shock - all are high priorities because without your treatment they may die. A conscious casualty with a fractured leg is less urgent and can wait until the more serious casualties are dealt with. A conscious casualty walking around, complaining of a sore shoulder,

for example, is at the bottom of the triage list. The most knowledgeable or experienced person present should undertake triage.

External Wounds

Abrasions

This is a graze. The blood vessels that are damaged are usually capillaries and the blood oozes. The causes of these types of injuries are generally from scraping of the skin on a rough surface.

Lacerations

This is an opening of the skin and underlying tissue. Either a blunt or sharp object can cause it. A sharp object causes an incision, which has even edges. Blunt objects cause a tearing of the skin with uneven edges to the wound. The blood will be bright red and spurting or dark red and flowing, depending on whether an artery or vein has been damaged.

Puncture / Penetrating

Knives, screwdrivers, gunshots and other objects often cause these types of wounds. These injuries can cause underlying damage to arteries, veins and underlying body parts as these injuries are more notably internal, there may not be a lot of external bleeding. A puncture / penetrating injury could cause substantial internal bleeding, especially if the wound has caused serious damage to the surrounding tissue and bone.

Amputation

This is a serious injury. This injury can be a complete loss of a limb or part of a limb. Normally there is a lot of blood loss because of the severed arteries along with the loss of the body part.

Treatment for External Wounds

- **DRSABCD**;
- Apply direct pressure to the wound, squeezing the edges of the wound together if possible. Be aware if you delay using direct pressure the patient can suffer from severe shock from blood loss;
- Call 000 for an ambulance. (Call First and call Fast);
- Protect yourself from coming into contact with blood and fluid by using gloves, eye protection, and face mask;
- If possible make casualty comfortable by sitting or lying down;
- Elevate the wound unless fractured;
- Inspect the wound, checking for foreign materials. If foreign material is on the surface of the wound, lightly brush off using a sterile pad or if possible wash with saline solution;
- **DO NOT** remove foreign materials that are embedded in the wound as this may increase bleeding and cause further injury to the casualty;

- Apply a clean pad over the wound;
- Apply a firm bandage around the bleeding wound;
- **DO NOT** bandage the wound too tightly as this may cut off the circulation;
- **DO NOT** apply pressure over or on a protruding object. Apply pressure by padding around the object;
- Check circulation below the wound before and after applying pad and bandage;
- If bleeding does not stop, remove the bandage, leaving the pad in place. Place a second pad over the first pad and re-bandage firmly;
- **DO NOT** remove the first pad as this may remove any clotting blood and increase bleeding.

Note: An arterial tourniquet may control life-threatening bleeding but may also cause permanent irreparable damage to a limb. Use an arterial tourniquet only as a last resort where all other methods of controlling bleeding have failed.

Internal Bleeding

Internal bleeding can be difficult to recognise, but should be suspected after the Carer gathers a good history (what's happened) and observes the casualty's signs and symptoms.

Signs and Symptoms

- Anxious;
- Pain, tenderness or tension over or around the affected area;
- Bleeding from the ear or nose after a head injury;
- Bright red frothy blood coughed up from the lungs;
- Pale, cold and clammy skin;
- Dark brown blood (like coffee grounds) vomited from the stomach;
- Passing of urine/faeces with blood;
- Rapid and shallow breathing;
- May have an altered level of consciousness;
- Rapid and weak pulse;
- Nausea and/or vomiting;
- Restless;
- Visible swelling.

Treatment for internal Bleeding

- **DRSABCD**;
- Call 000 for an ambulance. (Call First and call Fast);
- A Carer cannot control internal bleeding, therefore it is important to give the following treatment:
  - **d.** Place the casualty on their side if unconscious.
  - **e.** Lay the casualty in a flat position if conscious.
  - **f.** Raise the casualty's legs if injuries permit.
  - **g.** Monitor the Airway, Breathing and Circulation (ABC).
  - **h.** **DO NOT** give any medications or alcohol.
  - **i.** **DO NOT** allow the casualty to eat or drink.
  - **j.** Reassure the casualty even if unconscious. Some people can still hear when unconscious.
  - **k.** Protect the casualty from the environment
  - **l.** Check for any other injuries.

Allergic Reaction (Anaphylaxis)

Anaphylaxis is a severe Allergic Reaction that can be triggered by a variety of substances and can be life threatening. The signs and symptoms of an allergic reaction usually occur rapidly and within seconds to minutes.

A person who is diagnosed with allergies that may lead to anaphylaxis, often have prescribed medication (injectable adrenaline). This injection of adrenaline is often the lifesaving factor in anaphylaxis.

Signs and Symptoms

- Abdominal cramps;
- Bright red skin;
- Difficulty breathing;
- Fast pulse.
- Itching/hives;
- May collapse, leading to unconsciousness;
- Nausea and/or vomiting;
- Sudden onset of weakness;
- Swelling of the throat and tongue;
- The airway may become blocked leading to respiratory arrest;
- Wheezing.

Treatment for Allergic Reactions

- **DRSABCD**

- Call 000 for an ambulance. (Call First and call Fast)
- If the casualty has his or her own medications, (injectable adrenaline), assist the casualty to administer the medication as per the doctor's instructions.
- Rest and reassure the casualty.
- Monitor the casualty's vital signs, Airway, Breathing and Circulation.
- Be prepared to carry out CPR.

Bites and Stings

Bites and stings from venomous snakes and spiders can be fatal due to the venom poison and the effects it has on the nervous and respiratory system. The venom can cause an allergic reaction. Most of the bites and stings occur to the arms or legs of a casualty. If the casualty receives the correct first aid treatment it is unlikely that the casualty will die.

Snake Bites

Australia has some of the deadliest snakes in the world. Life threatening effects may not be seen for several hours. With large amounts of venom, symptoms can appear within minutes, especially in children.

Signs and Symptoms

- Abdominal pain;
- Fitting;
- Difficulty breathing;
- Headache;
- Breathing stops (respiratory arrest);
- Nausea and/or vomiting;
- Difficulty speaking and/or swallowing;
- Loss of consciousness;
- Dizziness and blurred vision;
- Paired fang marks or a single mark/scratch;
- Facial and limb weakness and/or paralysis;
- The bite may be painless, without any visible marks.

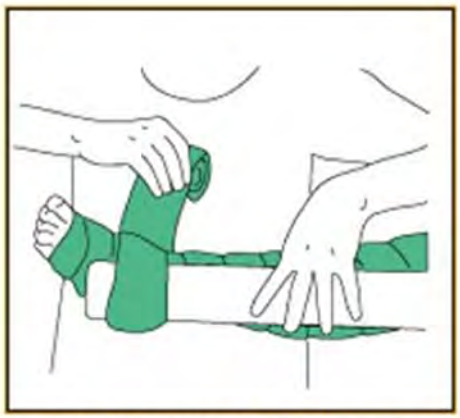
- **DRSABCD**;
- Call 000 for an ambulance. (Call First and call Fast);
- Lie the casualty down;
- Apply pressure to the bite site;
- Apply a compression bandage to the affected limb. The pressure bandage is best applied initially over the bite site, then extending up the affected limb;
- Splint the limb, including joints on either side of the bite;
- Check the fingers/toes for adequate circulation;
- Keep the casualty calm and at rest;
- Mark the bite site on the bandage;
- Monitor the casualty's pulse, respirations and levels of consciousness;
- **DO NOT** cut the bite;
- **DO NOT** use an arterial tourniquet;
- **DO NOT** wash or suck the bite;
- **DO NOT** remove bandages or splints;
- **DO NOT** allow the casualty to walk or move the affected limb, even if the bite is on the hand get help to come to the casualty.

Figure 13: Applying a pressure immobilisation bandage

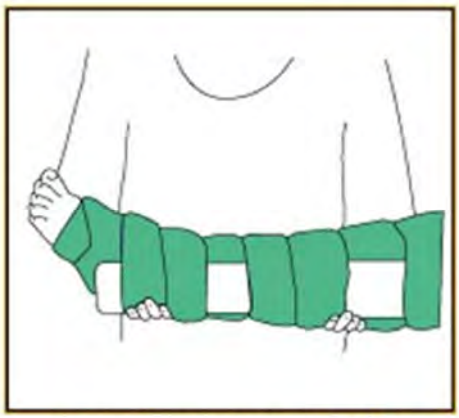
1. Wind the bandage firmly around the bitten arm or leg starting from the bite. The bandage should not be so tight that it restricts blood flow.

2. Wrap the entire limb, then apply a splint to prevent movement.

3. Keep the victim as still as possible.



4. Do not remove the bandage.



5. Seek medical attention as soon as possible.

Tick Bite

In Australia, although there are a variety of ticks, it is only the scrub tick that will seriously affect people.

Ticks can be found anywhere on the body but are usually located in hairy areas, skin folds and crevices.

Signs and Symptoms

- Blurred vision;
- Breathing difficulties;
- Lethargy;
- Localised pain;
- Muscle weakness (especially in children);
- Paralysis (especially in children);
- Swallowing difficulties;
- Unsteady walk.

Allergic reactions rarely occur but when they do, the signs and symptoms are:

- An itchy rash could appear;
- The face and throat may swell;
- The casualty may have breathing difficulties;
- Bright red skin;
- Rapid pulse;
- The casualty can collapse, leading to unconsciousness.

Treatment for Tick Bites

- **DO NOT** cut or squeeze the tick out;
- Slide the open blades of sharp pointed tweezers on each side of the tick and lever it upwards;
- Check the casualty's entire body, including the ears, hair and skin folds for further ticks;
- Seek medical advice for any further treatment;
- If the casualty has a history of allergic reaction or signs and symptoms of an allergic reaction;
- Call 000 for an ambulance. (Call First and call Fast);
- Be prepared to carry out CPR;
- Use a pressure bandage and splint the same as a snake bite

Red-back Spider

A Red-back spider bite may threaten the life of a child or a sick elderly person, but is rarely serious for an adult. The Treatment for the bite is also different than for a Funnel Web.

Signs and Symptoms

- Immediate pain to the bite site.
- Bite site becomes red, hot and swollen.
- Intense localised pain.
- Pain increases and spreads.
- Nausea and/or vomiting.
- Stomach pain.
- Profuse sweating.
- Swollen groin and armpit glands.

Treatment for Red-back Spiders

- Rest and reassure casualty
- Call 000 ambulance
- Ice pack over bite area
- Monitor Airway, Breathing, Circulation
- **DO NOT** use the Pressure Immobilisation technique with Red Back Spider Bite as the poison spreads slowly and the pressure will increase pain

Funnel Web Spider

All spiders have fangs, but the only spider that is an immediate threat to life in Australia, is the Funnel Web. If signs and/or symptoms occur from any spider bite, call 000 for an ambulance.

Any bite from a large dark spider should be treated as if it is a dangerous spider bite and immediate Treatment should be provide

Signs and Symptoms

- Pain to the bite site.
- Tingling around the mouth.
- Copious secretions of saliva.
- Profuse sweating.
- Stomach pain.
- Nausea and/or vomiting.
- Confusion.
- Breathing difficulties.
- Loss of consciousness (Usually a sudden onset)

Treatment for Funnel Web Spider

- **DRSABCD**
- Call 000 for an ambulance. (Call First and call Fast)
- Lie the casualty down.
- Apply pressure to the bite site.
- Apply a compression bandage to the affected limb. The pressure bandage is best applied initially over the bite site, then extending up the affected limb as far as possible.
- Splint the limb, including joints on either side of the bite.
- Check fingers/toes for adequate circulation.
- Keep the casualty calm and at rest.
- Mark the bite site on the bandage.
- Monitor the casualty's pulse, respirations and levels of consciousness.
- **DO NOT** allow the casualty to walk or move the affected limb, even if the bite is on the hand; get help to come to the casualty.
- **DO NOT** cut the bite.
- **DO NOT** remove bandages or splints.
- **DO NOT** use an arterial tourniquet.
- **DO NOT** wash or suck the bite.

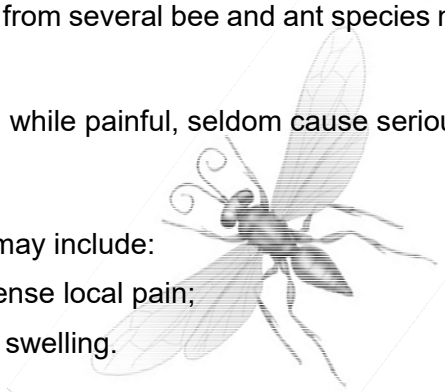
Bee, Wasp and Ant Sting

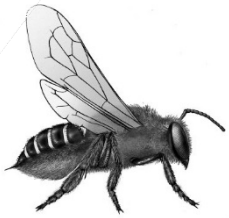
Introduction

These painful stings are a serious problem only for persons allergic to the venom. In particular, sting from several bee and ant species may cause severe allergic reactions.

Most wasp and ant stings, while painful, seldom cause serious problems.

Recognition





- Symptoms and signs may include:
  - **a.** Immediate and intense local pain;
  - **b.** Local redness and swelling.
- In allergic persons:
  - **a.** Itchy rash;
  - **b.** Facial swelling;
  - **c.** Wheezing and difficulty in breathing;
  - **d.** Collapse.

Note:

In an allergic person dangerous effects can occur within minutes. If stung in or around the mouth local swelling can result in airway obstruction and urgent medical care is required.

Treatment for Bee, Wasp and Ant Sting

- Scrape a bee sting off sideways with a finger nail or sharp edge. The sac must not be squeezed or pulled because this will inject more venom.
- Apply an ice compress to relieve pain
- Commence resuscitation if necessary, following the Australian Resuscitation Council Basic Life Flow Chart.
- If the victim has a history or signs of allergy:
  - **e.** Use the Pressure Immobilisation Technique immediately
  - **f.** Call the Ambulance urgently (Call First Call fast);
  - **g.** Assist casualty with medication if they have an EpiPen with Adrenaline

EpiPen

- Using the EpiPen Auto-injector device (adrenaline, epinephrine) to treat severe allergies.
- Adrenaline (epinephrine) is a natural hormone released in response to stress. It is a natural "antidote" to the

chemicals released during severe allergic reactions triggered by drug allergy, food allergy or insect allergy. It is destroyed by enzymes in the stomach, and so needs to be injected. When injected, it rapidly reverses the effects of a severe allergic reaction by reducing throat swelling, opening the airways, and maintaining blood pressure.

- Use of adrenaline for treating anaphylaxis is First Aid.

Note: Please make sure that you know how to use the Epi-Pen ahead of time. Read the instructions and aware of how to operate it and where to make the injection on the casualty.

Figure 14: Design and features of Epi-Pen® Auto-Injector

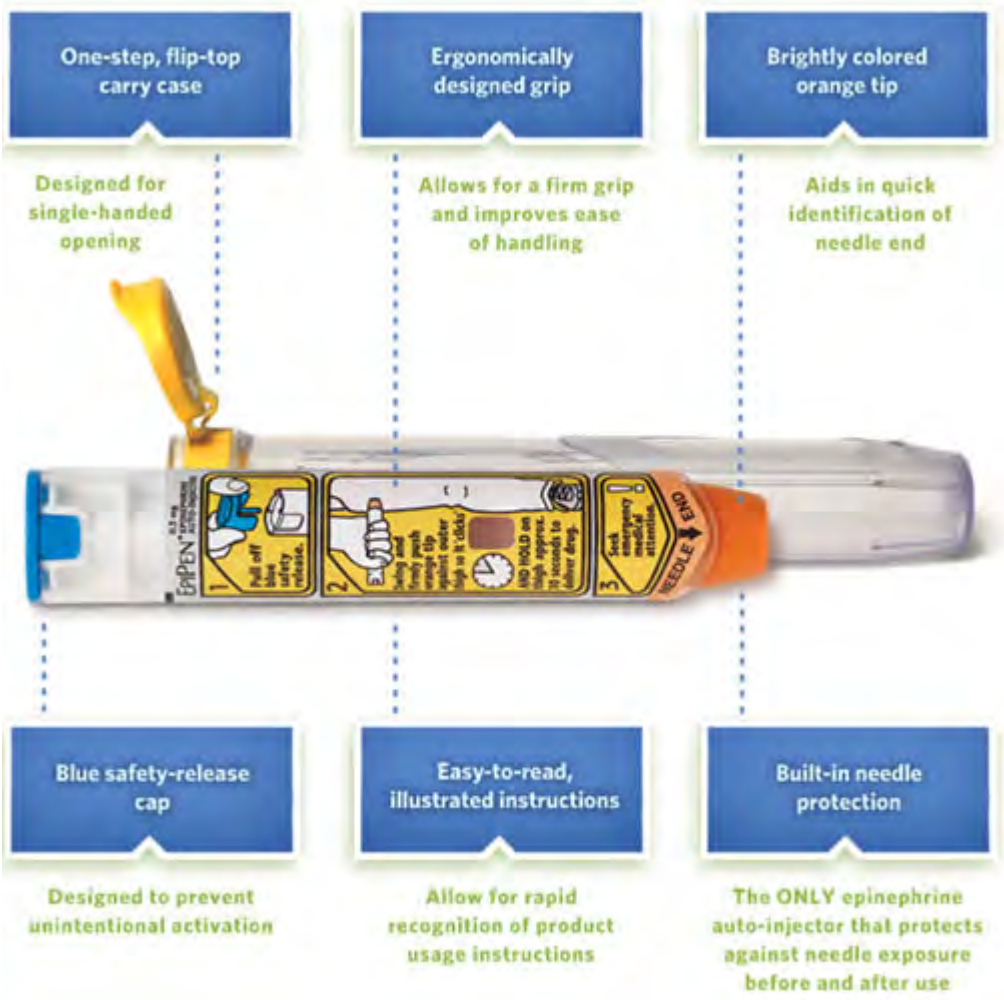


Figure 15: EpiPen® User Guide

Fire ants

Fire Ants (Solenopsis invicta) are a serious insect pest in Australia. They have the potential to destroy our outdoor lifestyle, environment and agricultural production.

Social Impacts

Fire ants are a social menace because of their sting. Encounters with fire ants may involve dozens of ants that may move quickly and remain undetected as they crawl up your leg. By the time they sting, there may be tens or hundreds of ants on your body, and they tend to all sting at once.

About the sting

Fire ants have a sting in their tail, similar to wasp and bees. However, unlike bees, fire ants can sting repeatedly. Stings from fire ants can cause a painful, burning and itching sensation, which can last for an hour. The sensation produced by multiple stings is that the body is on fire; hence, the name fire ant.

First aid Treatment for Fire Ants

- Apply a cold compress or ice as soon as possible to the affected areas to reduce swelling and relieve pain.
- After a few hours (or even a day or two), a small blister or pustule can form at the site of each sting. These may become very itchy and can take up to 10 days to heal. To prevent secondary infection, wash the blisters gently with soap and water and be careful not to break them.

Figure 16: Fire ant and its bite.

Marine Stingers

Tropical Jelly Fish

There are many types of jellyfish in the ocean. In Australia two of these are, the Chironex Box Jellyfish and Irukandji are classed as dangerous tropic jellyfish.

Irukandji Jellyfish

Irukandji Jellyfish are found in Australian tropical waters north of Agnes Waters (just south of Gladstone) in Queensland around to Western Australia south to Exmouth. However species are also found out to sea, and on the Great Barrier Reef. At times they may occur in epidemic proportions close to shore. The Irukandji Jellyfish is a small transparent box jellyfish 1-2 cm in diameter, usually never seen, some newly described species may be larger (up to 10 cm).

Signs and Symptoms

A sting from Irukandji Jellyfish typically causes an initial minor stinging sensation to the skin followed 20 to 40 minutes later by severe generalised muscle pain, headache, vomiting and sweating. The sting from some species cause very high blood pressure that may be life threatening. These symptoms are referred to as Irukandji Jellyfish Syndrome.

Figure 17: Irukandji Jellyfish

Chironex Box Jellyfish

Chironex Box Jellyfish is more commonly known as the “Box Jellyfish”. It is found in shallow Australian tropical waters north of Agnes Waters (just south of Gladstone) in Queensland around to Western Australia south to Exmouth. Stings from the Box Jellyfish have been recorded predominantly in coastal areas. The Box Jellyfish is a large but almost transparent jellyfish with a box shaped bell (with four corners) up to 30 cm diameter, Up to 15 ribbon like tentacles on each corner (up to 60 tentacles on each jellyfish. These tentacles may contract to 10 cm or extend to about 3 metres in length.

Skin Markings from various jellyfish to look out for:

- An inconspicuous mark which may develop a red flare ;
- An inconspicuous mark with goose pimples or an orange peel appearance;
- An inconspicuous mark with profuse sweating only at the sting site;
- An irregularly shaped blotchy wheel;
- White wheals with surrounding red flare;
- Multiple whip-like wheals on the skin;
- Adherent tentacles on the skin;
- A ‘frosted’ ladder pattern’ in the sting marks on the skin may be seen in the first few minutes;
- Later Blistering or darkening of the sting pattern.

Signs and Symptoms of severe stings

- Difficulty or cessation of breathing;
- Cardiac arrest;
- Severe pain;

- Restlessness and irrational behaviour;
- Nausea and vomiting, headache;
- Collapse;
- Profuse sweating only in the sting area.

Treatment for Irukandji Jellyfish and Chironex Box Jellyfish

- Remove the casualty from the water;
- Call for help from Lifesaver / Lifeguard or dial “000” for Ambulance;
- Pour Vinegar over sting area (flood the sting area in vinegar);
- Start CPR if required;
- Monitor vital signs and symptoms until Ambulance arrives.

The vinegar cannot relieve the pain that is already present. Other agents are promoted for pain relief in jellyfish stings BUT these should only be used after vinegar for the Box jellyfish or Irukandji stings or for unknown tropical stings

Treatment for Non-tropical Bluebottle stings

- Pick off any adherent tentacles with fingers (this is shown as not harmful to the rescuer);
- Rinse stung area well with seawater to remove invisible stinging cells;
- Place the casualty’s stung area in hot water (no hotter then what the rescuer can comfortably tolerate);
- If local pain is unrelieved by heat, or if hot water is not available the application of cold packs or wrapped ice may be effective.

Figure 18: Other Jellyfish around Australia

Name	Common name	Location
Physalia	Bluebottle Portuguese man-o-war Pacific man-o-war	Australia wide and in most warm ocean waters
Catostylus	Blubber	Worldwide
Carybdea Rastoni	Jimble	Australia wide but more common in southern areas and Western Australia
Cynea	Hair Jelly, Snottie, Lions Mane	Worldwide
Tamoya	Fire Jelly, Morbakka, Moreton Bay Stinger	Tropical Australian waters, all of Queensland and northern New South Wales coast – often an open water jellyfish.
Pelegia	Little Mauve Stinger	

Treatment for Other Jellyfish

- If casualty has any difficulties breathing phone "000" (Phone FIRST phone FAST);
- Put on Gloves if available;
- Wash area with sea water;
- Remove any adhering tentacles;
- Apply ice pack for 10 minutes;
- Re Apply ice pack if skin pain persists;
- Call for help from Lifesaver / Lifeguard or dial "000" for Ambulance if skin pain persists.

Note: In areas where dangerous tropical jellyfish are prevalent (i.e. Box jellyfish or Irukandji), if the species causing the sting cannot be clearly be identified as harmless, it is safer to treat casualty with vinegar.

Sea Snakes

Sea snakes are found in Northern Australian waters and are generally not aggressive, except during mating seasons. The sea snake bite looks the same as for a land snake.

A casualty can suffer from respiratory paralysis within 30 minutes.

Signs and Symptoms

- A spot of blood visible at the bite site;
- A single bite mark or two bite marks;
- Numbness to the lips and tongue;
- Bite can be painless;
- Nausea and vomiting;
- Progressive weakness of the respiratory muscles leading to respiratory arrest.

Treatment for Sea Snakes

- **DRSABCD**;
- Call 000 for an ambulance. (Call First and call Fast);
- Rest and reassure the casualty;
- Monitor the casualty's ABCs;
- Use pressure bandages and splints (refer to snake bite);
- Be prepared to carry out CPR.

Note: Despite being unable to move, the casualty may be able to hear you speaking to them.

Fish Stings

Numerous types of fish can cause fish stings. Some of the more common ones are the Stonefish (seawater), Bullrout (fresh water) and the Stingray. Handling these fish can be potentially dangerous. The Stingray has a powerful tail with a barb and can inflict a serious injury to a person. These fish have excellent camouflage capabilities and stings usually occur when a person stands on them.

Signs and Symptoms

- Intense pain to the site;
- swelling;
- an open wound;
- bleeding;
- panic and irrational behaviour due to pain.

Treatment for fish stings

- Place the injured site in hot water (at a temperature the Carer can tolerate);
- **DO NOT** use a pressure bandage;
- Stop any bleeding;
- monitor the casualty's vital signs, pulse, respirations and the level of consciousness;
- allergic reaction;
- Seek medical assistance if required.

Poisoning

Poisoning can be either accidental or intentional. Poisonous substances can enter the body via:

- Absorption - through the skin;
- Ingestion – swallowing;
- Inhalation – breathing;
- Injection - drug abuse, bites via snake / spider.

Signs and Symptoms

- Burns to the mouth and airway;
- Cardiac arrest;
- Headaches and blurred vision;
- Nausea and/or vomiting;
- Respiratory arrest;
- Seizures.

Treatment for Poisoning

- **DRSABCD**
- Call 131126 for Poisons Information Centre. They will call an ambulance for you. (Call First and call Fast)
- Be careful not to become contaminated yourself.
- If a substance is swallowed give small sips of milk.
- **DO NOT** induce vomiting.
- If a substance is absorbed, protect yourself using gloves etc.
- Wash the substance off.
- Remove the affected clothing. **DO NOT** remove the clothing over the casualty's head.
- If possible, ascertain the type of poison and follow Treatment as directed on the label.
- Rest and reassure the casualty.

- Monitor the vital signs, pulse, respirations and levels of consciousness.
- Be prepared to carry out CPR using a CPR mask.

Drug overdose

An overdose occurs when an excessive amount of a drug or poison is taken, leading to a toxic (poisonous) effect on the body. There are many drugs that can cause harm when too much is taken including alcohol, prescription drugs, over-the-counter drugs, illegal drugs and some herbal remedies.

Always call an ambulance if a drug overdose is known or suspected. Many overdoses **DO NOT** cause permanent damage and most people make a full recovery. Some overdoses can cause damage to certain organs such as the liver and kidneys. If the overdose was an attempt at self-harm, this requires careful ongoing treatment.

The symptoms vary widely

A wide range of symptoms can occur and everyone responds differently. Symptoms depend on the drug, the amount taken and the person's bodily constitution. Some poisons are weak and cause minor distress, while others are very strong and can cause more serious problems and possibly death. General symptoms of a drug overdose may include:

- Nausea
- Vomiting
- Dizziness
- Fitting
- Drowsiness
- Confusion
- Coma
- Breathing problems.

Reasons for overdose

The main reasons for taking an overdose include:

- Accidental - a person takes the wrong drug or combination of drugs, in the wrong amount or at the wrong time, not knowing that it could cause them harm.
- Intentional misuse - a person takes an overdose to get 'high' or to deliberately inflict self-harm. The latter may be a cry for help or a suicide attempt. This may be caused by relationship problems with family and friends. On the other hand, the person may be suffering from a mental health condition such as depression or schizophrenia.

Risk factors

People of any age may take a drug overdose, though certain groups are at increased risk including:

- Young adults
- Middle aged people
- Women, who are more likely to overdose than men;

Other risk factors include:

- The risk is increased when more than one drug is taken at the same time;
- The risk is increased when the body is not used to taking a certain drug.

First aid Treatment for Drug Overdose

If you think someone has taken an overdose, suggestions include:

- Call the Poisons Information Centre on 131 126, even if the person seems okay. The centre is open 24 hours a day, everyday; Australia-wide;
- Call 000 and ask for an ambulance. Ask for the police if the person is violent;
- **DO NOT** try to make them vomit;
- Bring the pill containers to hospital.

Stroke

Stroke (previously known as Cerebrovascular Accident) occurs when the supply of blood to part of the brain is suddenly disrupted. Blood is carried to the brain by the blood vessels called arteries. Blood may stop moving because the blood vessel is blocked by a blood clot or plaque or because the vessels have ruptured.

When the blood flow to a part of the brain is inadequate, that part cannot get oxygen it need and the brain cells in the area die and the brain becomes permanently damaged. Brain cells usually die within an hour of the onset of a stroke but may survive up to a few hours. Areas of the brain where the blood supply is reduced but not completely cut off can survive some hours. These brain cells can either recover or die depending on what happens in the minutes or hours the follow

Stroke is the second most common cause of death after heart disease. There is good evidence that the outcome can be improved through the urgent admission to hospital and specialized care highlighting the need for early recognition and management.

Recognition

Some people experience a mini stroke (Transient Ischaemic Attack or TIA) with the symptoms and signs generally not lasting longer the 60 minutes. However, the risk of stroke for people with TIA may be high as 28% within 90 days. Recognition and early assessment are therefore vital in preventing the progression form TIA to stroke.

Warning Signs

- Stroke is a life threatening emergency and most people who suffer a stroke will experience some warning signs. Weakness in the face or arms and speech difficulties are the most common signs of stroke. Even if the warning signs have resolved it is still important to seek urgent medical assessment and management.

The Warning signs of stroke may include one or more of these symptoms:

- Weakness, numbness or paralysis of the face , arm or leg on either side or both sides of the body;
- Difficulty speaking;
- Difficulty swallowing;
- Dizziness, loss of balance or an unexplained fall;
- Loss of vision, sudden blurred or decreased vision in one or both eyes;
- Headache, usually severe and of abrupt or unexplained change in the pattern of headaches;
- Drowsiness

FAST is a simple way for remembering the signs of stroke

Facial weakness - Can the person smile? Has their mouth or eye dropped?

Arm weakness - Can the person raise both arms?

Speech difficulty - Can the person speak clearly and understand what you say?

Time to act fast - Seek medical attention immediately (Dial 000 – call ambulance)

Treatment for Stroke

- Call an ambulance (Dial 000) and stay with the casualty
- If the victim is conscious provide reassurance, make the casualty comfortable and **DO NOT** give anything to eat or drink.
- Stay with the casualty until ambulance arrives
- Administer oxygen if trained to do so
- If the person becomes unconscious commence **DRSABCD**

Environmental Conditions

When temperatures change there is a process your body goes through to adjust to these environmental changes. This happens when your skin feels that it is colder or hotter and sends messages through nervous system to the brain. The brain then adjusts different body systems to help control your body temperature.

Heat Exhaustion

Heat exhaustion is caused by exertion accompanied by heat and high exhaustion.

Signs and Symptoms

- Dizziness and headaches
- Hot, dry skin;
- Nausea;
- Pale, clammy skin;
- Profuse sweating;
- Rapid pulse and respirations;
- Thirst;
- Weakness/muscle cramps

Treatment for heat exhaustion

- **DRSABCD**

- Move the casualty to a cool, shaded area;
- Rest and reassure the casualty;
- remove outer clothing;
- Give frequent small sips of water;
- Sponge the casualty down with cool water;
- Fan the casualty;
- **DO NOT** cause shivering/goose bumps;
- Apply ice compresses to the neck, groin and armpits;
- Monitor the casualty's ABCs and level of consciousness;
- If the casualty becomes unconscious then check **DRSABCD**;
- Call 000 for the ambulance (Call First and Call Fast) if casualty condition worsens.

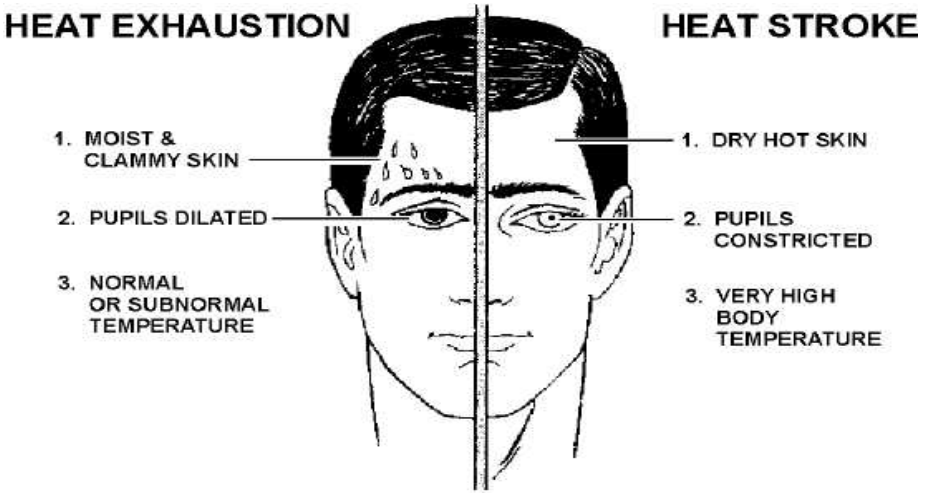
Heat Stroke

The normal body temperature is approximately 36.5 degrees Celsius. The brain controls and regulates the body's temperature. When the brain is overloaded or not functioning correctly, the body's temperature can rise. Hyperthermia is a continuing process, body temperature rises and can lead to heat cramp followed by heat exhaustion and then heat stroke if untreated. Early recognition and rapid first aid cooling are the keys to recovery from heat stroke

Heat Stroke can affect people who play sport or engage in vigorous activity. Heat stroke is an uncommon but life-threatening complication of grossly elevated body temperature with exercise in heat stressed settings. Whilst heat stroke risk can be minimised by the use of predictive tools (e.g. Sports Medicine Australia's UV Illness and Heat Guide), the risk cannot be fully eliminated.

Risk is highest with: high temperatures and/or high humidity and/or vigorous activity.

Figure 19: Heat exhaustion and Heat stroke



Heat Stroke can be caused by:

- Hot climates;
- Infection and illnesses;
- Insufficient fluid intake;
- Overdressing for the climate;
- Physical exercise.

Signs and Symptoms

- Anxiety;
- Confusion and feeling faint;
- Incoherent speech
- Hot dry skin;
- Sweating ceased;
- Irrational behaviour;
- Abnormal walking
- May collapse;
- Possible seizures;
- Respiratory and cardiac arrest;
- Strong bounding pulse;
- Unconsciousness;
- Coma
- Visual problems.

Treatment for Heat Stroke

Actions to take in this order are:

- **STRIP** the athlete of as much clothing as possible

- **SOAK** with any available water
- **FAN** vigorously by whatever means possible—improvise e.g. use a clipboard, bin lid.

When available, cool or ice water immersion is the most effective cooling means possible:

- **IMMERSE** the athlete up to the neck in a cool or ice bath **OR**
- **COVER** all of the body with ice water-soaked towels that are changed frequently as an alternative if a bath isn't available, but ice is
- **CALL 000** to summon emergency services but do so once you are certain first aid cooling is being implemented.

Remember it is early recognition and first aid in heat stroke that is critical to save a life.

Hypothermia

Hypothermia is when the body's core temperature is less than 35 degrees Celsius. Our normal body core temperature is approximately 36.5 degrees Celsius.

Some of the causes of Hypothermia are:

- Elderly person may have fallen and not been found for some time;
- Immersion in cold water;
- Inadequate clothing for cold climates;
- Prolonged exposure to cold climates.

If a casualty's core temperature drops to 25 degrees Celsius, their heart and lungs would most likely have ceased functioning.

Signs and Symptoms

- Cold to touch;
- Confusion and clumsiness;
- Exhaustion;
- Irrational behaviour;
- Shivering;
- Slow pulse and breathing;
- Slurred speech;
- Unconsciousness;
- Possible death.

Treatment for Hypothermia

- Be prepared to carry out **DRSABCD** in severe cases;
- Call 000 for an ambulance. (Call First and call Fast);
- Cover with blankets, warm clothing etc;
- Give sips of warm sweet drink;

- Monitor the casualty's vital signs: pulse, respirations and levels of consciousness;
- Remove the casualty from the cold to shelter;
- Remove wet clothing and gently dry the casualty;
- Share a sleeping bag with a companion;
- **DO NOT** give the casualty alcohol (this restricts heat production);
- **DO NOT** move the casualty unnecessarily until recovered;
- **DO NOT** re-warm with direct heat;
- **DO NOT** rub or massage the casualty.

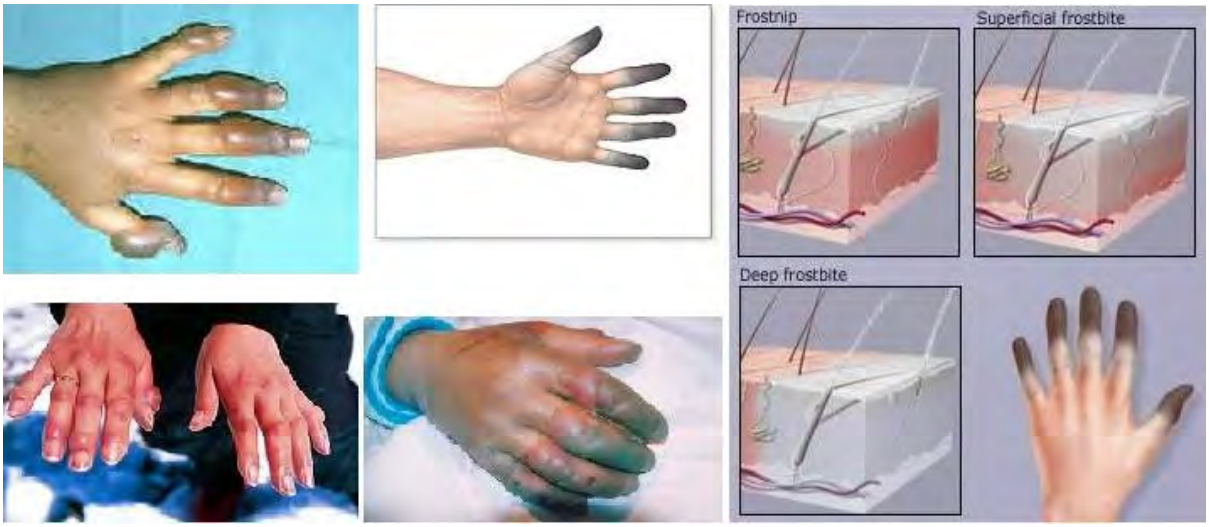
Note: When there is a drop in core temperature, there is also a drop in the body's metabolic rate. The body therefore requires less oxygen. If CPR needs to be preformed the casualty has an increased chance of survival once they are in hospital and have been re-warmed. **DO NOT** stop doing CPR.

Figure 20: Hypothermia

Frost Bite

Frostbite is the result of tissue freezing, the forming of ice crystals and the blocking of small blood vessels. The face, nose, ears, fingers and toes are the most commonly affected areas of the body because they are the parts that are exposed to the cold conditions.

Figure 21: Frostbite



Signs and Symptoms

- Cold to touch;
- Loss to sensation;
- Numbness;
- Pain whilst rewarming;
- White or mottled blue skin.

Treatment for Frostbite

- **DRSABCD**;
- Call 000 for an ambulance. (Call First and call Fast);
- Place casualty in a warm area;
- Protect the casualty from the cold;
- Remove any wet clothing;
- Treat hypothermia before frostbite;
- **DO NOT** allow refreezing of the affected part;
- **DO NOT** rub or massage the affected area as this can cause tissue damage;
- **DO NOT** break blisters;
- **DO NOT** give the casualty alcohol.

Head Injuries

A head injury is any injury to the head or face that involves the brain, internally or externally. An injury to the head can lead to a loss of consciousness, damage to the brain, eyes, ears, teeth, airway, mouth or jaw. A severe head injury can lead to irreversible brain damage and/or death. Once a head injury has been sustained, problems associated with the injury may not develop for several

hours or days after the injury has occurred. The extent of the injury is determined by the amount of bleeding and/or swelling inside the brain/skull. It is therefore necessary to treat all head injuries as serious and seek ambulance assistance (000).

Head Injury Symptoms & Signs

The signs and symptoms of a head injury may occur immediately or develop slowly over several hours. Even if the skull is not fractured, the brain can bang against the inside of the skull and be bruised (called a concussion) or damaged. The head may look fine, but complications could result from bleeding inside the skull.

When encountering a person who just had a head injury, try to find out what happened. If he or she cannot tell you, look for clues and ask witnesses. In any serious head trauma, always assume that there is also injury to the spinal cord.

The following symptoms suggest a more serious head injury that requires emergency medical treatment:

- Loss of consciousness, confusion, or drowsiness;
- Low breathing rate or drop in blood pressure;
- Convulsions;
- Fracture in the skull or face, facial bruising, swelling at the site of the injury, or scalp wound;
- Fluid drainage from nose, mouth, or ears (may be clear or bloody);
- Severe headache;
- Initial improvement followed by worsening symptoms;
- Irritability (especially in children), personality changes, or unusual behaviour;
- Restlessness, clumsiness, or lack of coordination;
- Slurred speech or blurred vision;
- Inability to move one or more of your limbs;
- Stiff neck or vomiting;
- Pupil changes;
- Inability to hear, see, taste, or smell.

Treatment for Head injury

- Call 000 for an ambulance. (Call First and call Fast);
- A victim who has sustained a head injury, whether or not there has been loss of consciousness or altered consciousness, should be assessed by a health care professional.
- **DRSABCD** if unconscious (ARC Guideline 4)
- Always suspect a spinal injury;

- Protect the neck from movement (maintain in line spinal immobilisation) whilst maintaining a clear airway (ARC Guideline 9.1.6).
- Identify and control any significant bleeding with direct pressure if possible (ARC Guideline 9.1.1).

Note: only apply a cervical collar if trained to do so.

- If the casualty is unconscious and has blood or fluid coming from the ear, the casualty is to be placed on to the side with the affected ear facing down and a pad placed over the affected ear;
- Monitor the casualty's pulse, respirations and level of consciousness closely for any deterioration;
- Complete the secondary survey and treat any subsequent injuries.

Note: If a casualty has a skull fracture, **DO NOT** place any pressure to this area, as this can put direct pressure onto the brain and cause brain damage.

Skull Fracture: First Aid

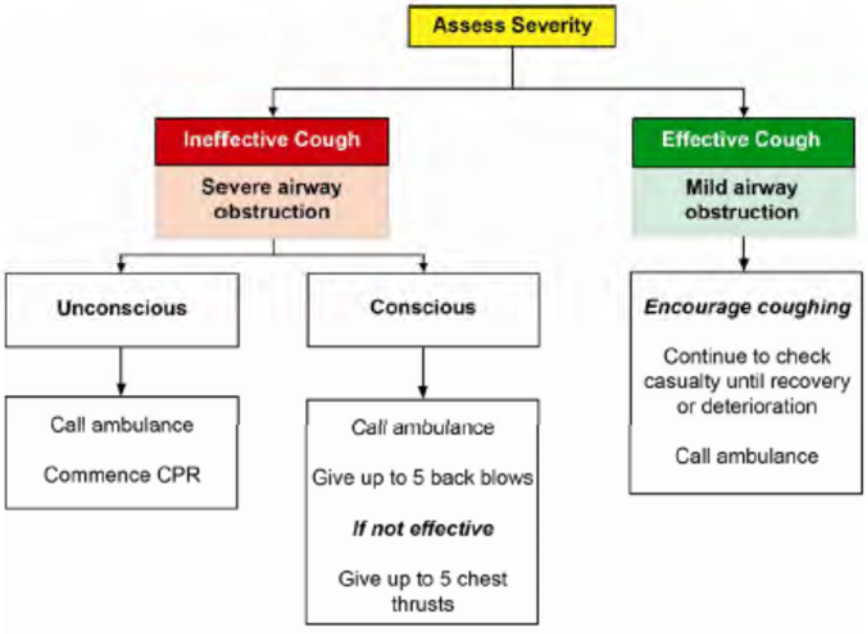
1. Check the airway, breathing, and circulation. If necessary, begin rescue breathing and CPR.
2. Avoid moving the casualty (unless absolutely necessary) until medical help arrives. Instruct someone to call 000 for medical assistance.
3. If the casualty must be moved, take care to stabilize the head and neck. Place your hands on both sides of the head and under the shoulders. **DO NOT** allow the head to bend forward or backward, or to twist or turn.
4. Carefully check the site of injury, but **DO NOT** probe in or around the site with a foreign object. It can be difficult to ascertain accurately if the skull is fractured or depressed (dented in) at the site of injury.
5. If bleeding, apply firm pressure with a clean cloth to control blood loss over a broad area.
6. If blood soaks through, **DO NOT** remove the original cloth. Rather, apply additional cloths on top, and continue to apply pressure.
7. If the casualty is vomiting, stabilize the head and neck, and carefully turn the casualty to the side to prevent choking on vomit.
8. If the casualty is conscious and experiencing any of the previously listed symptoms, transport to the nearest emergency medical facility (even if he does not think medical assistance is necessary).

Figure 22: Management of foreign body and obstruction (choking)
(as per http://www.resus.org.au – accessed 28/11/2013)

AUSTRALIAN RESUSCITATION COUNCIL

NEW ZEALAND Resuscitation Council

MANAGEMENT OF FOREIGN BODY AIRWAY OBSTRUCTION (CHOKING)



Nosebleeds

The blood vessels in the septum (the firm tissue between the nostrils, which divides the nose into two halves) can break fairly easily and bleed. The most common area for a nosebleed is near the front of the nose, but occasionally the bleeding comes from the back, near the throat. Bleeding from the nose is common in children and is usually not severe. If the bleeding is very heavy, or does not stop with simple measures, take your child to a doctor or hospital emergency department.

Symptoms

The symptoms of a nosebleed include:

- Bleeding from either one or both nostrils;
- A sensation of flowing liquid at the back of the throat;
- The urge to swallow frequently.

A range of causes

A nosebleed can be caused by a range of factors, including:

- Fragile blood vessels that bleed easily, perhaps in warm dry air or after exercise;
- An infection of the nose lining, sinuses or adenoids;
- An allergy that causes hay fever or coughing;
- Bumps or falls;
- An object that has been pushed up the nostril;
- Nose picking;
- Rarely, a bleeding or clotting problem.

First aid treatment for Nose Bleed

Suggestions to treat a nosebleed include:

- Reassure the child, as crying can bring more blood to the face and make the bleeding worse.
- Sit the child up straight.
- Ask the child to lean forward.
- Use your thumb and forefinger and firmly squeeze the soft part of the nose - just above the nostrils - and hold for five to 10 minutes.
- Encourage the child to breathe through the mouth while the nostrils are pinched.
- Sometimes, it may help to place a cold cloth or cold pack over the forehead or bridge of the nose.
- Release your grip slowly to see if the bleeding has stopped.
- Tell the child not to sniff or blow their nose for at least 15 minutes and not to pick their nose for the rest of the day. (Having a nose full of clotted blood is unpleasant, and children will find it difficult to avoid sniffing or nose

blowing for a few hours. Fifteen minutes will at least give some time for the clot to stabilise.)

Seek medical advice

You should take your child to the doctor or hospital emergency department if the bleeding doesn't stop after simple first aid treatment. The cause for ongoing bleeding needs to be found and treated.

Frequent nosebleeds

If your child keeps having nosebleeds, see your doctor for investigation and treatment. Bleeding that happens a lot can be treated by cautery (sealing) of the blood vessels that may be causing the problem. Cauterisation blocks the vessels, so they can no longer break open. If an ongoing infection is the cause, your doctor may prescribe an antibiotic ointment or medicine. Very occasionally, a child loses so much blood that it causes other health problems, such as anaemia.

Where to get help

- Your doctor;
- Nurse on Call Tel. 1300 606 024 - for expert health information and advice (24 hours, 7 days);
- Hospital emergency department.

Things to remember

- Bleeding from the nose is common in children and is usually not a sign of any underlying problem;
- First aid treatment includes pinching the nostrils until the bleeding stops;
- If the nosebleed won't stop, take your child to a doctor or hospital emergency department.

Teeth Injury

So, your face has come into contact with… a ball…, a bat…., the ground…, the car seat…, some bit of your friend, and you now have a gap in your smile! A tooth has been knocked out. If it's a baby tooth, that's not a big deal, but if it's a permanent tooth then you need to find it because you could just be able to put it right back where it came from.

Alert!

When teeth are damaged or dislodged, follow the first aid steps in this topic and get immediate dental care.

Any injury which was bad enough to knock a tooth out may have also cracked the bone around the tooth. It is important to see a dentist so this can be checked.

Baby teeth (deciduous teeth)

If a baby tooth is knocked out, **DO NOT** place the tooth back into the socket.

You don't really need to find it - unless you want to save it for the tooth fairy!

- Baby teeth which have been replaced tend to get stuck to the jaw bone, and there can be problems when it is time for the tooth to come out to make way for permanent teeth.
- It is still important to see a dentist to make sure no other damage has been done.

Permanent teeth

If a permanent tooth is knocked out, it should be replaced into the socket immediately. The tooth has an excellent chance of living, but the chances of it living get worse with every minute that the tooth is out of its socket.

What to do

- **DO NOT** allow the tooth to dry out.
- **DO NOT** scrape or rub the root surface.
- If the tooth is clean, immediately put it back into the socket and hold it there firmly with your finger.
- If it is dirty, and if the person is calm enough, get him to clean the tooth with saliva (spit).
- If he cannot clean the tooth, it is better to rinse it briefly with milk than water
- **DO NOT** rinse the tooth in water for any longer than 1 to 2 seconds
- Then put it back into the socket.
- Keep holding the tooth in place with fingers, or press aluminium foil over the replaced tooth and the teeth near it. Or get the person to bite down on a soft cloth pad (gauze or a clean handkerchief) to hold the tooth in position. This also helps stop bleeding and reduces pain.

- Get immediate dental treatment.

What to do if it cannot be put into the socket

- Completely cover the tooth in milk, or wrap it in some plastic wrap, to stop it drying out
- Get immediate dental treatment.

What to do if a tooth cannot be found

- Have a careful search of the surrounding ground, the person's mouth and their clothes.
- If the tooth cannot be found, still get immediate dental treatment, as there could be other damage to the jaw.

When you're a kid you get used to losing teeth and may even look forward to losing them (the tooth fairy again!)

As you get older, the last thing you want to do is lose any teeth, so try to avoid doing so. Wear a mouth guard when playing sports that include body contact or balls. Look after that great smile!

For adults - if your private dentist is not available, contact your local Public Hospital or Private Doctor

Overview and Considerations with Fractured and Dislocated Jaw

A broken or dislocated jaw usually heals completely after treatment. Recurrence of a dislocated jaw is common. Complications may include:

- Airway obstruction
- Bleeding
- Aspiration of foreign material (such as blood or food) into the lungs
- Infection of the jaw or face
- Recurrent dislocated jaw
- Chronic temporal-mandibular joint problems (TMJ)
- Difficulty talking (temporary)
- Difficulty eating (temporary)
- Imperfect closure (malocclusion) of the teeth

Signs and Symptoms:

Symptoms of a dislocated jaw include:

- Pain in the face or jaw; located in front of the ear on the affected side/s, worse with movement;
- Inability to close the mouth;
- Drooling because of inability to close the mouth;
- Difficulty speaking;
- Jaw may protrude forward;
- Teeth may not align normally;

- Bite feels “off” or crooked.

Symptoms of a fractured (broken) jaw include

- Jaw tenderness or pain, worse with biting or chewing
- Jaw stiffness Difficulty opening the mouth widely
- Severe fracture may limit any movement of the jaw
- Lump or abnormal appearance of the cheek or jaw
- Numbness of the face (particularly the lower lip)
- Facial swelling;
- Facial bruising;
- Loose or damaged teeth;
- Bleeding from the mouth.

First Aid Treatment for Fractured and Dislocated Jaw

A broken or dislocated jaw is an acute condition that requires prompt examination by a health care provider because of the risk of breathing difficulty or profuse bleeding. A tube may need to be inserted into the airway (endotracheal tube) if the patient is having trouble breathing or bleeding profusely, or if facial swelling is severe and breathing difficulty is likely to develop. The jaw should be supported during transportation to the emergency room. This is most easily accomplished by holding the jaw gently in the hands.

Spinal Injury

Spinal injury must be considered in the management of all accident casualties. Following an injury to the spinal cord, the casualty may already be suffering with paraplegia or quadriplegic so extreme care must be taken in treating and moving the casualty to minimise further damage to the casualty's spinal cord.

The Treatment of the Airway, Breathing and Circulation (ABC) always takes precedence in the Treatment of a casualty with a suspected spinal injury.

Spinal injuries must be considered when the casualty has been involved in:

- A diving accident into shallow water;
- A dumping accident in the surf;
- A fall from a height;
- A sporting accident;
- A motor vehicle/cycle accident;
- Any accident where the casualty is unconscious or has been unconscious.

Spinal injuries can occur in different areas of the spine.

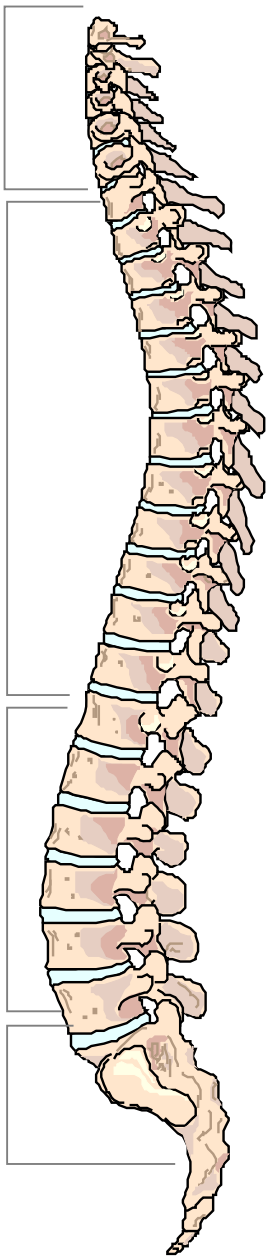
Spinal column

The segment of the spinal cord at which the damage occurs determines which parts of the body are affected. Damage at one segment will affect function at that segment and segments below it.

Figure 23: Spinal column.

Neck

Cervical Region (C1 - C7)
This region control signals to the neck, arms, hands, and muscles of breathing (the diaphragm)



Chest

Thoracic Region (T1 - T12)
This region relay signals to the torso and some parts of the arms.

Lumbar Region (L1 - L5)
This region control signals to the hips and legs.

Lower back

Sacrum Region (S1 - S5)
This region relay signals to the groin, toes, and some parts of the legs.

Tailbone

Signs and Symptoms

- History of trauma;
- Pulse can be irregular, weak, fast or slow;

- The casualty can be pale, cold and sweaty;
- The casualty may be unconscious or have an altered level of consciousness;
- The casualty may complain of pain or an unusual sensation at or near the site of the injury;
- The casualty may have difficulty breathing;
- The casualty may have pins and needles to the hands and/or feet;
- There may be a loss of movement to the limbs;
- A male casualty may have a priapism (erection).

Treatment for Spinal Injury

- **DRSABCD**. **Always suspect a spinal injury**.
- Call 000 for an ambulance. (Call First and call Fast)
- Airway management always takes precedence over a suspected spinal injury.
- Handle the casualty gently with no twisting and minimal head and neck movement.
- Support the casualty's head and neck at all times.
- Keep the casualty's head, neck and spine in alignment especially when placing casualty into the side position.
- Use bystanders to assist in logrolling the casualty, supporting their head and neck at all times.
- Monitor the casualty's pulse, respirations and level of consciousness.
- **DO NOT** move the casualty unnecessarily.
- Prevent heat loss by using a blanket if necessary.
- Complete the secondary survey and treat any subsequent injuries.

Note: If Rescue Breaths are required it is preferable to use jaw thrusts to open the airway, as head tilt may increase any injury

Concussion

Concussion is a temporary loss of consciousness resulting from a head injury, followed by a rapid recovery. Casualties who subsequently have varying levels of consciousness are suffering from a more serious injury and require urgent medical assistance.

Signs and Symptoms

- History of an injury;
- A temporary loss of memory;
- A temporary loss or decreased level of consciousness;
- Anxiety;
- Can have headaches;
- Nausea and/or vomiting.

Treatment for concussion

- **DRSABCD**;
- Call 000 for an ambulance (Call First and call Fast);
- Reassure the casualty;
- Complete the secondary survey and treat any subsequent injuries;
- Monitor the casualty's pulse, respirations and level of consciousness.

Eye Injuries

The eye can be easily damaged. It is extremely important that the correct treatment is applied to the eye. An eye injury that has had the incorrect Treatment can result in irreversible eye damage.

Eye injuries can be sustained in a many ways. Examples include injuries from blunt objects, penetrating objects, foreign bodies, welder's flash, chemical or heat burns and ultra violet radiation (sun).

Signs and Symptoms

- Bleeding into/from the eye;
- Foreign substances in the eye such as sand, grit, dirt;
- Inability to open the eye due to light or pain;
- Object penetrating the eye;
- Pain to the eye;
- Redness of the eye;
- Signs and symptoms of shock;
- Swelling around the eye;
- Watery eyes

Treatment for Eye Injury

- **DRSABCD**;
- Call 000 for an ambulance. (Call First and call Fast);
- Always explain what you are doing to the casualty;
- Tell the casualty not to rub their eyes;
- Reassure the casualty and sit/lay the casualty down away from bright lights or sunlight;
- Ask the casualty to remove any contact lenses;
- Ensure you irrigate under the eyelids;
- If the eye injury is serious, lay the casualty down with head and shoulders slightly raised;
- If the injury is caused by chemical or heat burns, irrigate the eye with cool clean water for approximately 20 minutes;
- If the injury is minor (e.g. dirt, dust) gently wash with cool clean water;
- If there is an object penetrating the eye, place padding around the object. This is to keep the eye from moving;
- Pad both eyes to help reduce eye movement;
- **DO NOT** apply pressure to the actual object;
- **DO NOT** place any pressure on the casualty's eyes;
- **DO NOT** remove any penetrating objects.

Note: When removing minor foreign bodies from the eye (e.g. dirt, dust, etc); only remove the foreign body if it is able to be washed out with gentle washing with cool water.

Chest Injuries

Chest injuries can be life threatening, especially if they involve an underlying organ such as the heart, lungs, major arteries and/or veins. These injuries are not always visible or obvious and a thorough examination is required. The casualty can deteriorate quickly, so they must be constantly monitored.

Sucking Chest Wound

This is where air and/or blood are getting into the chest cavity putting pressure on the lung and in more severe cases the heart. This type of injury can cause the lung to collapse resulting in breathing difficulties. These injuries can be caused from motor vehicle accidents, blunt or penetrating injury such as a gunshot/stabbing or even fractured ribs.

Fractured Ribs

The casualty with fractured ribs can be in significant distress and pain. This type of injury can reduce the effectiveness of breathing. In more serious cases a fractured rib may puncture a lung. This results in the air from the lung entering the chest cavity.

Flail Segment

This is when two or more adjacent ribs are fractured in two or more places. The affected area breaks away from the rib cage and moves in the opposite direction (paradoxical breathing) to the rest of the rib cage during inspiration and expiration. Generally there is an associated collapsed lung (pneumothorax).

Figure 24: Penetrating Chest wound

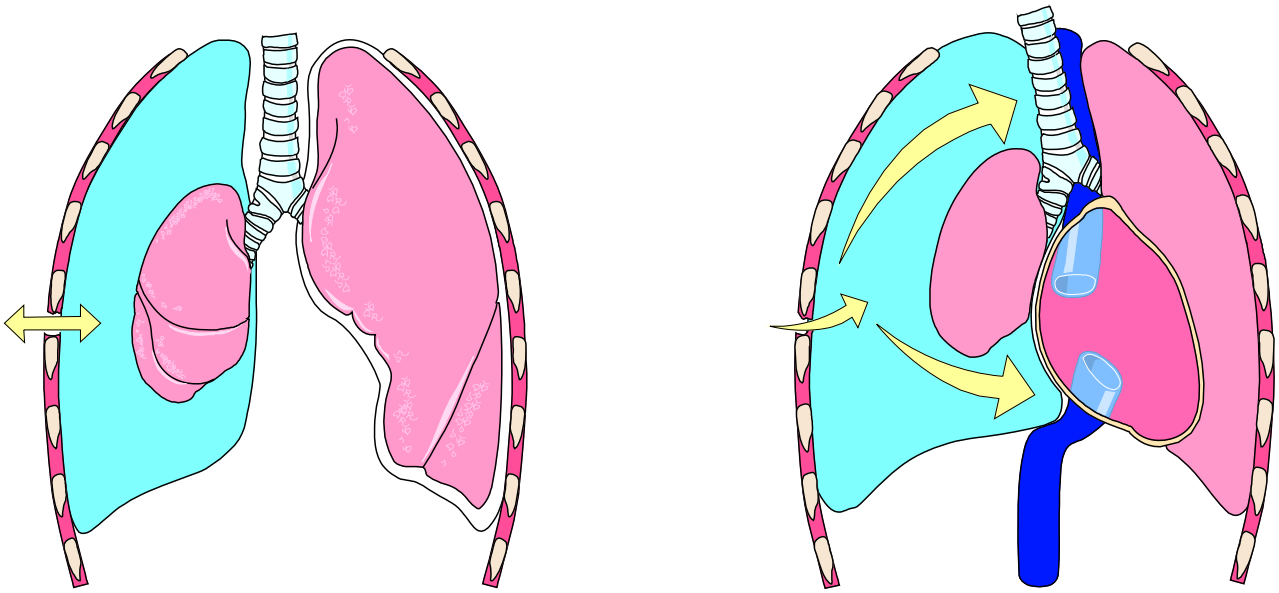
if wound is open, apply plastic or a non-stick pad taped on three sides only leaving bottom side un-taped to allow for air to escape from the chest. A gloved hand can also be used to seal the wound until more suitable material is available.

Signs and Symptoms

- Anxious and/or restless;
- Decreased air movement to injured side;
- Decreased level of consciousness leading to unconsciousness;
- Difficult and/or noisy breathing;
- Flail segment;
- Frothy bloodstained saliva (sputum);
- Obvious chest injury (e.g. gunshot, stabbing);
- Pain increasing on breathing, movement and/or coughing;
- Pale or blue skin;
- Rapid deterioration of the casualty;
- Sign and Symptoms Shock.

Figure 25: Pneumothorax.

Normal Pneumothorax. *Tension Pneumothorax*



Two sets of lungs showing two cases where air or gas has entered the pleural cavity: (left) normal pneumothorax and (right) tension pneumothorax.

Treatment for Chest Injuries

- **DRSABCD**;
- Call 000 for an ambulance. (Call First and call Fast);
- Place the casualty with their head and shoulders slightly elevated and leaning towards the injured side;
- Support the injured area using a large pad or pillow;
- Reassure the casualty;
- Cover any entry wounds;
- Cover the wound with an airtight dressing;
- Tape the top and sides of the dressing;
- **DO NOT** tape the bottom of the dressing. This acts as a one-way valve and reduces the air entering through the wound;
- If the casualty is unconscious, place into the side position with the affected side down, unless an object is embedded in the casualty;
- If an object is embedded in the chest: **DO NOT** remove object;
- Apply padding around the object;
- Stop any bleeding;

- **DO NOT** apply pressure over the embedded object;
- Complete the secondary survey and treat any subsequent injuries;
- Monitor the casualty's pulse, respirations and levels of consciousness.

Note: If a sucking chest wound is suspected the casualty needs urgent hospitalisation to reduce the pressure on the heart and lungs.

DO NOT waste any time calling an Ambulance (Call First and Call Fast)

Abdominal Injury

These types of injuries can be caused by either a blunt (driver into steering wheel) or penetrating (stabbing) injury. The signs and symptoms can depend on the organs and other blood vessels that are involved.

Signs and Symptoms

- Blood in the urine and/or faeces;
- Blood loss, either internal/external (look for signs of shock);
- Breathing difficulties;
- Exposed intestines, (evisceration);
- Fast pulse and/or respirations;
- Guarding of the injury site;
- Nausea;
- Obvious pain;
- Pale cold clammy skin;
- Shock;
- Swelling (internal bleeding);
- Vomiting.

Treatment for Abdominal Injury

- **DRSABCD**;
- Always suspect a spinal injury;
- Call 000 for an ambulance(Call First and Call Fast);
- Control the bleeding;
- Cover any protruding intestines with either a non-stick or wet sterile dressing. Use clean plastic wrap if nothing else is available;
- lay the casualty down with their head and shoulders slightly raised and knees bent;
- Reassure the casualty;
- Complete the secondary survey and treat any subsequent injuries;
- Monitor the casualty's pulse, respirations and levels of consciousness.

Figure 26: Dressing an abdominal wound

Care must be taken not to apply material to the wound that will stick to the organs. It should be noted that there is often little pain associated with this type of injury, and the casualty may walk around or even offer help.

Soft Tissue Injuries

Deformities caused by fractures, dislocations, and severe sprains

Fractures, dislocations, and severe sprains often cause a limb or joint to look twisted, bent out of shape, or out of its normal position. Fractures, dislocations, and severe sprains can also cause:

- Severe pain;
- Swelling and bruising;
- A feeling that a bone popped or moved out of place;
- A loose or unstable joint;
- Abnormal movement of a limb or joint;
- A locked joint (can't bend or straighten it);
- Cool, pale skin or numbness and tingling at or below the injury, if nerves or blood vessels were injured or pinched by the injury.

A **fracture** may also cause a break or tear in the skin. The broken bone may poke through the skin in some cases. Skin bacteria can enter at the injured site and cause a deep joint or bone infection in addition to a skin infection.

A **dislocated bone** may also damage blood vessels, nerves, ligaments, tendons, and muscles that are close to the bone.

A **sprain** may cause so much swelling that it may be difficult to tell whether an additional underlying injury is present. Sprains can be mild, moderate, or severe.

Soft tissue injuries are caused when muscles or ligaments are either torn or stretched. It is also difficult to distinguish between a soft tissue injury and a

fracture. If you are unsure, treat for a fracture until proven otherwise by x-rays etc.

Sprain

Sprains are injuries to (ligaments) a short band of tough flexible connective tissue linking bones together. If you have a severe sprain, your symptoms may not be much different from those you would have with a broken bone.

Signs and Symptoms

- Bruising;
- Pain, increasing on movement;
- Swelling

Muscle strain

A muscle strain, also known as a pulled muscle, may be minor (such as an overstretched muscle) or severe (such as a torn muscle or tendon). Strains are caused by overstretching muscles.

Signs and Symptoms

Symptoms of a muscle strain can vary, depending on how severe the strain is, and may include:

- Decreased mobility of the limb;
- Swelling;
- Tenderness and pain to the site;
- Pain and tenderness that is worse with movement. Swelling and bruising;
- Normal or limited muscle movement;
- A bulge or deformity at the site of a complete tear.

Recovery time for a muscle strain can vary, depending on a person's age and health and the type and severity of the strain. While a minor strain often heals well with home treatment, a severe strain may require medical treatment. If a severe strain is not treated, a person may have long-term pain, limited movement, and deformity.

Bruises

Anyone who is rushing about doing heaps of things can bang into something (or someone) if they are in too much of a rush. Kids are often in a hurry to get somewhere, play sport, want to be first in line etc. and so kids often have bruises in many colours, decorating some parts of their bodies.

What is a bruise?

Bruises are caused by banging yourself against something or being hit by something like a ball, or being squeezed hard, e.g. when someone pinches you hard or you trap your finger in the fridge door when you are trying to shut it quickly (you know, when you hear mum coming!)

Small blood vessels in the skin or just under it break so that some blood escapes from them. The blood vessels heal quickly so that they **DO NOT** go on bleeding, but the blood that has already leaked out stays under the skin, around the place that is hurt, for a few days.

Signs and Symptoms

- It feels painful.
- The bruised area swells up.
- Your skin goes red and later black and blue, then yellow after a few days.
- You feel sore all around the area of the bruise.

What you can do

As soon as you have hurt yourself stop further bleeding and swelling (bruising) by using R.I.C.E.

Treatment for Soft Tissue Injuries (R.I.C.E)

The Treatment for sprains and strains is summarised using the acronym

Rest the injured limb and reduce the movement and use of the limb.

Ice (cold) compresses the injured limb. Be aware not to over cool limb

Compression bandage the affected limb to help reduce swelling.

Elevate the limb to reduce swelling.

Cold compress can be made by placing ice into a plastic bag and then wrap the ice bag in a cloth. This can now be place onto a casualty. Reusable soft-fabric cold compresses that can be stored in freezer (at least 2 hours) and dual-purpose hot/cold packs are available and are ideal for the workplace Carer to have always available. Never place ice or any frozen object directly onto a casualty's skin because this can cause more damage than help.

Dislocations

Dislocations are where a bone has been pushed out of its normal position/joint. Dislocations can be difficult to distinguish from a fracture. A dislocation can result from trauma or in some cases occur spontaneously and be resolved spontaneously. Dislocations may cause damage to the tissue supporting the joint.

Signs and Symptoms

- Deformity of the joint;
- Loss of movement at the joint;
- Severe pain and tenderness.

- **DRSABCD**;
- Call 000 for an ambulance (Call First and Call Fast);
- **DO NOT** attempt to put a dislocation back in place;
- Allow the casualty to support the dislocation in a position of comfort;
- try and splint it in this position;
- apply an ice compress to help reduce the swelling.

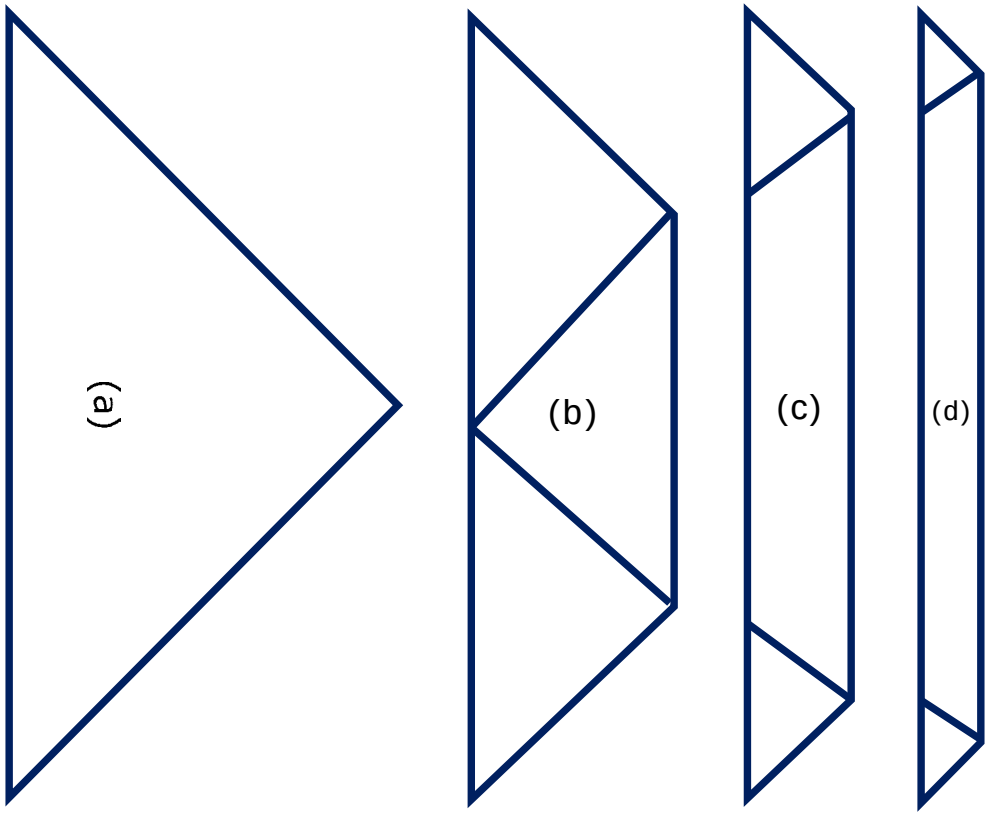
Slings using Triangular Bandages

The purpose of splints and slings is to prevent movement of the fractured bone by immobilising the limb, restricting the movement in the joint above and below the fracture site and reducing the amount of bleeding and further injury.

How to Fold a Triangular Bandage

- A triangular bandage can be used as a sling or a bandage;(a)
- Fold the triangular bandage in half (apex to the base) and then in half again. This is called a broad fold bandage and can be used for bandaging or splinting of the upper legs;(c)
- Fold in half again. This is now a narrow fold bandage and can be used for bandaging or splinting of the lower legs or arms.(d)

Figure 27: Folding a Triangular Bandage



Fractures

A fracture is any break in the continuity of a bone. It can be either a complete break (bone in 2 or more pieces) or incomplete (bone has bend or splintering of the bone but the bone has not completely come apart). The aim of treatment is to assist the bone to recover fully in strength, movement and sensitivity. Some complicated fractures may need surgery and/or surgical traction for best results.

Causes of fractures of healthy bones include incidents such as sporting injuries, vehicle accidents and falls. As we get older, our bones usually become more brittle. Osteoporosis and some types of cancer can also cause the bones to fracture more easily.

- **Closed fracture**: the skin remains intact and there is little damage to surrounding tissue;
- **Open fracture**: the bone is exposed to the outside environment;
- **Complicated fracture**: - in addition to the fracture, there is injury to the surrounding structures. There may be damage to the veins, arteries or nerves and there may also be injury to the lining of the bone (the periosteum).

Fractures may be caused a number of ways:

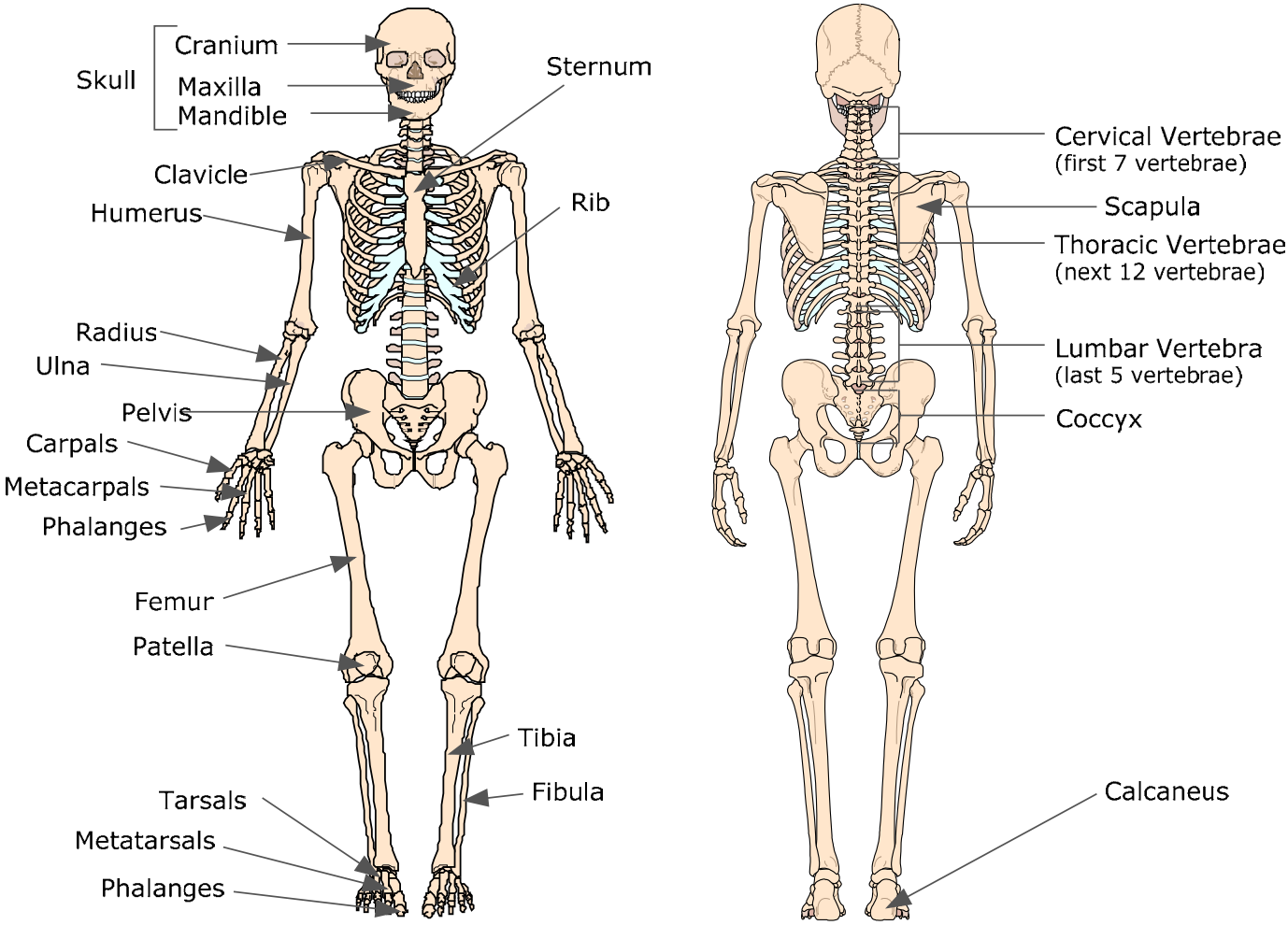
- **Direct force;** where sufficient force is applied to cause the bone to fracture at the point of impact;
- **Indirect force;** where force or kinetic energy, applied to a large, strong bone, is transmitted up the limb, causing the weakest bones to fracture;
- **Spontaneous or spasm-induced;** where fractures are associated with disease and/or muscular spasms.

These are usually associated with the elderly, and people with specific diseases affecting the bones. Always exercise care when assessing an elderly casualty as the condition known as osteoporosis or ‘Chalky Bones' causes bones to fracture easily, often in several places. Always suspect a fracture if an elderly person complains of pain or loss of power to a limb.

Be especially aware of fractures at the neck of the femur (near the hip), a very common fracture in the elderly.

Young children are also prone to fractures. Arm and wrist fractures are common with children. As young bones **DO NOT** harden for some years, children's fractures tend to ‘bend and splinter', similar to a broken branch on a tree - hence the common name ‘greenstick fracture'.

Figure 28: Skeleton



Signs and Symptoms

- Crepitus (Broken ends grinding together when moved);
- Deformity;
- Loss of function/power;
- May be shortening of the limb;
- Pain;
- Swelling and tenderness;
- Unnatural movement;
- Casualty felt or heard a bone snap.

Treatment for a simple fracture:

1. Check for Danger

2. Call First Call Fast (Phone for an Ambulance)
3. Check for circulation to limb. If there is no circulation to the limb, light traction and realignment may be required.
4. Stop any bleeding if possible.
5. Immobilise the limb. (This means **DO NOT** move the limb if possible).
6. Make injured person comfortable and reassure them while waiting for the Ambulance
7. You should not transport any injured person until you have spoken to the Ambulance Service.

Caution: When splinting limbs together you should be very cautious not to cause any extra injuries. If the limb has good circulation leave it where it is. Support and reassure injured person.

Use your imagination if you need a splint. A straight piece of wood, a rolled up newspaper or magazine, even a rolled up blanket will do! The main aim is to keep the limb as immobile and comfortable as possible. Make sure the splint extends beyond both sides of the fracture and carefully elevate the limb to slow blood flow to the wound.

Treatment for Fractures

The treatments for fractures are listed on the previous page of this manual. You should use the guidelines "Treatment for a simple fracture" and be cautious to look after the needs of the specific injury/injuries the causality has received.

Pelvic Fracture

- **DRSABCD**;
- Call 000 for an ambulance. (Call First and call Fast);
- If the casualty is conscious, place the casualty flat on their back with their knees slightly bent (remember all unconscious casualties go in the side position);
- Remove everything from the casualty's pockets and give to relatives or friend;
- Immobilise the legs by placing a broad fold bandage around the thighs and a narrow fold bandage around the ankles;
- Treat the casualty gently, as they could have further fractures of the legs or internal injuries.

Collar Bone/Hand Injury

- **DRSABCD**;
- Call 000 for an ambulance. (Call First and call Fast);
- Use an upper arm sling;

- Position the affected arm with the casualty's hand placed on the opposite shoulder;
- Place a triangular bandage across the arm, with the point (apex) toward the elbow;
- Bring the lower half of the triangular bandage up between the forearm and chest and then out behind the elbow, forming a pocket for the injured arm;
- Bring the other end over the uninjured shoulder tying both ends together;
- Twist the bandage at the elbow until firm and then tuck into the bandage;
- Pad under the knot;
- Check for a radial pulse (wrist) on the injured arm;
- If required, you can place a broad fold bandage around the casualty to secure the arm to the casualty's chest. This is to prevent movement of the arm;
- If the casualty has found a comfortable position with the fractured collarbone try and splint it in this position.

Upper Arm Fracture

- **DRSABCD**;
- Call 000 for an ambulance. (Call First and call Fast);
- Use a collar and cuff sling. This allows the weight of the arm to separate the fractured bone (traction), which helps reduce pain and grinding (crepitus);
- Lay a narrow bandage down; make two loops with the bandage, with one end coming out on opposite sides of the middle;
- Fold loops together, place the casualty's hand through the loops and gently tighten;
- Raise the hand to the uninjured side, near the shoulder;
- Tie off the ends around the casualty's neck;
- Pad under the knot;
- Check for a radial pulse (wrist) on the injured arm;
- If the casualty has found a comfortable position with the fractured arm, try and splint it in this position;

Lower Arm and Wrist Fracture

- **DRSABCD**;
- Call 000 for an ambulance. (Call First and call Fast);
- Use a lower arm sling;
- Place a splint under the lower arm (e.g. board or folded newspaper, etc);

- Tie the splint with narrow fold bandages above and below the fracture;
- Position the casualty's arm across their chest with a slight elevation;
- Place the triangular bandage between their arm and chest, with the point (apex) of the triangular bandage at the elbow and the top over the shoulder, on the uninjured side;
- Bring the bottom end of the triangular bandage up and over the fractured arm. Then place over the shoulder on the injured side;
- Tie both ends together, tying the knot on the uninjured side;
- Twist the end at the elbow until firm and then tuck in;
- Check for a radial pulse (wrist) on the injured arm;
- If the casualty has found a comfortable position with the fractured arm, try and splint it in this position.

Leg Fractures

- **DRSABCD**;
- Call 000 for an ambulance. (Call First and call Fast);
- Place a wooden padded splint between the legs and on the outside of the fractured leg. If not available, pad between the legs and use the good leg as the splint;
- Apply a broad fold bandage around the top of the thigh;
- Apply a bandage above and below the fracture site;
- Place other bandages as necessary.

Ankle Fractures

Leave the shoe in place as this acts as the splint and provides compression to reduce the swelling. Slightly elevate the ankle with a pillow.

Treatment for Ankle fractures

- **DRSABCD**;
- Call 000 for an ambulance. (Call First and call Fast);
- A fracture may be an obvious injury, but **DO NOT** forget **DRSABCD** and the secondary survey;
- Cover all wounds with a sterile or clean dressing;
- **DO NOT** apply direct pressure to any protruding bone. Pad around the protruding bone;
- **DO NOT** elevate the limb;
- Apply a bandage around the pad.

- Allow the casualty to support the injured limb in a position of comfort;
- Always immobilise above and below the fracture;
- Apply a cold compress to the fractured site to help reduce the swelling.

Entrapment of casualty

If someone is entrapped from an accident involving the main danger is that the entrapped limbs are crushed. If the limb is compressed and cannot be released immediately the casualty will most like suffer from crush injury syndrome.

Crush injury syndrome occurs when a compressive force is applied to a major part of the casualty and cuts off the circulation. The cells have no oxygen supply and produce a toxic substance. Medical intervention is required to treat a casualty with crush injury syndrome.

Signs and Symptoms

- No pulse beyond the compressive site;
- Pain and swelling around the injury site;
- Bleeding to/or around the site;
- There is usually a fracture to the affected site.

Treatment for Entrapped Casualty

- **DRSABCD**;
- Call 000 for an ambulance. (Call First and call Fast);
- If the compressive force has been in place for less than 1 hour and can be removed immediately and safely then remove it;
- If the compressive force has been in place for longer than 1 hour, **DO NOT** remove it! Wait for the emergency services;
- You now treat the casualty as you do for a casualty with fractured limbs;
- Monitor the casualty's **DRSABCD**.

Fainting

Fainting is a term used to describe a condition of a sudden and brief loss of consciousness, with the potential for a full recovery. The loss of consciousness is usually brief, from seconds to one or two minutes. Brain damage can occur if the casualty is left supported in an upright position such as sitting in a chair etc.

Some of the reasons for fainting are:

- Standing for long periods of time in hot weather.
- Standing in a hot shower for a length of time.

- The sight of blood, needles, trauma
- Pain.
- A drop in blood pressure.
- Pregnancy.

Signs and Symptoms

- Anxiety;
- Light headedness/dizziness;
- Nausea;
- Pale and cold skin;
- Sweating;
- Tremors to the face and limbs just prior to fainting.

Treatment for Casualty who fainted

- **DRSABCD**;
- Lay the casualty down flat on their back;
- Position the casualty's legs raised above the heart;
- All pregnant women should be placed on their left side;
- Assess and treat any further injuries;
- If the casualty does not recover quickly, consider another diagnosis and remember all unconscious casualties are to be placed into the side position;
- If casualty is unconscious call 000 for an ambulance;
- (Call First and call Fast).

Fits and Seizures

There are different reasons why people have fits and seizures. They can be caused by one of the following: Epilepsy, this is due to abnormal electrical activity within the brain.

- Any condition affecting the brain, example: head injury, stroke, meningitis, brain tumours or lock of oxygen (hypoxia);
- Some poisons or drugs;
- Withdrawal from alcohol or drugs;
- High temperature (Febrile Convulsion) in children under five (5) years old.

Epilepsy

A disorder of the central nervous system, particularly the brain, which means people sometimes have seizures. Epilepsy means you are likely to have more than one seizure. Not everyone who has a seizure has epilepsy.

What Causes Epilepsy?

People often wonder what causes epilepsy. In about 50 per cent of cases, doctors cannot find a cause - epilepsy just seems to come out of the blue. In the other 50 per cent of the cases, the cause can be identified, just like any injury or illness to the brain. Epilepsy is widespread and it can affect anyone. People with epilepsy come from all sections of the community and all nationalities. Two in every 100 Australians have some form of epilepsy. Although epilepsy can begin at any age, most people with epilepsy have their first seizure during childhood. About two thirds of people with epilepsy have had their first seizure by the time they complete their primary school years. This means that about 50,000 primary school students throughout Australia have epilepsy.

Signs and Symptoms

- Blueness around the face and lips;
- Confusion and disorientation when regaining consciousness;
- Jerking movements of the body;
- Loss of bladder control;
- Muscle spasms, causing rigidity and the casualty to fall down;
- Noisy breathing with frothing saliva from the mouth;
- Symptoms lasting from a few seconds to minutes;
- Unconsciousness.

Treatment for Epilepsy Fitting

- **DRSABCD**;
- Call 000 for an ambulance. If required;
- Protect the casualty from danger and further injury;
- Once the seizure stops, treat as for unconsciousness;
- Place the casualty in the side position;
- Allow the casualty to sleep with supervision;
- **DO NOT** restrain the casualty;
- **DO NOT** place anything in the casualty's mouth;
- **DO NOT** force the casualty's jaw open.

Febrile Convulsion (younger children)

A Febrile Convulsion is usually associated with a high body temperature in children younger than five years of age. Febrile Convulsions are brought on by a high fever usually caused by a viral infection.

Signs and Symptoms

- Breathing difficulties;

- Face/lips become blue;
- Jerking body movements;
- The child will become limp post seizure;
- The child's back will arch;
- The child's body will become stiff.

Treatment for Febrile Convulsion

- **DO NOT** Panic;
- **DRSABCD**;
- Call 000 for an ambulance (Call First and Call Fast);
- Remove the child's excess clothing to reduce temperature;
- Sponge the child with tepid water;
- **DO NOT** allow the child to shiver/goose bumps, as this will automatically cause the body to produce heat;
- Infant Panadol can only be given if written permission from a doctor is given;
- When the seizure has finished, place the casualty into the side position;
- Monitor **DRSABCD**;
- Lightly cover the child with wet sheet.

Diabetes

Diabetes is a condition, which is caused by an imbalance of insulin causing high or low sugar in the blood. Because all human cells require sugars as food, the body takes in complex sugars in a normal diet. So that the body's cells can use these sugars, the body, through an organ called the pancreas, secretes a protein hormone, called insulin, which attaches to the sugars. This allows the cells to recognise the sugars as food, and absorb the necessary glucose. Diabetes is due to an imbalance in the production of vital insulin. Diabetic emergencies appear in two forms:

- **High blood sugar, or Hyperglycaemia**, is an imbalance of blood sugar, which usually requires the affected person to supplement his or her insulin requirements by periodic injections of the hormone. A casualty who is unable to obtain this supplement is liable to collapse into a serious state called diabetic coma. This condition is less common and has a slower onset than hypoglycaemia. Not all diabetics are dependent on supplementary insulin, and many live normally on a controlled diet
- **Low blood sugar, or Hypoglycaemia**, is a dramatic imbalance where the tissues, especially the brain cells, become starved of essential blood sugar. This condition is the more common type and especially dangerous as its onset is rapid. The result of further deprivation of sugar is that the casualty becomes unconscious and death may follow within hours.

Signs and Symptoms

High Blood Sugar

- Drowsiness;
- Excessively thirsty;
- Frequent need to urinate;
- Hot, dry skin;
- Smell of acetone (nail polish remover) on the breath;
- Unconsciousness.

Low Blood Sugar

- Confused or aggressive;
- Hunger;
- May appear to be drunk;
- Pallor;
- Profuse sweating;
- Rapid pulse;
- Seizures;
- Unconsciousness.

First aid treatment for either type of diabetic emergency is the same. Treatment for the hyperglycaemic requires medical expertise. Low blood sugar is easiest to treat, and treatment generally rewards the first aid provider with dramatic results.

Treatment for Diabetes

- **DRSABCD**;
- Call 000 for an ambulance. (Call First and call Fast);
- If conscious, give sweet drink repeat if casualty responds;
- On recovery, assist with medication and encourage ingestion of food high in carbohydrates e.g., biscuits;
- Avoid putting fingers in the casualty's mouth;
- Unconscious casualty should be placed on side;
- **DO NOT** - attempt to give insulin injection;
- **DO NOT** - give anything by mouth if unconscious;
- **DO NOT** - give diet drink.

The difference between acute and chronic conditions

With many short term or acute illnesses, a quick fix can often be at hand. A visit to a doctor, a course of medication, maybe an operation will often cure or fix the immediate problem. The affected person can choose to be a relatively passive participant in this process: take the medications, undergo the surgery and follow the prescription of the health professional. Of course, a more active

engagement in a healthy life-style including appropriate diet and exercise, can often do much to reduce the risk of such acute episodes.

Chronic long term conditions, such as arthritis, **DO NOT** respond to the quick fix approach. There simply isn't a quick fix; there is often, as yet, no cure. Part of the challenge for the person with a long term condition, is learning to live with the condition and its effects on a day to basis, over a considerable period of time and to maintain quality of life. This challenge can often seem insurmountable, affected people can feel depressed, angry, frustrated, helpless and uncertain.

Asthma

Signs and Symptoms

The onset of an attack can be recognised by one or more of the following symptoms and signs:

- Shortness of breath;
- Wheezing when exhaling, remember, not all asthma casualties' wheeze;
- Dry or moist cough;
- Thirst due to loss of water vapour from the lungs;
- Increasing pulse rate;
- Drawing in of the spaces between the ribs and above the collarbones with the effort of breathing;
- Cyanosis;
- Collapse.

Signs of deterioration include:

- An inability to talk;
- Exhaustion;
- Cyanosis seen in the lips and tongue;
- Collapse.

Assist the casualty to take up to four additional puffs of their "reliever" medication while waiting for trained help. If breathing stops, begin CPR promptly. Effort may be required to overcome the resistance to inflation.

Treatment for Asthma

If you know the casualty's management plan, follow its guidelines. Assist the casualty to:

- Position of comfort - Normally sitting up. If severe attack, place casualty on side
- Take any prescribed medication immediately.

  Queensland health legislation states that you must not use another person's puffer or prescribed medication.

- Rest from any physical activity, even if this appears at first to make the attack worse.
- Sit with arms supported on a table or bench to make breathing easier.
- Constantly observe the casualty in case any deterioration occurs.
- If there is definite improvement, normal activity can resume under close observation. Strenuous physical activity should be avoided unless a medical clearance has been given.
- If there is no improvement after the initial steps have been taken, help the casualty to take two more puffs of the "reliever" medication, and then either contact the casualty's doctor or call for an ambulance.
- If there are signs of deterioration, call for an ambulance immediately.

If there is no action plan in place then use the following Asthma First Aid plan. (ARC Guideline 9.2.5)

Asthma First Aid lan

If a victim has any signs of a severe asthma attack, call an ambulance straight away and follow the Asthma First Aid Plan while waiting for the ambulance to arrive.

Step 1: Sit the person comfortably upright. Be calm and reassuring. Do not leave the person alone.

Step 2: Without delay give four separate puffs of a “reliever”. The medication is best given one puff at a time via a spacer device. If a spacer is not available, simply use the puffer.

Ask the person to take four breaths from the spacer after each puff of medication.

Use the victim’s own inhaler if possible. If not, use the first aid kit inhaler if available or borrow one from someone else.

The first aid rescuer should provide assistance with administration of a reliever if required.

Step 3: Wait four minutes. If there is little or no improvement give another four puffs.

Step 4: If there is still no improvement, call an ambulance immediately. Keep giving four puffs every four minutes until the ambulance arrives.

No harm is likely to result from giving a “reliever” puffer to someone without asthma.

If oxygen is available, it should be administered at a flow rate of at least at 8 litres per minute through a face mask, by a person trained in its use.

If breathing stops, give resuscitation following ARC Basic Life Support Flowchart (Guideline 8)

If a severe allergic reaction is suspected, refer to ARC Guideline 9.2.7 Anaphylaxis – First Aid Management.

See Figure below from the National Asthma Council with a flowchart on the correct use of devices with and without spacers

Prevention of an Asthma attack

People with asthma should have their lung function medically assessed. As part of their personal asthma management plan, many people will use a device called a peak flow meter, which measures their lung function. A reduced reading indicates the need for increased preventative medication; improved readings indicate that the asthma is under control.

Exercise-induced asthma (EIA) responds well to treatment if the person takes the prescribed medication appropriately. Generally the person with EIA is advised to take the prescribed medication 5 to 10 minutes before exercise

Figure 29: First Aid for Asthma
(accessed http://www.nationalasthma.org.au/ 28/11/2013)

First Aid for Asthma

1 **Sit the person comfortably upright.**
Be calm and reassuring.
Don't leave the person alone.

2 **Give 4 puffs of a blue/grey reliever**
(e.g. Ventolin, Asmol or Airomir)
Use a spacer, if available.
Give 1 puff at a time with 4 breaths after each puff
Use the person's own inhaler if possible.
If not, use first aid kit inhaler or borrow one.

OR

Give 2 separate doses of a Bricanyl or Symbicort inhaler
If a puffer is not available, you can use Symbicort (people over 12) or Bricanyl, even if the person does not normally use these.

3 **Wait 4 minutes.**
If the person still cannot breathe normally, **give 4 more puffs.**

Wait 4 minutes.
If the person still cannot breathe normally, give 1 more dose.

4 If the person still cannot breathe normally,
CALL AN AMBULANCE IMMEDIATELY (DIAL 000)
Say that someone is having an asthma attack.
Keep giving reliever.
Give 4 puffs every 4 minutes until the ambulance arrives.
Children: 4 puffs each time is a safe dose.
Adults: For a severe attack you can give up to 6–8 puffs every 4 minutes

If the person still cannot breathe normally, CALL AN AMBULANCE IMMEDIATELY (DIAL 000) Say that someone is having an asthma attack.
Keep giving reliever while waiting for the ambulance:
For Bricanyl, give 1 dose every 4 minutes
For Symbicort, give 1 dose every 4 minutes (up to 3 more doses)

HOW TO USE INHALER

WITH SPACER

- Assemble spacer
- Remove puffer cap and shake well
- Insert puffer upright into spacer
- Place mouthpiece between teeth and seal lips around it
- Press once firmly on puffer to fire one puff into spacer
- Take 4 breaths in and out of spacer
- Slip spacer out of mouth
- Repeat 1 puff at a time until 4 puffs taken – remember to shake the puffer before each puff
- Replace cap

WITHOUT SPACER

- Remove cap and shake well
- Breathe out away from puffer
- Place mouthpiece between teeth and seal lips around it
- Press once firmly on puffer while breathing in slowly and deeply
- Slip puffer out of mouth
- Hold breath for 4 seconds or as long as comfortable
- Breathe out slowly away from puffer
- Repeat 1 puff at a time until 4 puffs taken – remember to shake the puffer before each puff
- Replace cap

BRICANYL OR SYMBICORT

- Unscrew cover and remove
- Hold inhaler upright and twist grip around and then back
- Breathe out away from inhaler
- Place mouthpiece between teeth and seal lips around it
- Breathe in forcefully and deeply
- Slip inhaler out of mouth
- Breathe out slowly away from inhaler
- Repeat to take a second dose – remember to twist the grip both ways to reload before each dose
- Replace cover

Not Sure if it's Asthma?
CALL AMBULANCE IMMEDIATELY (DIAL 000)
If a person stays conscious and their main problem seems to be breathing, follow the asthma first aid steps. Asthma reliever medicine is unlikely to harm them even if they do not have asthma.

Severe Allergic Reactions
CALL AMBULANCE IMMEDIATELY (DIAL 000)
Follow the person's Action Plan for Anaphylaxis if available. If the person has known severe allergies and seems to be having a severe allergic reaction, use their adrenaline autoinjector (e.g. EpiPen, Anapen) before giving asthma reliever medicine.

For more information on asthma visit:
Asthma Foundations – www.asthmaaustralia.org.au
National Asthma Council Australia – www.nationalasthma.org.au

National Asthma Council Australia
leading the attack against asthma

Hyperventilation

Hyperventilation is defined as a rapid respiratory rate (fast breathing) and/or increased depth of breathing. The most common causes are:

- Anxiety;
- Deliberately over breathing.

Signs and Symptoms

- A feeling of not getting enough air;
- Anxiety;
- Chest tightness;
- Rapid breathing;
- Hands and fingers can contract and twist;
- Abdominal cramps;
- Tingling to the fingers and lips;

Treatment for Hyperventilation

- Reassure and calm the casualty;
- encourage slow breathing;
- it may take some time for the casualty to calm down and relax;
- ask any bystanders who are aggravating the situation to move away;
- if casualty does not improve call 000 for the ambulance

Croup

Croup is the inflammation of the upper airway (throat). This inflammation causes narrowing of the upper airway and can be caused by a bacterial infection. It normally affects children aged between 2-4 years of age.

Signs and Symptoms

- A seal like bark, worsening at night;
- Difficulty in breathing;
- Onset over hours to days;
- Restlessness.
- Sore throat, high temperature and a runny nose.
- The child looks and is unwell.

Treatment for Croup

- Reassure and calm the child;
- Call 000 for an ambulance if the child has breathing difficulties and is in distress;
- **DO NOT** look inside the child's mouth;
- **DO NOT** take the child out into the night air;
- Place child in a room full of moist/steam air (in the bathroom with the hot shower tap on to steam the room). Be careful not to place the child close to the hot water you **DO NOT** want to raise the child's temperature;
- Remember to dry the child when leaving the bathroom, as they will be wet from the steam.

Epiglottitis

Epiglottitis is the inflammation of the flap (epiglottis) that sits above the windpipe and closes off the windpipe when something is swallowed. Normally this flap is open to allow breathing. Inflammation of the epiglottis can have a rapid onset, developing quickly and in severe cases blocking the airway. Epiglottis normally affects children aged between 2-4 years of age.

Signs and Symptoms

- Harsh cough;
- High temperature;
- Lethargic;
- Noisy breathing;
- Pale;
- Postural changes, example: leaning forward;
- Rapid onset;
- Sick looking child;
- Sore throat that is too painful for the casually to eat, drink or even swallow.

Treatment for Epiglottitis

- **DRSABCD**.
- Call 000 for an ambulance. (Call First and call Fast).
- **DO NOT** look into the casualty's mouth this could block the airway.
- Rest and reassure the casualty. It is best to have a parent nurse the child for reassurance.
- Sit the casualty upright. This assists with breathing and helps prevent the epiglottis from blocking the airway.
- **DO NOT** force the casualty to drink or eat.

Note This is an extremely serious condition and ambulance assistance (000) is required. These casualties need to be monitored on the way to hospital at all times as their airway could become blocked at any time.

2. Apply appropriate first aid procedures

2.1 Perform cardiopulmonary resuscitation (CPR) in accordance with Australian Resuscitation Council (ARC) guidelines

2.2 Provide first aid in accordance with established first aid principles

2.3 Display respectful behaviour towards casualty

2.4 Obtain consent from casualty where possible

2.5 Use available resources and equipment to make the casualty as comfortable as possible

2.6 Operate first aid equipment according to manufacturer's instructions

2.7 Monitor the casualty's condition and respond in accordance with first aid principles

2.1 Perform cardiopulmonary resuscitation (CPR) in accordance with Australian Resuscitation Council (ARC) guidelines

Performing Cardiopulmonary Resuscitation (CPR) can help save a life, often the life of a family member or someone you know.

If the patient is not breathing you need to give CPR.

In an emergency situation remember **DRABCD** **Danger, Response, Airway, Breathing** , **Circulation and Defibrillation**

D **Check for Danger**

Look for danger to yourself, bystanders and the patient. If able to do so, remove the patient from danger or the danger from the patient without putting yourself at risk.

For example: removing the patient away from a fire.

R **Check for a Response**

Identify if the patient is conscious, by asking the patient questions such as "open your eyes", "can you hear me" while gently shaking their shoulders.

If conscious reassure the patient and seek medical advice

If unconscious carefully roll the patient onto their side, (this is called the recovery position) ensuring that you support the patient's neck. If the patient is in a motor vehicle, gently tilt the head back.

A Check the Airway

Open airway by tilting patient's head back and lifting the chin. Do not perform a head tilt on babies or injured patients.

Check that the airway is not blocked; this is done by sweeping the mouth with your fingers removing any solid pieces of food or other things, and letting any fluid drain out.

If this simple manoeuvre is unsuccessful in opening a patient's airway you need to get someone to call an ambulance immediately.

B Check Breathing 'look, listen and feel'

Look for the rise and fall of the chest

Listen for breath sounds from their mouth or nose

Feel for the rise and fall of chest

If the patient is breathing keep the patient on their side (recovery position). Remain with the patient while continuing to monitor the patient and check the breathing and pulse every few minutes until Ambulance arrives.

If the patient is not breathing, the first-aider should only roll the unconscious person onto their side if there is foreign material present in the mouth. Open the airway by tilting patient's head back and after lifting their chin, commence rescue breathing as follows:

- **ADULT** - pinch the patient's nostrils and seal your mouth over patient's mouth and give 2 full breaths
- **CHILD** - use 2 smaller breaths for a child
- **BABY** - seal your mouth over the baby's mouth and nose and give 2 quick puffs

In each case ensure that the chest rises and falls with each breath.

C Check Circulation

First aiders are no longer required to check for a pulse when managing an unconscious patient who is not breathing.

They should commence rescue breathing as follows:

- **ADULT** – 2 breaths in about 2 seconds

- **CHILD** – 2 breaths in about 2 seconds
- **BABY** – 2 breaths (puffs) in about 2 seconds

Ensure that the patient's chest rises and falls with each breath and commence CPR (Cardio-Pulmonary Resuscitation).

- **ADULT -** Position the heel of one hand on the centre of the lower half of breastbone (sternum) while grasping the wrist with your other hand.
- **CHILD**– Position the heel of one hand on the centre of the lower half of the breastbone (sternum)
- **BABY** – Position 2 fingers in the centre of the breastbone (sternum) just between the nipples

Give 2 breaths to every 30 compressions (at 100 compressions per minute). (Figure 12)

Compress chest to 1/3 of its depth. (Figure 11)

If pulse returns but the person has no breathing continue rescue breathing until Ambulance arrives.

Always stay with the person until help arrives

Keep the '000' (Ambulance dispatcher) informed of persons condition (if possible ask someone to do this for you)

Check for any visible signs of injury and if present;

Control severe bleeding by applying direct pressure to the affected area (take care to not come in direct contact with blood)

Support broken bones (fractures) through immobilisation of the limb Prevent further injuries to the casualty

Figure 30: Position of hands

Figure 31: Give 2 Rescue Breaths

D Defibrillation

If Automated External Defibrillator (AED) is available

1. **Turn on AED**
   Follow the voice and/or visual prompts

Figure 32: Turn on AED

2. **Wipe bare chest dry**

   (Remove any medication patches with a gloved hand)

3. **Attach Pads**

Figure 33: Attach Pads

4. **Plus in Connector, if necessary**

Figure 34: Plug in connector

5. **Stand Clear**

Make sure no-one, including you, is touching the person.

Say “Everyone Stand Clear”

Figure 35: Stand Clear

6. **Analyse heart Rhythm**

Push the “analyse” button, if necessary. Let AED analyse the heart rhythm

7. **Deliver Shock**

If shock is advised:

- Make sure no-one. Including you is touching the person
- Say, “EVERYONE, STAND CLEAR”
- Push the “shock” button, if necessary.

Figure 36: Deliver Shock

8. Perform CPR

After delivering the shock, or if no shock is advised:

- Perform about 2 minutes (or 5 cycles) of CPR.
- Continue to follow the prompts of the AED.

TIPS:

- If at any time you notice an obvious sign of life, stop CPR and monitor breathing and for any changes in condition.
- If two trained responders are present, one should perform CPR while the second responder operates the AED.

Rescue Breathing

If the unconscious casualty has airway opened and cleared, check for signs of life (i.e. unconscious, unresponsive, not moving and no normal breathing), the rescuer must immediately commence Rescue Breathing. Give two initial breaths allowing about one second per inspiration, and then commence chest compressions.

Mouth to Mouth Rescue Breathing

Tilt

Kneel beside the casualty's head. Maintain an open airway.

Blow

Take a breath, open mouth as widely as possible and place over the casualty's slightly open mouth. Whilst maintaining an open airway pinch the nostrils (or seal nostrils with rescuer's cheek) and blow to inflate the casualty's lungs. Because the hand supporting the head comes forward some head tilt may be lost and the airway may be obstructed. Pulling with the hand on the chin helps to reduce this problem.

Look, Listen and Feel

Look for a distinct rise of the casualty's chest with every breath into their airway. If the chest does not rise, possible causes are:

- Obstruction in the airway (inadequate head tilt, chin lift, or foreign material);
- Insufficient air being blown into the lungs;
- Inadequate air seal around mouth and or nose.

If chest does not rise, ensure correct head tilt, adequate air seal and ventilation. Following inflation of the lungs, lift your mouth from the casualty's mouth and turn your head towards the casualty's chest and listen and feel for air being exhaled from the mouth and nose.

Compressions

Recognition of the Need for Chest Compressions

Rescuers should start chest compressions if the casualty has no signs of life (i.e. unconscious, unresponsive, not moving and not breathing normally). Checking the carotid pulse is an inaccurate method of confirming the presence or absence of circulation. Lay rescuers should not attempt to palpate a pulse to determine whether or not to give chest compressions.

Locating the Site for Chest Compressions

There is insufficient evidence for or against a specific hand position for chest compressions during CPR in adults. The Australian Resuscitation Council recommends the lower half of the sternum as the compression point in all age groups.

Direct visualisation may be used to locate the compression point. For the ease of teaching the lower half of the sternum equates with the "centre of the chest". This is simple method will minimize pauses between ventilations and compressions and may encourage more people to attempt CPR. Avoid compression to the lower limit of the sternum. Compression applied too high is ineffective and if applied too low may cause regurgitation and/or damage to internal organs.

Method of Compression

Infants

In infants the two fingers technique should be used by the rescuer whether they are lay rescuers, healthcare or trained first aid responders in order to minimise transfer time from compression to ventilation. Having obtained the compression point the rescuer places the pulps of the two fingers on this point and compresses the chest.

Children and Adults

Once you have obtained the compression point, the rescuer places the heel of their hand on this point, with the fingers parallel to the ribs and preferably slightly raised; so that pressure will not be exerted directly on the ribs. The rescuer places their hand securely on top of the first. All pressure is exerted through the heel of the bottom hand and the rescuers body weight is the compressing force. Therefore, the rescuer's shoulder should be vertically over the sternum and the compressing arm kept straight. Casualties requiring chest compressions should be placed supine on a firm surface (e.g. backboard or floor) before chest compressions to optimize the effectiveness of compressions. Compressions should by rhythmic with equal time for compression and relaxation. The rescuer must avoid either rocking backwards and forwards or using thumps and quick jabs. Rescuers should allow for complete recoil of the chest after each compression.

Depth of Compression

The lower half of the sternum should be depressed by one third of the depth of the chest with each compression. This equates to at least 4-5cm in adults.

Rate of Chest Compressions

Rescuers should perform chest compressions for all ages at a rate of approximately 100 compressions per minute (That means almost 2 compressions per second). This does not imply 100 compressions will be delivered each minute since the number will be reduced by the interruptions for breaths by rescue breathing.

Cardiopulmonary Resuscitation

Cardiopulmonary Resuscitation - (CPR)

Cardiopulmonary resuscitation is the technique of rescue breathing combined with chest compressions. The purpose of cardiopulmonary resuscitation is temporarily to maintain a circulation sufficient to preserve the brain function until specialised treatment is available.

Rescuers should start CPR if the casualty has no signs of life (unconscious, unresponsive, not moving, and not breathing normally). Even if the casualty takes occasional gasps, rescuers should suspect that cardiac arrest has occurred and should start CPR.

Compression Ventilation Ratio

No human evidence has identified an optimal compression-ventilation ratio for CPR in casualties of any age. Interruptions to compressions should be avoided

with evidence suggesting that previous compression-ventilation ratios resulted in too much “hands off time”. Evidence also demonstrates that over ventilation occurs even by trained responders.

A universal compression-ventilation ratio of 30:2 (30 compressions followed by 2 ventilations) is recommended for all ages regardless of the numbers of rescuers present. Compressions must be paused to allow for ventilations. This compression ventilation ratio has been selected to:

- Increase the number of compressions;
- Minimise interruptions to compressions;
- Prevent excessive ventilation;
- Simplify teaching
- Maximise skill retention
- Maintain international consistency.

Steps for Resuscitation

Initial steps of resuscitation are:

DRSABCD

- Check for danger (hazards/risks/safety);
- Check for response (unresponsive/unconscious);
- Send for Help;
- Opening the airway (look for signs of life - Call 000/resuscitation team);
- Give rescue breathing (give two rescue breaths if not breathing normally);
- Give 30 chest compressions (almost 2 compressions/second) followed by 2 breaths;
- Attach an AED (Automated External Defibrillator) if available and follow the prompts.

When providing 30 compressions (at approximately 100/min) and giving 2 breaths (each given over 1 second per inspiration), this should result in the delivery of 5 cycles in approximately 2 minutes.

Chest Compression Only

In some circumstances, there may be unwillingness or inability to do rescue breathing in these instances the rescuer should do chest compressions only. If chest compressions only are given, they should be continuous at a rate of approximately 100/min.

Multiple Rescuers

When more than one rescuer is available ensure:

- That an ambulance has been called (000)
- All available equipment has been obtained (e.g. Defibrillator)

- Frequent rotation of rescuers is undertaken (approximately every 2 minutes) to reduce fatigue.

Duration of CPR

The rescuer should continue cardiopulmonary resuscitation until:

- Signs of life return
- Qualified help arrives
- It is impossible to continue (e.g. exhaustion);
- An authorised person pronounces life extinct.

Recovery Checks

Evidence has demonstrated that interruption of chest compressions is associated with poorer return of spontaneous circulation and lower survival rates and that both lay and health care professional's experience difficulty in determining presence or absence of pulse in collapsed casualties. Therefore, rescuers should minimise interruptions of chest compressions and CPR should not be interrupted to check for signs of life.

DO NOT PAUSE TO CHECK PULSE.

Resuscitation in late Pregnancy

In the obvious pregnant woman, the unborn infant causes pressure on the major abdominal vessels when she lays flat, reducing venous return (blood flow through the veins) to the heart. The pregnant woman should be positioned on her back with her shoulders flat and sufficient padding under the right buttock to give an obvious pelvic tilt to the left. This allows the unborn infant to move to the left side of the woman removing pressure from the major blood vessels. If you tilted the pelvis to the right the unborn infant would not move to the right because the unborn infant would be resting against the woman's liver and pressure would remain on the major vessels.

Additional notes:

Distension of the stomach may occur when the rescuer either blows too hard or blows when the airway is partially obstructed so that air enters the stomach rather than the lungs. If the stomach is distended, **DO NOT** APPLY TO PRESSURE TO THE STOMACH. If air forced into the stomach, some stomach contents can be forced up into the mouth and airway thus into the lungs. Regurgitation is the passive flow of stomach contents into them mouth and nose. Although this may occur in any person, regurgitation and inhalation of stomach contents is a major threat to an unconscious person. It is often unrecognised because it is silent and there is no obvious muscle activity. Vomiting is an active process during which action causes the stomach to eject its contents. In resuscitation, regurgitation and vomiting are managed in the same way by prompt positioning on the side and manual clearance of the airway prior to continuing to rescue breathing.

Defibrillation

The Australian Resuscitation recommends the use of an AED if available

What is an Automatic External Defibrillator (AED)?

The automated external defibrillator (AED) is a computerized medical device. An AED can check a person's heart rhythm. It can recognize a rhythm that requires a shock. And it can advise the rescuer when a shock is needed. The AED uses voice prompts, lights and text messages to tell the rescuer the steps to take.

AEDs are very accurate and easy to use. With a few hours of training, anyone can learn to operate an AED safely. There are many different brands of AEDs, but the same basic steps apply to all of them.

Why should people who are responsible for operating an AED receive CPR training?

Early CPR is an integral part of providing lifesaving aid to people suffering sudden cardiac arrest. CPR helps to circulate oxygen rich blood to the brain. After the AED is attached and delivers a shock, the typical AED will prompt the operator to continue CPR while the device continues to analyse the victim.

If AEDs are so easy to use, why do people need formal training in how to use them?

An AED operator must know how to recognize the signs of a sudden cardiac arrest, when to activate the EMS system, and how to do CPR. It's also important for operators to receive formal training on the AED model they will use so that they become familiar with the device and are able to successfully operate it in an emergency. Training also teaches the operator how to avoid potentially hazardous situations.

Australian Resuscitation Council Guideline 10.1.3

Public Access Defibrillation (PAD)

The Australian Resuscitation Council recommends that 2 type of people can use the AED. When someone has No Signs of Life and CPR is being performed, and an Automatic External Defibrillator (AED) is available the people who are trained in the use of AED and people who are not trained in the AED may use the AED. It is preferable that the trained person uses the AED. It is recommended that if a person is working in a workplace which has an AED the all staff are trained in the use of the AED.

Treatment Recommendation for using an Automatic External Defibrillator (AED)

The evidence to date supports the premise that early defibrillation delivered within a PAD mode may improve survival following cardiac arrest which occurs outside of hospital and in public places. Accordingly it is acceptable that PAD programs be implemented wherever feasible adopting the following principles.

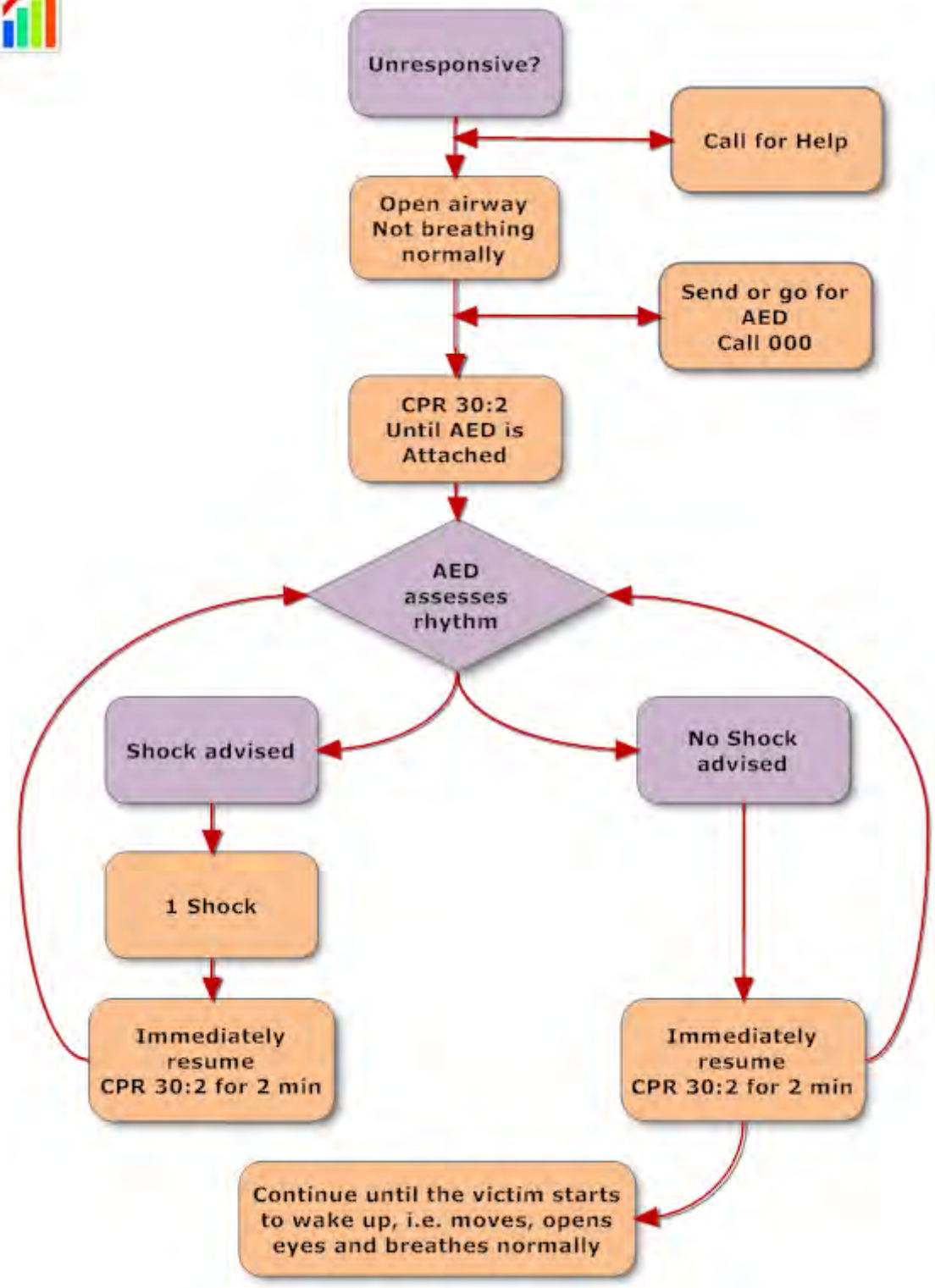
- Public Access Defibrillation represents an important link in the Chain of Survival for a person experiencing a sudden cardiac arrest. Any initiative in this area should promote the other links in that chain.
- Defibrillation should preferably be undertaken by trained lay people or health professionals. As trained personnel may not be available immediately, untrained bystanders

should also have access to the use of public access defibrillators.

- Programs are needed to support the broader education of the Australian community in emergency response and cardiopulmonary resuscitation (CPR).
- Implementation of Public Access Defibrillation should be developed in partnership with local emergency medical services and provide for data collection and audit of events.

There is no data supporting the efficacy of PAD for cardiac arrests occurring in the home. Furthermore, this recommendation only considers the efficacy and effectiveness of PAD in improving survival from out of hospital cardiac arrest and does not address the specific issues of implementation or cost effectiveness.

Figure 37: AED algorithm (2013 Resuscitation Guidelines)



Currency and assessment of CPR skills

CPR skills performance has been shown to decline rapidly following initial achievement of competency. The Australian Resuscitation Council recommends that CPR skills are reassessed at least annually.

The Australian Resuscitation Council recognises that training organisations are required to assess CPR competency. ARC recommends that assessors be cognisant to the intent of the resuscitation community that any attempt at resuscitation is better than no attempt. As such, assessment should focus on adequate CPR and not on the technicalities of achieving set figures or rates. Focus is on good COMPRESSIONS and effective BREATHS.

Secondary Survey

This follows the primary Survey (**DRSABCD**) and after any life threatening bleeding has been treated.

A thorough examination of the casualty is to be completed. The more information the Carer can gather, the better equipped the Carer will be to give the most appropriate treatment. There are four (4) tools used to assist in assessing the casualty in the Secondary Survey. They are:

- Signs
- Symptoms
- History
- Medical alert bracelets.

Signs:

What the Carer can see, touch, hear or smell. For example, the casualty is bleeding, has vomited, has noisy breathing etc. These signs are most important to note when the casualty is unconscious and unable to communicate with the Carer.

Symptoms:

This is the information provided by the casualty. It is what they tell the Carer e.g. where they have pain, how they feel etc.

History:

This has two (2) components. The first is relevant past history, which may include previous illnesses or injuries that have contributed to the current situation. For example the casualty has a heart condition and now has chest pain or a respiratory problem and is short of breath.

The second component is the current history. This includes what has happened or what has occurred leading up to this current situation. This information will tell you what happened and the type of injuries that could be present. For example, the casualty that fell from the roof of the house would generally have different injuries than the casualty who fell out of a chair. Bystanders and witnesses are often important in establishing the current history.

Further information can also be gathered using - Simple Questions.

- **A**llergies: - Does the casualty have any?
- **M**edications: - What medications does the casualty use?

- **P**ast Medical History: - Does the casualty have any previous illnesses?
- **L**ast meal: - When did the casualty last eat/drink?
- **E**vent: - What events have occurred leading up to the incident?

Medical alert bracelets:

People suffering with known medical conditions e.g. allergies, usually wear a medical alert bracelet so that in case of an emergency a Carer will look for the bracelet and be able to gain important information about the casualty.

Head to Toes Assessment

The Secondary Survey (Head to Toes) is a more thorough examination conducted by the Carer and is carried out for casualties with potential injuries. If the casualty is unconscious, is breathing adequately and has a pulse, the casualty is left in the side position, and the casualty's Airway, Breathing and Circulation (ABC) are checked regularly throughout the secondary survey. The secondary survey is conducted in a methodical manner from which signs, symptoms and history can be established and is started at the head of the casualty.

Head

- Instruct the casualty not to move their head.
- Look for any bleeding, swelling or deformity to the head or face.
- Look for discharge, blood or clear fluids from the ears, nose, eyes or mouth.
- Ask if they have any pain to their head/face.
- Ask the casualty if they are able to clench their jaw and if they have any pain when doing so.

Neck

- Look for any swelling, deformity or bleeding.
- Remind casualty not to move their head.
- Ask casualty if they have any pain to their neck.

Chest (Thorax)

- Look for any deformity, bleeding or swelling to the chest and shoulders.
- Ask the casualty to take a deep breath.
- Listen for any noisy breathing.
- Look at the rise and fall of the chest.
- Ask the casualty if they have any pain or if they are short of breath.

Stomach (Abdomen) and Hips (Pelvis)

- Ask the casualty if they have any pain to the stomach (abdomen) or hips (pelvis).
- Look for swelling, bleeding or bruising.
- Is the stomach (abdomen) bloated (distended)?
- Is the casualty guarding the stomach (abdomen)?

Legs

- Look for deformity, bleeding or swelling.
- Ask the casualty if they have any pain to the legs.
- Does the casualty have numbness or tingling to the legs?
- Is there any loss of feeling or movement to the legs?

Arms

- Look for deformity, bleeding or swelling.
- Ask the casualty if they have any pain to the arms.
- Does the casualty have any numbness or tingling to the arms?
- Is there any loss of feeling or movement to the arms?

Spine

- Ask if the casualty has pins and needles or loss of feeling anywhere.
- Ask the casualty if they have any back pain.
- If the limbs are not injured and you are sure that the casualty does not have a spinal cord injury then, with assistance.
- Gently roll the casualty onto their side whilst supporting the head and neck.
- Gently feel and look for any deformity or bleeding to the back.
- Gently roll the casualty back into their original position.

During the secondary survey, if any serious injuries are found, they should be treated immediately. The Carer must also tailor the secondary survey to the situation and circumstances at the scene. If you do have to treat a serious injury handle the casualty carefully.

Note: If the casualty is complaining of having an injury or complains of numbness or tingling to the arms or legs, **DO NOT** move the casualty wait for the doctor and ambulance to arrive on scene. If possible keep the casualty awake while waiting.

2.2 Provide first aid in accordance with established first aid principles

Reassure the casualty

Imagine you are hurt in a workplace accident. You can see blood on your leg and you think you've broken your arm. You've twisted your ankle and you're also in considerable pain and feeling a bit dizzy. You will probably be feeling frightened and panicked or confused.

Feeling frightened and panicked could make things worse for you. Feeling this way will increase your blood pressure and pulse causing more pain and more bleeding. This will in turn cause more anxiety and panic. It becomes a vicious circle.

Not only is it important to reassure the casualty to make them feel better, this also lowers the blood pressure and pulse rate and therefore lowers the amount of bleeding and pain.

Think of what kind of things could alleviate some of this anxiety and panic.

Learning Activity 8:

Answer True or False by circling the correct answer

1. Panic and pressure can cause the pulse rate and blood pressure to increase thereby increasing pain and bleeding **True / False**
2. One way to reassure the casualty is to stay with them **True / False**
3. You could help in a first aid situation by driving an injured casualty to the hospital **True / False**

Offering reassurance is the process of providing information that is comforting and instills trust and confidence in your abilities to provide first aid care. You can offer reassurance through giving the casualty information about the care you are providing and by letting them know that professional help is on the way, if this is the case. Your reassurance can greatly assist in reducing the casualty's fears and anxieties. In some circumstances bystanders may also require reassurance that the situation is under control.

Figure 38: Methods

There are definite dos and don'ts regarding ways in which you can reassure the casualty.

DO DON'T	DON'T
Be as honest as possible.	Don't tell them bad news e.g. 'Emma is dead.' If the casualty asks about another casualty who is dead or critical, just say 'Everything is being done for them.'
Let the casualty know that help is on its way.	Don't react to the situation ie don't shout 'Oh my goodness, look at Bob.' or 'Gee, look at all that blood.'
If an ambulance has been called, let the casualty know this.	
Stay with the casualty.	Do not leave the casualty.
Try to make them comfortable with minimal movement e.g. blankets, icepack.	Don't move the casualty unnecessarily.
Tell the casualty your name, find out theirs and use it e.g. 'How are you doing, Bob?' and 'Help is on its way, Bob.'	Don't tell the casualty to look at the wounds.

Act confidently, instilling trust in the casualty.	Don't fall apart (e.g. do not say 'I don't know what to do').

2.3 Display respectful behaviour towards casualty

When offering first aid, it is important to remember that the casualty you are about to assist may live by customs, traditions or values that may be different to your own. Be aware and be sensitive to their specific needs. For example, it would be more appropriate for a female first-aider to attend to the sprained ankle of a female casualty for many cultures. Sometimes it would not be respectful to remove clothing from a casualty who has suffered a burn. In this case leave the clothing and cool the burn underneath by using cool, running water over the clothing.

Following are some simple strategies for talking to a casualty:

- Speak slowly and clearly.
- Use short and simple sentences.
- Maintain normal volume.
- Use different words to express the same idea.
- Prioritise and sequence your instructions.
- Avoid jargon.
- Respond to expressed emotions.

In dealing with a casualty be empathic, unbiased and non-judgmental. Do not think in stereotypes. Do not let your personal biases and opinions impact on the way you interact with the casualty, regardless of their race, culture, religion, gender, age, disability or even the way they look. If we treat some people differently based on any of the areas then we are being discriminative. Discrimination is illegal in Australia.

Confidentiality

When offering first aid care to any casualty it is important that you can keep any information that you gain confidential. Information about the nature of the accident or the condition of the casualty should only be conveyed to Emergency Services personnel and/or the workplace supervisor, if appropriate.

Determine and explain nature of injury and first aid procedure

For many people it would be important to know what their injuries are or what their condition is and what first aid management if being given. Knowledge can provide comfort and reassurance to a casualty.

Before you start providing more information to the casualty, determine first whether they wish to be told - watch their reaction when you begin to inform them. If the casualty nods, says OK, or asks questions, you can be assured they wish to know what is happening.

The casualty usually has to participate in their first aid management to some extent either by answering questions, for example, 'Have you got your asthma medication with you? Or they may have to position their arm slightly for a bandage to be applied. Be aware that you will need to read their body language to gauge how much information to provide for their comfort

2.4 Obtain consent from casualty where possible

Agreement from the person who has been injured needs to be obtained, if it is possible, prior to the commencement of any management. Once you begin to render assistance you have a responsibility to provide first aid in accordance with your level of training and experience. No legal action has ever been successful against a first aider in Australia

When offering any assistance to a casualty who is conscious, it is important to seek their permission for you to provide first aid management. If the casualty is unconscious or in a life threatening situation, you should act immediately and presume that they would prefer you to offer any assistance.

When offering first aid management for people under the age of 18, consent should also be sought from their parent or guardian, when available.

A casualty who is of sound mind and has not provided consent or has clearly stated that they want to be left alone, must have their wishes respected otherwise it could be considered assault. Even with the best of intentions, it is very important that permission is sought prior to administrating first aid. The casualty who tells the first aider that they are fine and that they do not need help had their own reasons for refusing assistance.

Welfare

The casualty's welfare is of paramount importance when you are treating them for their injury. You do not want to inflict further harm upon them from the treatment that you deliver. Firstly ensure that the casualty is not in any danger from their surrounding environment e.g. If they are in the vicinity of unstable equipment, which may fall on them, that this equipment is stabilised before treatment is commenced. Next the first aider has to determine if moving the casualty or any part of the body may cause further damage such as in the case of suspected spinal injuries.

2.5 Use available resources and equipment to make the casualty as comfortable as possible.

An individual needs to be aware of the resources that are available to be able to carry out first aid in their surroundings. The first aider should be familiar with all the equipment that is at hand such as first aid kits, stretchers, breathing apparatus, splints etc .and ensure that they are in full working order therefore all equipment should be checked on a regular basis. They should also be familiar with how to use the equipment should the need arise. An example of a typical on site first aid kit can be seen in the table below. If the institution has a predetermined first aid area, this area also needs to be checked regularly and kept free of clutter and obstacles. Prior knowledge of the location of all first aid

resources and equipment is essential so that these resources can be utilised in an efficient and timely manner thus saving valuable time which may be imperative in the treatment of certain injuries and conditions.

You may be required to assist in a first aid situation by getting resources such as:

- first aid kit
- blankets
- mobile phone (to call for help)
- torch
- thermometer
- ice pack
- resuscitation mask or pocket face mask
- space blanket
- extra bandages
- spacer device
- gloves.

If you do need to assist by accessing any of these items, prepare yourself by becoming familiar with where these items are kept in the workplace. This will save time and speed up the first aid response, help to promote recovery and may prevent injuries from worsening.

Figure 39:

First Aid Kits **Description of Appliance or Requisite**	**Contents** **First Aid Kit**		
	A	**B**	**C**
Adhesive plastic dressing strips, sterile, packets of 50	2	1	1
Adhesive dressing tape, 2.5cm x 5 cm	1	1	-
Bags, plastic, for amputated parts: small	2	1	1
Medium	2	1	1
large	2	1	-
Dressing, non-adherent, sterile, 7.5cm x 7.5cm	5	2	-
Eye pads, sterile	5	2	-
Gauze bandages 5cm	3	1	1
10cm	3	1	-
Gloves, disposable, single	10	4	2
Rescue blanket, silver space	1	1	-
Safety pins, packets	1	1	1

Scissors, blunt/short-nosed, minimum length, 12.5cm	1	1	-
Splinter forceps	1	1	-
Sterile eyewash solution, 10ml single use ampoules or sachets	12	6	-
Swabs, pre-packed, antiseptic, packs of 10	1	1	-
Triangular bandages, minimum 90cm	8	4	1
Wound dressings, sterile, non-medicated, large	10	3	1
First aid pamphlet (as approved by WorkCover)	1	1	1

First Aid Kit A – for construction sites at which 25 or more persons work and for other places of work at which 100 or more persons work.

First aid Kit B - for construction sites at which less than 25 persons work and for other places of work at which less than 100 or more than 10 persons work.

First Aid Kit C - for any place of work, other than a construction site at which 10 or less persons work.

Learning Activity 9:

When working out your first aid requirements name 2 factors that need to be considered

_____

_____

_____

Case study

You hear a bang in the storeroom. You stop what you are doing and quickly walk to the storeroom. You see Mr. Pratchett, the maintenance officer, lying on the ground with a stepladder lying beside him. You determine that Mr. Pratchett has fallen off the stepladder, and decide that it is safe to approach him. You call for help as well as a first aid kit, while carefully moving the ladder aside to prevent further injury. You determine that Mr. Pratchett is conscious because he is holding his ankle and moaning. A qualified first aider arrives with a first aid kit and together you manage injuries and reassure Mr. Pratchett.

Sometimes, you may need to improvise to provide effective first aid. That is, you may need to be creative and think laterally because you might not have exactly what you require. You will need to use something else instead. Look around you and think of what resources you may be able to use. For example, if you need to elevate the casualty's legs, look for a bag or case, a small box or a chair, which can be turned upside down in order to elevate their legs. If you can't find anything, hold the casualty's legs up yourself.

Figure 40: Elevating a casualty's leg

2.6 Operate first aid equipment according to manufacturer's instructions

There are a number of pieces of equipment that can be utilised in the administration of first aid. Life support equipment should be regular checked for deterioration, to ensure that it is functioning properly and cleanliness. The first aiders should be up to date on how to use the equipment and maintain it. There is little benefit in having up to date life support equipment available if no

one knows how to use it. Manufacturers /suppliers instructions should be kept in an accessible place so that they can be referred to if needed. However, prior knowledge is the best as you don't want to have to go and read the instructions in an emergency.

First aid equipment refers to the first aid kit, the defibrillator and other equipment such as Epi-pens, puffers and spacers.

An automated external defibrillator (AED) is a portable automatic device used to restore normal heart rhythm to patients in cardiac arrest. An automated external defibrillator is applied outside the body. The AED automatically analyses the casualty's heart rhythm and advises the first-aider whether or not a shock is needed to restore a normal heart beat. If the casualty's heart resumes beating normally, the heart has been successfully defibrillated.

The defibrillator is very simple to use. The first-aider simply follows the instructions. However, it is strongly recommended that you complete a short course on using a defibrillator so you are well prepared should you need to use it.

Be aware of what you can and cannot use as there a number of pieces of equipment that require separate training to be able to use. An example of this is oxygen therapy.

Life Support Equipment that you may come in contact with;

Figure 41: Oxygen therapy – oxygen mask

Figure 42: Ambu bag

Figure 43: Example of a First Aid Kit

Figure 44: Automated External Defibrillator - AED

2.7 Monitor the casualty's condition and respond in accordance with first aid principles.

The principles of first aid are relatively simple. Commonsense is the most important factor. Having the ability to stay calm in an emergency situation is a key factor. Included in first aid principles are ensuring those giving first aid are also free from injury, checking and maintaining the casualty's airway ,breathing and circulation, control bleeding, minimise pain, and reassurance of the casualty. Before commencing any first aid a diagnosis must be made consisting of history of the individual and of the event that caused the injury and the signs and symptoms that are evident.

First aid management will need to account for:-

- location and nature of the surroundings;
- the environmental conditions for example electricity, biological risks, weather, motor vehicle accidents;
- location of emergency personnel;
- number of casualties and potential casualties;
- confined spaces, subject to industry need;
- workplace policies and procedures;
- industry/site specific regulations, codes etc;
- Occupational Health and Safety requirements;
- State and Territory workplace health and safety requirements

The administration of first aid may include:

- administration of analgesic gases;
- cardiopulmonary resuscitation (**CPR**);
- infection control;
- semi-automated external defibrillator (**SAED**);
- expired air resuscitation (**EAR**).

There are extra considerations that need to be taken into account when you are located in a remote or isolated area when you need to decide whether to travel for assistance or wait. These include:

- the severity of the injury;
- the time required for medical assistance to arrive;
- whether movement may cause further injury;
- will movement hinder rescue procedures.

Overview of first aid management processes

The flowchart below provides an overview of the various stages and processes that may be involved in the management of any first aid situation.

1. Initial approach to a first aid scene:
   a. Assess the scene and make sure it is safe to enter;
   b. Gather immediate impressions and information;
   c. Gain consent to offer assistance;
2. Determine immediate priorities (**DRSABCD**):
   a. Use the **DRSABCD** Action Plan to conduct an initial assessment of the casualty and to determine if life threatening situations exist;
   b. Administer immediate Basic Life Support, as required.
3. Call for help:
   a. Call services such as Emergency Services and the ambulance for help at the earliest possible stage, if required.
4. Secondary assessment of the casualty:
   a. Look for signs and symptoms of injury or illness;
   b. Manage injuries and illness;
   c. Provide reassurance;
   d. Assess for and manage shock;
   e. Closely monitor the casualty's condition.
5. Communicate details of the incident:
   a. Hand over information to Emergency Services;
   b. Advise workplace supervisor of incident;
   c. Complete any necessary workplace reports.
6. Finalise first aid management:
   a. Clean up the scene;
   b. Restock any first aid kits/supplies;
   c. Seek counselling or debriefing, as required.

Role of the first aider

The trained first aider should provide initial treatment to the casualty that is consistent with the first aider's level of training and competence. As a first aider your role and responsibilities will depend on the accident scene, the available resources and any relevant workplace policies and procedures. In general a first aider may be required to:

- assess the scene;
- call for and assist Emergency Services;
- provide first aid management of injuries and illnesses;
- direct bystanders;
- provide shelter, warmth, food and fluids, if appropriate;
- provide reassurance and emotional support;
- report to a supervisor and complete injury/illness forms;
- maintain first aid supplies and equipment.

Caution – Work within your role limits

All first aid procedures provided by the first aider should be limited by the extent of his/her role and skills. Where the first aid management or medical treatment required is beyond a first aider's level of competence, the first aider should seek assistance from trained professionals such as an ambulance officer, medical practitioner, or occupational health nurse.

Legal liability

ARC Guideline 10.5 Legal and Ethical Issues Related to Resuscitation July 2012 states:

"The legal issues surrounding resuscitation by lay persons, trained Volunteers and those who have a duty of care are clear in only a few circumstances. Many differences exist between jurisdictions which have legislation providing protection for 'Good Samaritans' and 'Volunteers'.

Ethical issues surrounding resuscitation are even less clear and are dependent on law, on local cultural and on moral issues. It is therefore impossible to provide specific recommendations about ethical matters other than to provide broad principles. Whatever ethical principles are espoused, they cannot override existing law. In many situations, the ethical and legal principles are identical such as autonomy and self-determination.

A limited number of diverse legal and ethical issues are the subject of this guideline."

DUTY TO RESCUE

"'Good Samaritans' and Volunteers

A 'Good Samaritan' is defined in legislation as a person acting without expecting financial or other reward for providing assistance. Although

jurisdictional differences exist, 'Volunteers' are generally (circuitously) defined as a member of a Volunteer organization performing voluntary community work.

Lay persons or Volunteers acting as 'Good Samaritans' are under no legal obligation to assist a fellow being, that is, they have no legal 'duty to rescue'. However, uniquely, in The Northern Territory, persons are required by Statute law to render assistance to any other in need.

Having decided to assist however, a standard of care appropriate to their training (or lack of training) is expected. Generally speaking, that standard is low. Rescuers need not fear litigation if they come to the aid of a fellow human in need. No 'Good Samaritan' or 'Volunteer' in Australia, or probably elsewhere, has ever been successfully sued for consequences of rendering assistance to a person in need. Indeed, legal protection is provided.

All Australian States and Territories have enacted Statutes which provide some measure of protection for the 'Good Samaritan' and/or the 'Volunteer'.

They are required to act at least with 'good faith' and 'without recklessness'. In New South Wales and Queensland the 'Good Samaritan' or 'Volunteer' is required to act with reasonable care and skill – a standard which is in fact no different from the common law standard which pre-dated the legislation. Volunteers must however, act within the scope of activity of their organisation and according to instruction of the organisation. Organisations which control the Volunteer however, are generally not afforded the same protection for the actions of their Volunteers.

The standard of care required of a person who has a duty of care to respond, is higher. Like other persons in our community who hold themselves out to have a skill, they must perform their tasks to a standard expected of a reasonably competent person with their training and experience. However, this does not mean a standard of care of the highest level.

Doctors (and healthcare professionals)

Doctors, and probably other trained healthcare workers, who have been requested to provide assistance outside their usual place of work when ready for duty have a Common Law obligation to do so in New South Wales, and probably also in the Australian Capital Territory.

Trained Volunteers

It is uncertain whether a trained Volunteer eg a surf life-saver or a St John Volunteer, has a legal duty to rescue when on duty, although one could argue strongly from an ethical point of view that such duty does exist, provided that the rescuer is not placed in danger. Indeed, a rescuer is owed a duty of care by the rescued victim not to be endangered.

When not on duty, trained Volunteers would be regarded as 'Good Samaritans' if deciding to rescue."

CONSENT FOR TREATMENT

"Normally, the consent of an injured or ill person (parent or guardian of a minor) should be obtained before any assistance is rendered. The consent of a child's parent or (legal) guardian should likewise be obtained. Every competent adult and the parents or guardians of minors has the over-whelming right of autonomy and self-determination. To treat without consent potentially constitutes 'medical trespass' (assault) and the victim could recover damages without requirement of proof of injury, causation or negligence.

A) Victim unable to consent and responsible person absent

If the victim is unable to give consent and no responsible person is present, the legal requirement to obtain consent before assistance or treatment is waived in several circumstances"

1. ***Emergency***
    - *Under the common law doctrine of emergency, a doctor (and possibly other healthcare professional), may treat a patient if the doctor acts reasonably and honestly believes on reasonable grounds that the treatment is necessary to prevent a serious threat to the victim's life or health.*
    - *The States of Tasmania, Victoria, New South Wales, Queensland and Western Australia have legislation allowing urgent treatment to be provided by a doctor or dentist of an incompetent person without consent"*
    - *In Tasmania, Victoria, New South Wales and Queensland, urgent treatment is generally defined as that to save a person's life, to prevent serious damage to health or to prevent or treat suffering, pain or distress. Urgent treatment is defined in Western Australia as a life-sustaining measure, palliative care or other health care (ie, effectively any treatment). In Victoria and New South Wales, urgent treatment may be provided by other persons under a doctor's supervision. In Western Australia urgent treatment may be provided by "the health professional" (undefined) without consent.*
2. ***Necessity***
    - *The principle of necessity in common law may justify a doctor (and possibly other healthcare professionals) giving treatment when the condition is not life-threatening without the patient's consent 3 although authority for this is uncertain and may rest on 'Accepted Medical Practice'. A doctor may provide treatment without consent when it is not practicable to communicate with the victim (e.g. the victim is unconscious and therefore incompetent) and when a reasonable doctor would in the circumstances act in the 'best interests' of the victim. Under this category, the reasonable doctor is acting in accordance with a responsible and competent body of professional opinion. This is the so-called Bolam test of common law but which has been modified in all Australian States and Territories by legislation which enables its acceptance only if the court believes it is reasonable.*

- *The States of Tasmania and New South Wales have legislation which permits a doctor or dentist to provide treatment which is necessary to promote the victim's health and well-being provided that the victim does not object and that such treatment and lack of objection are certified in the clinical record.*

B) Victim unable to consent but responsible person(s) present

- *Although a spouse, a de facto, a relative, carer or domestic partner has normally no legal authority over an incompetent adult unless legally appointed as a surrogate decision-maker, they may in some circumstances give consent for treatment, and its refusal in the absence of a treatment refusal certificate.*
- *In Western Australia, consent (or refusal) for any treatment of an incompetent person may be given by a person responsible, that is, (in order) a spouse or de facto, nearest relative, carer (non-paid) or person maintaining a close personal relationship, provided such decisions are in the victim's "best interests".*
- *In South Australia, a relative (spouse, domestic partner, parent, brother/sister, son/daughter) may consent for medical or dental treatment with "medical treatment" defined as (any) treatment carried out by a doctor or health professional in the course of practice. A "health professional" specifically includes nurses. Although ambulance officers are not included specifically this does not mean they are excluded."*

Refusal and Discontinuation of Treatment

Competent adults are legally entitled to refuse any treatment even if life-sustaining or their decisions are not for their own benefit. Substitute decision-makers, such as parents or guardians of minors or legal guardians can likewise refuse treatment but only if in the 'best interests' of their charge.

Several States/Territories have legislation which gives statutory force to the common law principle that competent persons may refuse treatment. Treatment provided in knowledge of legally binding refusal of treatment is the offence of medical trespass.

A refusal of treatment certificate (or similar) is required to be completed by the person when competent (an advance directive). Treatment may be refused by the legal agent or guardian of an incompetent person.

Differences exist between jurisdictions. For example, in Victoria, refusal of treatment may be from a person given "Enduring Power of Attorney (medical treatment)" under the Medical Treatment Act 1988 (Vic) whereas in New South Wales refusal of treatment may be from a person given "Enduring Guardianship" under The Guardianship Act 1987 (NSW). (In NSW, "Enduring Power of Attorney" refers to a person appointed to manage financial affairs of an incompetent person under the Powers of Attorney Act 2003). Refusal of treatment decisions should be recorded on appropriate jurisdictional certification.

It has long been settled law that parents or guardians of minors, in conjunction with doctors, may make legal and ethical decisions on withholding and withdrawing life-sustaining treatment.

Queensland and Western Australia are the only States whose legislation specifically includes references to withholding or withdrawing (discontinuation) of treatment without consent 4. This does not mean however that treatment cannot be withheld or withdrawn in other States, for example, in South Australia where treatment is specified as that which is normally done by the doctor or health professional. This would expectedly include withholding and withdrawal of treatment. In Queensland, a life-sustaining measure may be withheld or withdrawn without consent as consistent with good medical practice (Guardianship and Administration Act 2000 s 63A). In Western Australia, a person responsible (see above) may refuse consent to commencement or continuation of any treatment (Guardianship and Administration Act 1990 s 110ZD.)

'DO NOT ATTEMPT RESUSCITATION' ORDERS

In health institutions/facilities, refusal of treatment, such as 'Do-Not-Attempt-Resuscitation' (DNAR) or 'Not for Resuscitation' (NFR) orders should be documented in case notes and signed. However, at present, the legal status of such orders within institutions is not clear and probably void between institutions and out-of-hospital unless signed by the victim him/herself (when competent) or by an appointed guardian or by a parent of a child victim.

In out-of-hospital circumstances, emergency services are often activated for patients in cardiac arrest who are chronically ill or have a terminal illness. Generally, the principles of treating an incompetent victim apply (see above) unless an advanced directive exists or a legally appointed guardian or attorney exists.

The International Liaison Committee on Resuscitation recommends the use of standardised out-of-hospital physician orders for patients who are chronically ill or have a terminal illness. These must be easily understood by healthcare professionals. Additional instructions should indicate whether healthcare personnel are to initiate or continue life-sustaining interventions for patients in cardiac arrest and those in near-arrest."

Because laws governing the use of DNAR forms and advance directives vary by jurisdiction, healthcare providers should be aware of local laws and regulations.

Standardized orders for limitations on life-sustaining treatments should be considered to decrease the incidence of futile resuscitation attempts and to ensure that adult victims' wishes are honoured. Instructions should be specific, detailed, and transferable across health care settings, and easily understood. Processes, protocols, and systems should be developed that fit within local cultural norms and legal limitations to allow providers to honour patient wishes regarding resuscitation efforts."

Family Presence during CPR.

"Reviews of studies of performance of resuscitation for an adult or child during the presence of a family member reported no impediment to resuscitation and possibly better outcomes in children. The same reviews reported no detrimental emotional nor psychological impacts on the family members but rather better improved measures of coping and positive emotional outcomes for them."

Duty of care

The term duty of care is used to describe any legal responsibilities and requirements for people to act in a certain way. As a first aider you have a duty to use the knowledge and skills that you obtain in your first aid training whenever you choose to render first aid to a casualty. Once you give first aid you have a duty to provide care to the best of your abilities until such a time as you endanger your own safety, the casualty no longer requires your assistance, or you have been relieved by a more qualified person.

First aiders should not administer first aid management beyond their level of training and should weigh the risks involved in treating a person against their own capabilities to provide safe and effective first aid. If you are engaged in paid or voluntary employment to act as a First Aid Officer, you have a duty to provide first aid services to those in your care, for example, work colleagues, clients and visitors to your place of work.

Seek assistance from others

If you do find yourself in a situation where the casualty needs urgent first aid or medical attention, the sooner you raise the alarm the sooner help will arrive. Do not leave the casualty. Call for help. Depending on the workplace set-up, you may be able to call for help, or you may have to use an intercom or telephone. Find out your workplace procedures regarding getting help.

In most workplaces there will be enough staff working nearby that you can quite easily raise the alarm. You may be able to call out to the person closest to you to either get the first aid kit, the supervisor or any qualified first aider, depending on whom you are working with and where the first aiders are.

Methods

You can call out something like this:

'Nancy, we need some first aid in the playground for Tommy.' or

'John, quickly bring the first aid kit to the office. Mr Smith has hurt himself.'

Remain calm but assertive.

Learning Activity 10:

Answer True or False by circling the correct answer

a. The sooner you raise the alarm, the sooner help will arrive. **True / False**

b. It is standard practice to run to look for help. **True / False**

c. It is acceptable to call out 'Malcolm, Fred's got blood all over the place. I think he's cut off his finger, maybe his whole arm. It's unbelievable!' **True / False**

Handling casualties

Do not move the casualty unless it is absolutely necessary

This procedure should be followed for a person who has fallen on the floor or who is found sitting or lying on the floor.

Under no circumstances attempt to manually lift the person from the floor.

Never attempt to lift a person alone. The person may have suffered a stroke, a heart attack, an epileptic fit, a bleeding wound, or a fracture. Further injury of the person can occur if manual lifting is attempted.

- Lay the person down on the floor and make them comfortable;
- Assess the person for possible complications, bleeding and consciousness;
- Call for assistance;
- Place a pillow or towel under the person's head;
- Ring for an ambulance if serious injury is suspected.

If the person is not seriously hurt you could attempt to help the person to stand by rolling them onto his or her side, then onto all fours and then into a kneeling position. Using a chair as a prop, help the person up and onto the chair. Should the person be unable to do this with light assistance, then an ambulance should be called.

Apply Knowledge of Basic Anatomy and Physiology

The Body Systems

The seven anatomical systems of the human body are:

- Musculoskeletal System
- Nervous System
- Respiratory System
- Circulatory System
- Digestive System
- Lymphatic System
- The Skin (Integumentary System)

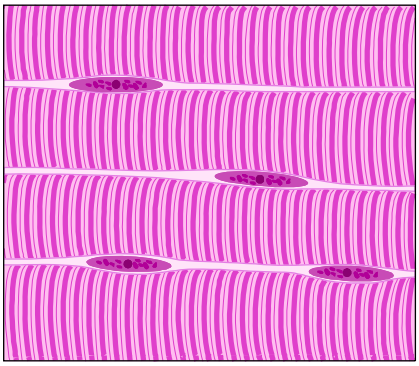
All body cells need a constant supply of food to provide energy and the building blocks needed to manufacture body substances.

Musculoskeletal System

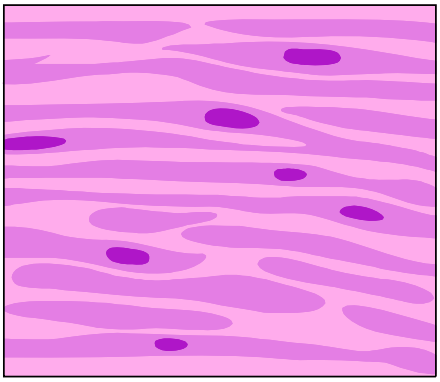
The Musculoskeletal System comprises of the Muscles and Skeleton which provide structural support and movement for the body.

There are three types of muscle:

- **Skeletal muscle** or "voluntary muscle" is anchored by tendons to bone and is used to affect skeletal movement such as locomotion and in maintaining posture. Though this postural control is generally maintained as a subconscious reflex, the muscles responsible react to conscious control like non-postural muscles. An average adult male is made up of 40-50% of skeletal muscle and an average adult female is made up of 30-40%.



- **Smooth muscle** or "involuntary muscle" is found within the walls of organs and structures such as the esophagus, stomach, intestines, bronchi, uterus, urethra, bladder, and blood vessels, and unlike skeletal muscle, smooth muscle is not under conscious control.



- **Cardiac muscle** is also an "involuntary muscle" but is a specialized kind of muscle found only within the heart. The cardiac muscle is a type of involuntary striated muscle found in the walls of the heart. As it contracts, it propels blood into the heart and through the blood vessels of the circulatory system.

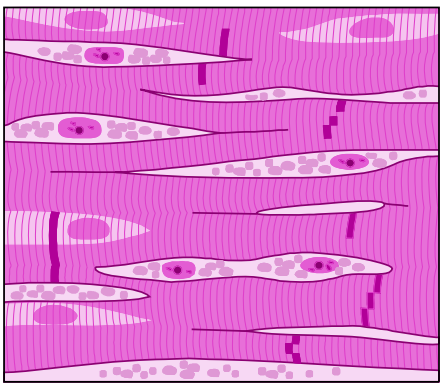
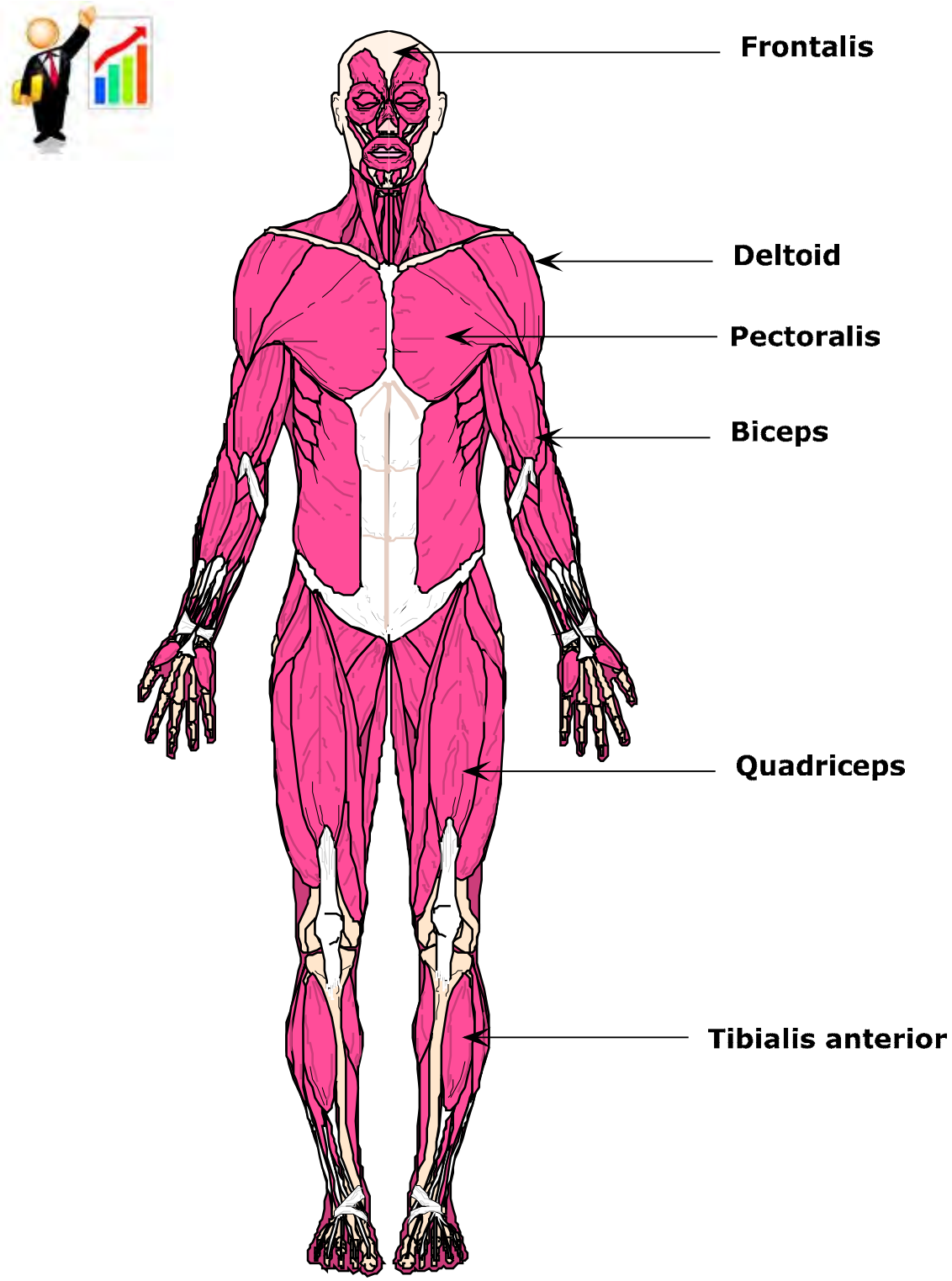


Figure 45: Superficial Anterior Muscles



The Nervous System

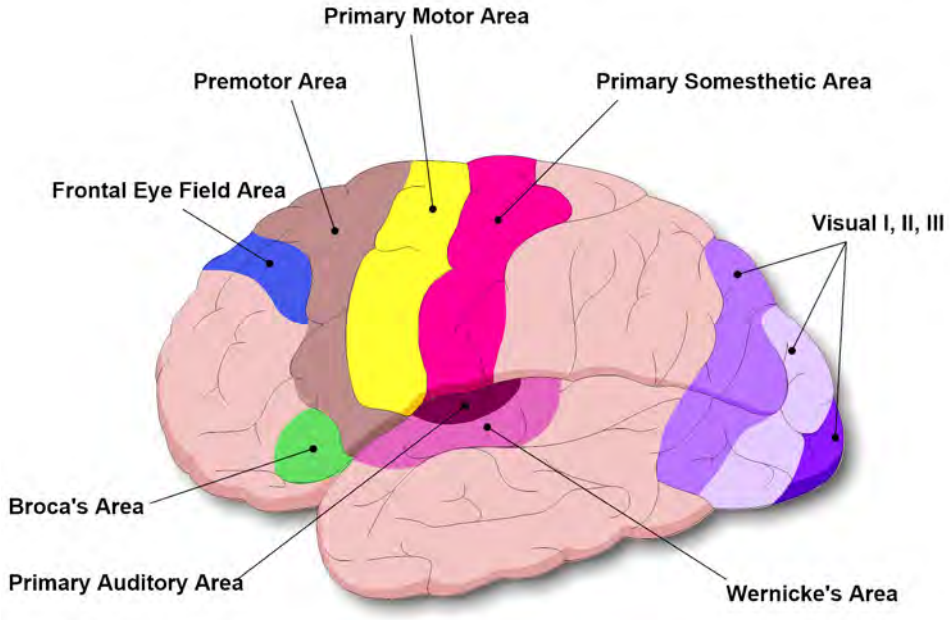
The nervous system comprises the brain, spinal cord and nerves.

The Brain

The brain is enclosed in and protected by the skull. It is a very delicate organ that can be damaged easily. The brain analyses thoughts and functions. The brain stem contains the Medulla Oblongata, which controls the breathing rate and depth, the rate and force of heart contractions and it controls the size of the blood vessels by constricting and dilating.

Figure 46: Areas of the Brain

Below is a lateral view of the brain with 10 different areas (such as primary auditory area and primary motor area) labelled and differentiated by colours.



The Spinal Cord

The spinal cord contains the sensory and motor control nerves(neurons). The spinal cord runs down from the brain, protected by the spinal column and finishes at about lumbar 3 (L3) where it branches off into peripheral nerves.

The Nerves

The peripheral nerves contain motor and sensory nerves, which send and receive electrical impulses. Motor nerves are responsible for transmitting the electrical impulses for muscle movement. Sensory nerves transmit impulses for sight, hearing, touch etc to the brain.

Figure 47: Spinal cord innervation

A simple drawing of the brain, skull, spinal cord and vertebrae showing the levels of innervations.

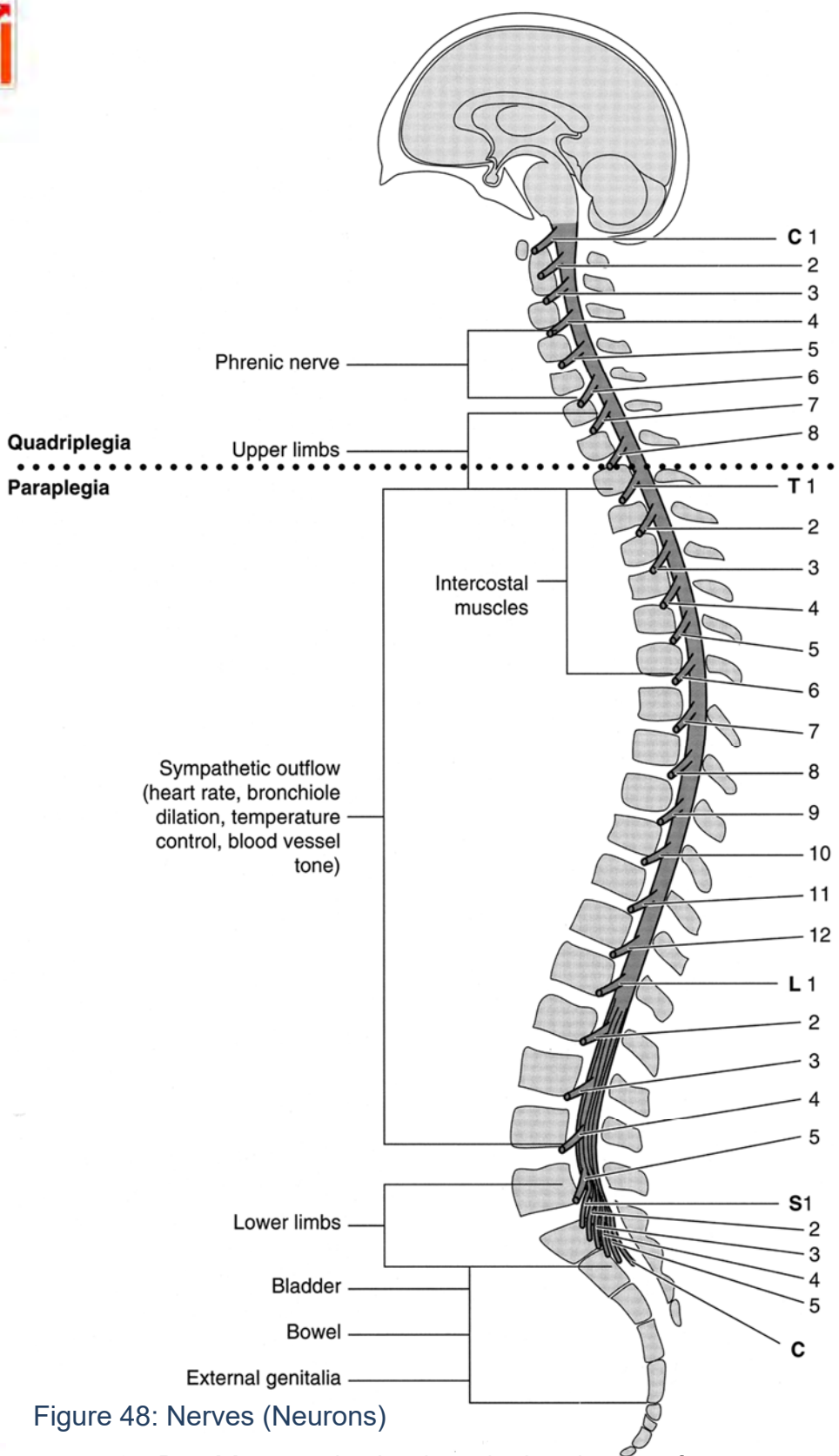


Figure 48: Nerves (Neurons)

3. **Dendrite** – a slender, branched projection of a neuron, which conducts the electrical stimulation received from other cells to and from the cell body, or soma, of the neuron from which it projects.

o. **Cell body (Soma)** – the bulbous end of a neuron, containing the nucleus and is where most protein synthesis occurs

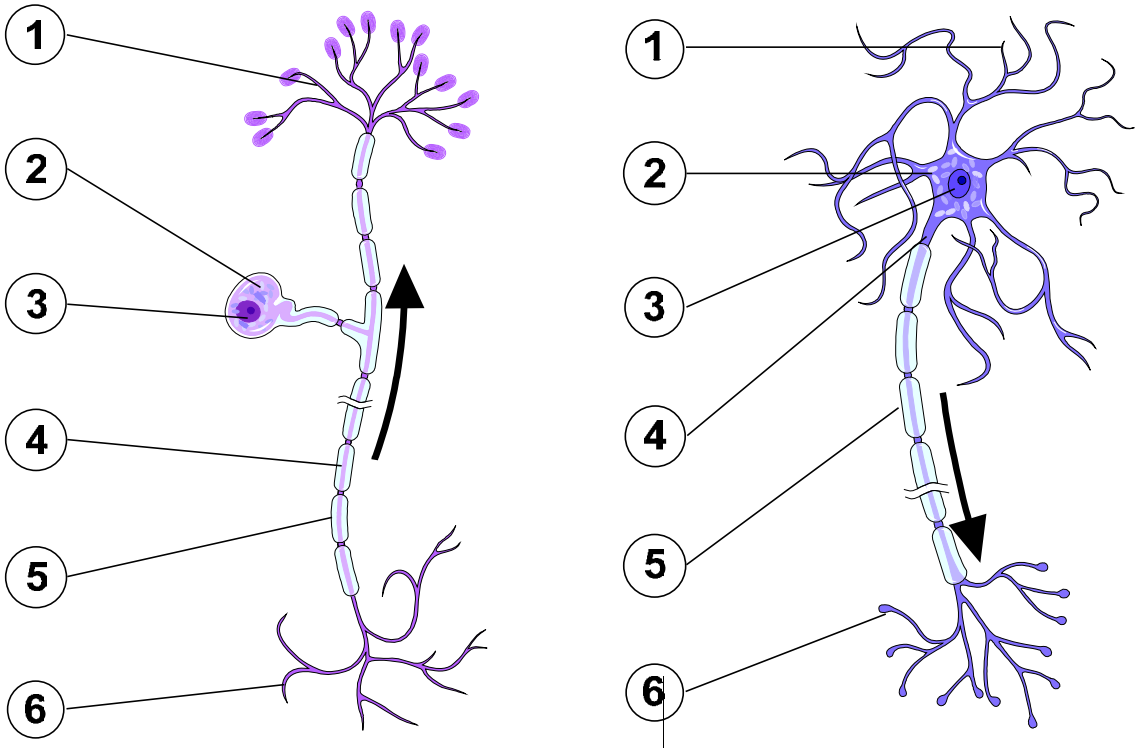
p. Nucleus – controls chemical reactions within the cytoplasm and stores information needed for cellular division

q. Axon – a long slender projection of a neuron which conducts electrical impulses away from the neuron's cell body

r. Myelin Sheath – an electrically insulating phospholipid layer that surrounds the axons of many neurons composed of about 80% lipid fat and about 20% protein. It helps prevent the electrical current from leaving the axon and causing a short circuit in the brain.

s. Axon terminal – a specialised structure at the end of the axon that is used to release neurotransmitter and communicate with target neurons.

Sensory Neuron **Motor Neuron**



The Respiratory System

The function of the respiratory system is to inhale the air we breathe, which allows oxygen to pass into the blood stream and waste products to blood stream, before we exhale.

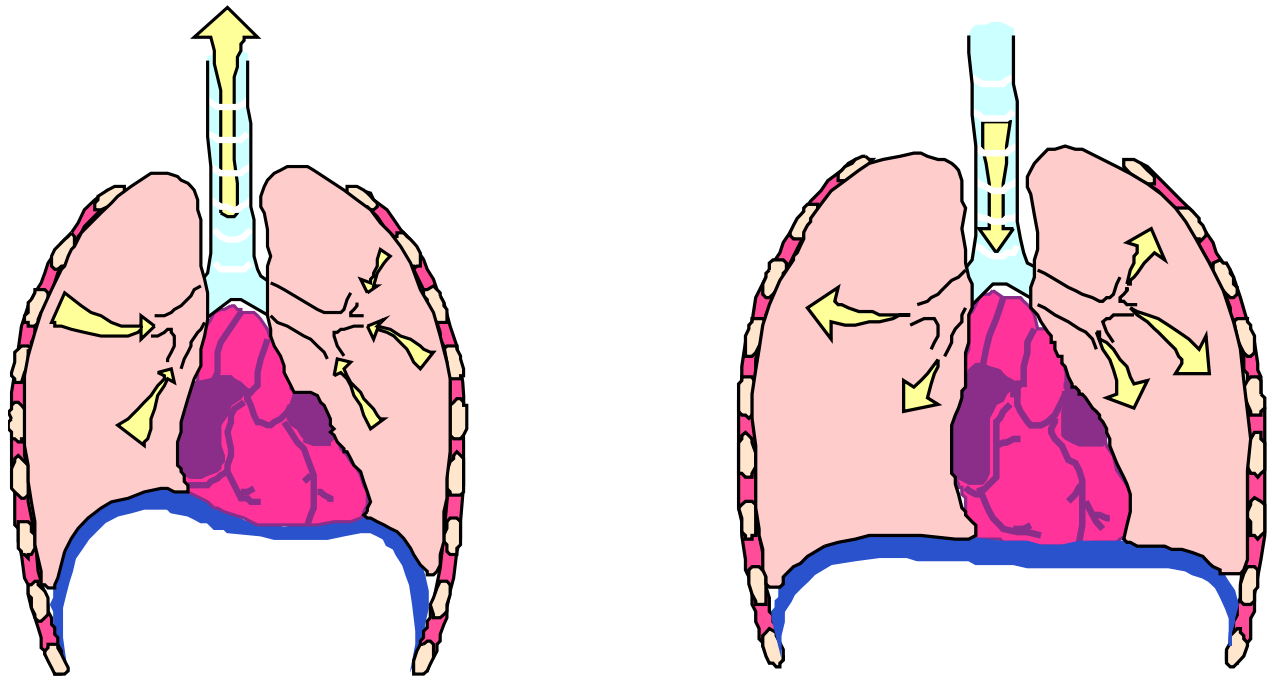
When you breathe in, air enters through the nose. The nasal cavity warms and filters the air we breathe before it enters the trachea. The trachea then divides into the left and right bronchi. The bronchi then divide into what are known as alveoli, which are small air sacks in the lungs. This is where the air we breathe

in and out exchanges oxygen into the blood stream and removes waste product (carbon dioxide) from the blood stream.

The air we breathe contains about 21% oxygen. The rest is made up of different gases. Our body uses approximately 5% of this oxygen, exhaling the remaining 16%. Therefore what we exhale has sufficient oxygen content for the purposes of Rescue Breathing.

Figure 49: Breathing

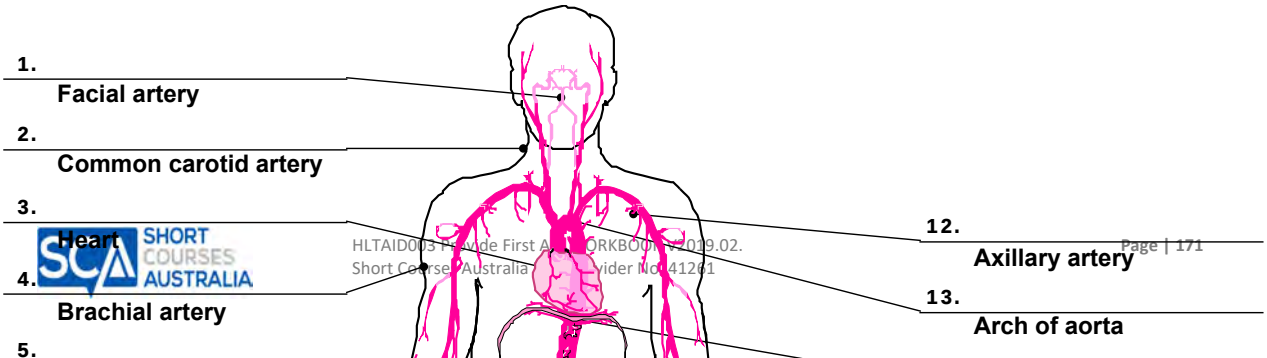
Two transverse sections of the chest cavity, side by side, and showing the changes in structure during breathing.



The Circulatory System

The heart, blood vessels and blood make up the Circulatory system.

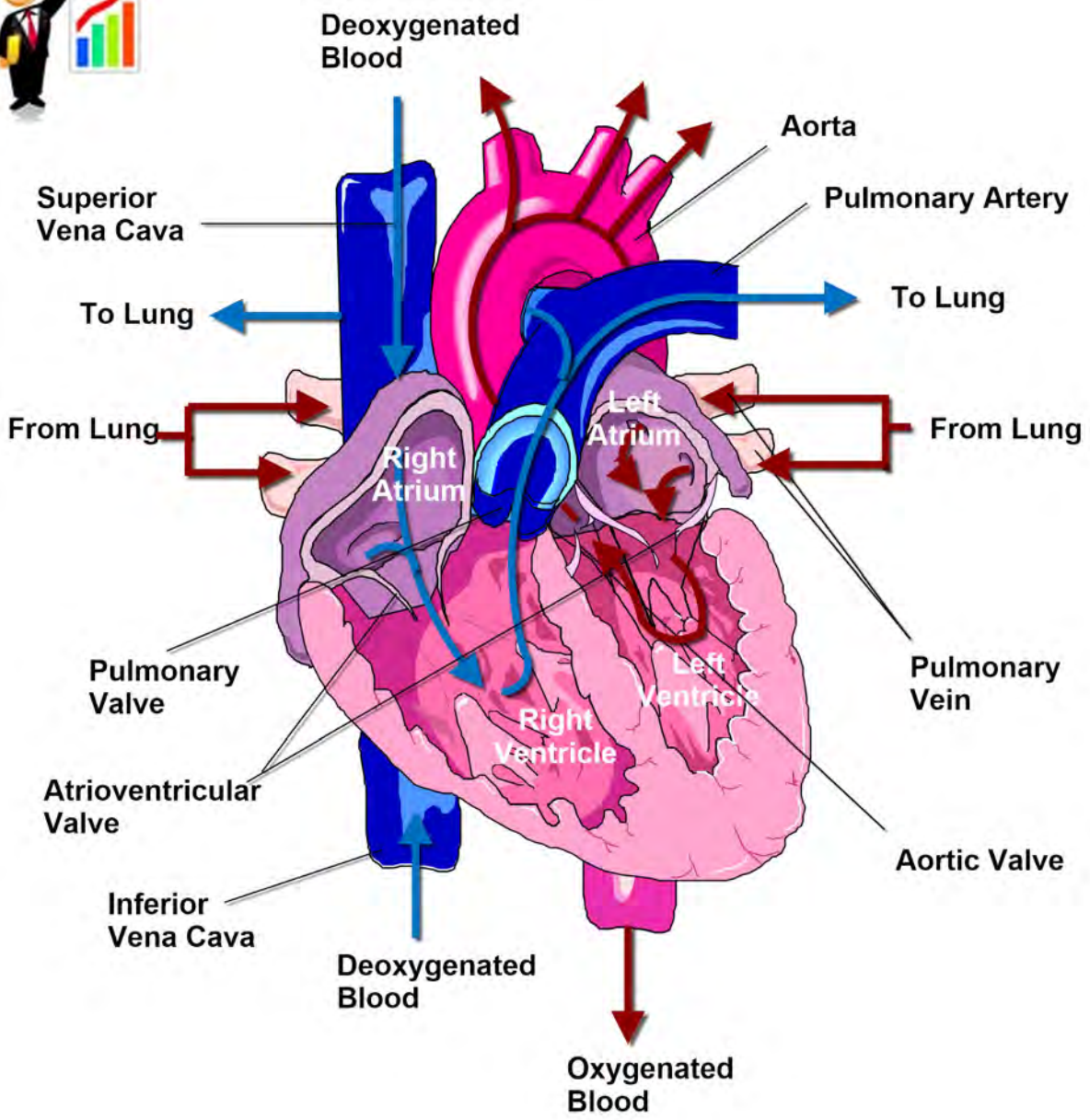
Figure 50: Major Arteries



The Heart

The heart is a four-chambered pump. Used blood is returned to the heart via the top (superior) and bottom (inferior) venacarva (largest veins in the body). The blood enters the heart via the right atrium and is then pumped into the right ventricle. Then when the ventricle contracts the blood is then pumped to the lungs for the exchange of oxygen and the removal of carbon dioxide. Once this process is complete, the oxygenated blood returns to the heart via the left atrium and is then pumped into the left ventricle. When the ventricles contract the blood is pumped back into the body via the aorta (the largest artery in the body).

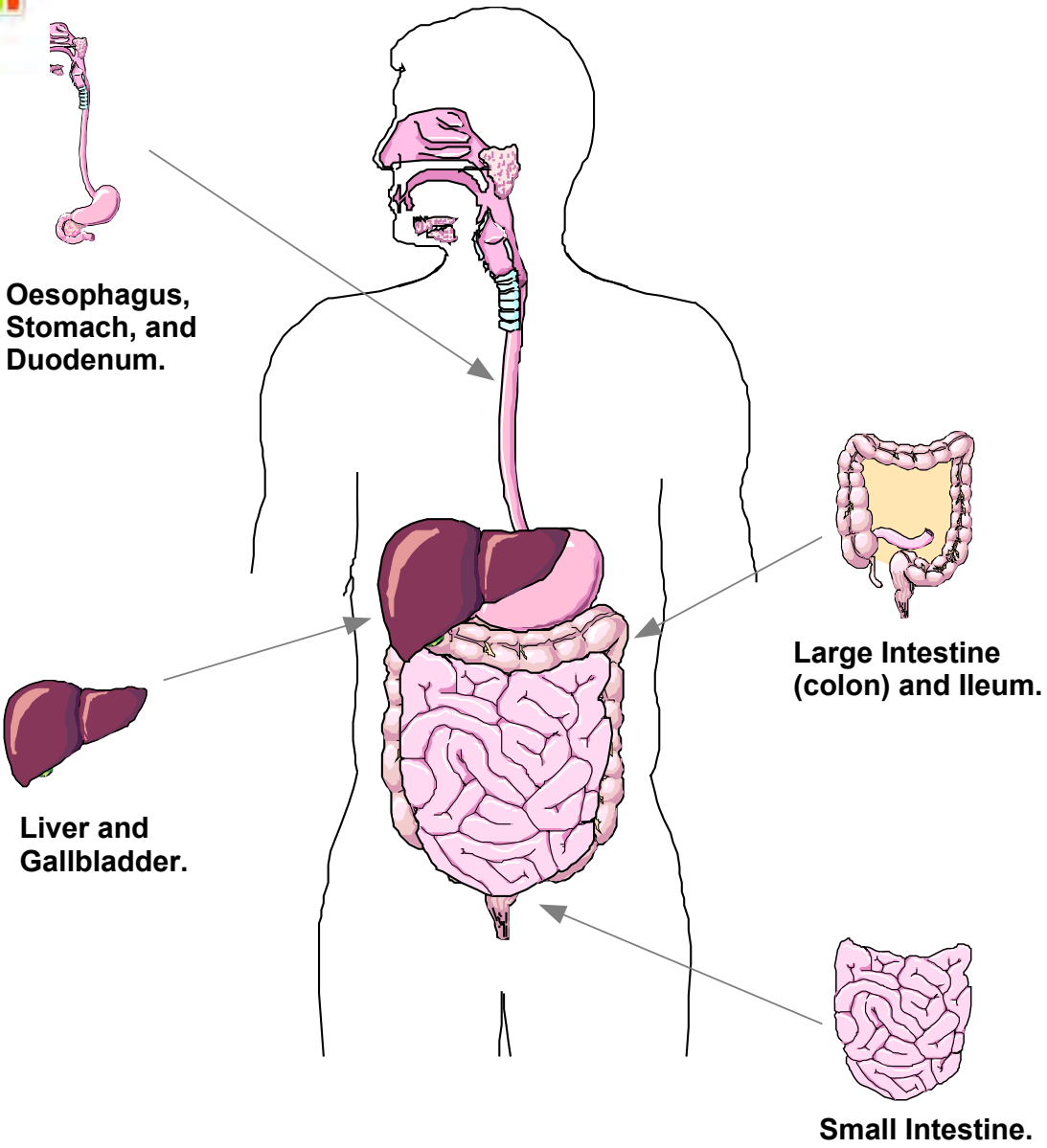
Figure 51: The Human heart and circulation



The Digestive System

Food as we take it in is however, too large to enter the cells. It must first be broken down into particles small enough to pass through the cell membrane. This process is known as digestion. After digestion, food must be carried to the cells in every part of the body by the circulatory system; the transfer of food into the circulation is called absorption. Digestion and absorption are the two chief functions of the digestive system. The main organs of the digestive system are the Mouth, Pharynx, Oesophagus, Stomach, Liver, Small Intestine, Large Intestine, and Rectum.

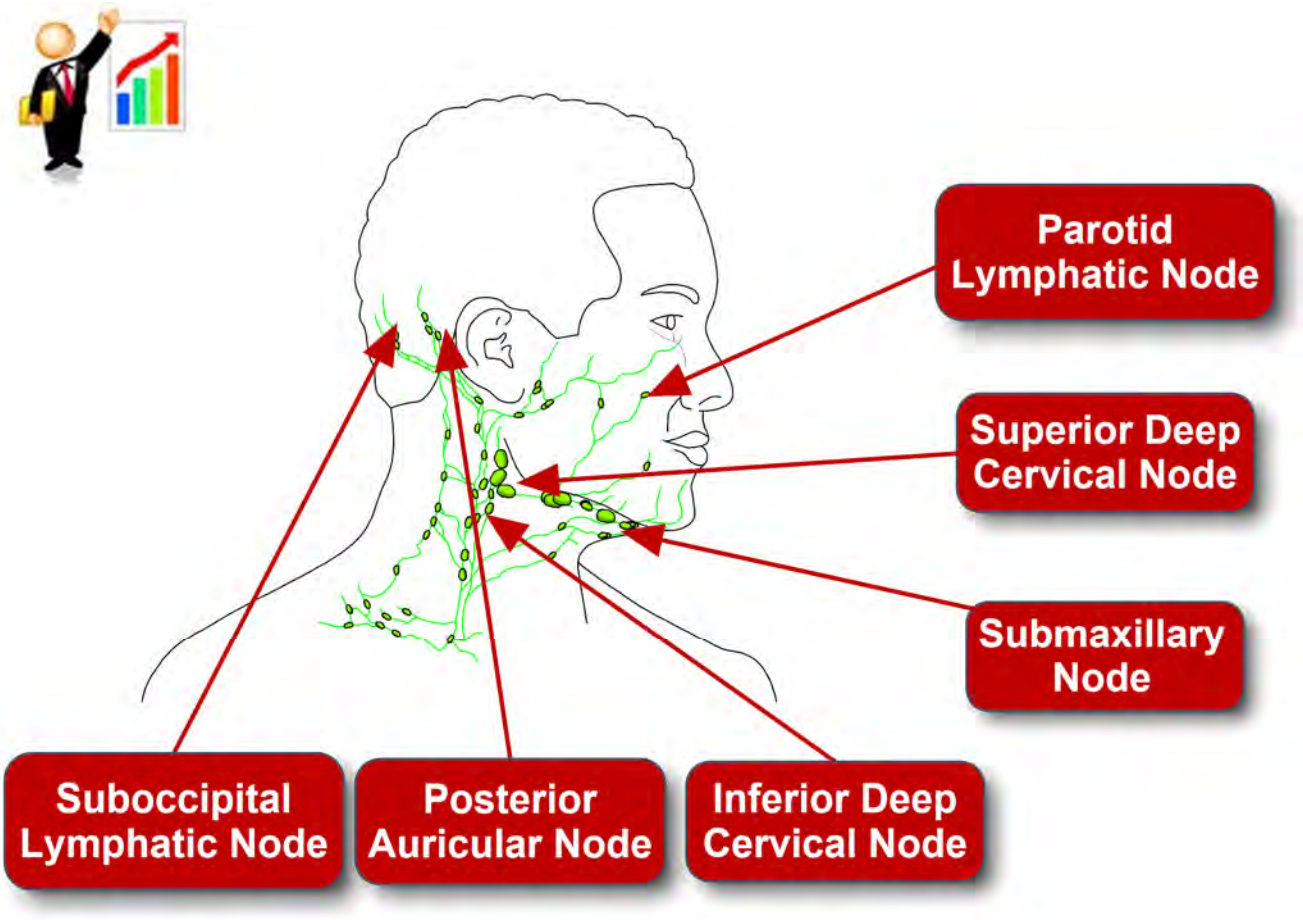
Figure 52: Digestive System



The Lymphatic System

The lymphatic system is our defence against infections and toxins e.g. Snake bite. The lymph glands are located in the neck, armpits and groin. As infection/poison travels through the body via the lymphatic system, the lymph glands trap, break down and dispose of the infection/poison. This prevents the infection/poison reentering the circulatory system. When an infection/poison has been trapped by the lymph glands, these glands become swollen, enlarged and painful.

Figure 53: Lymphatic glands of the neck



The Skin

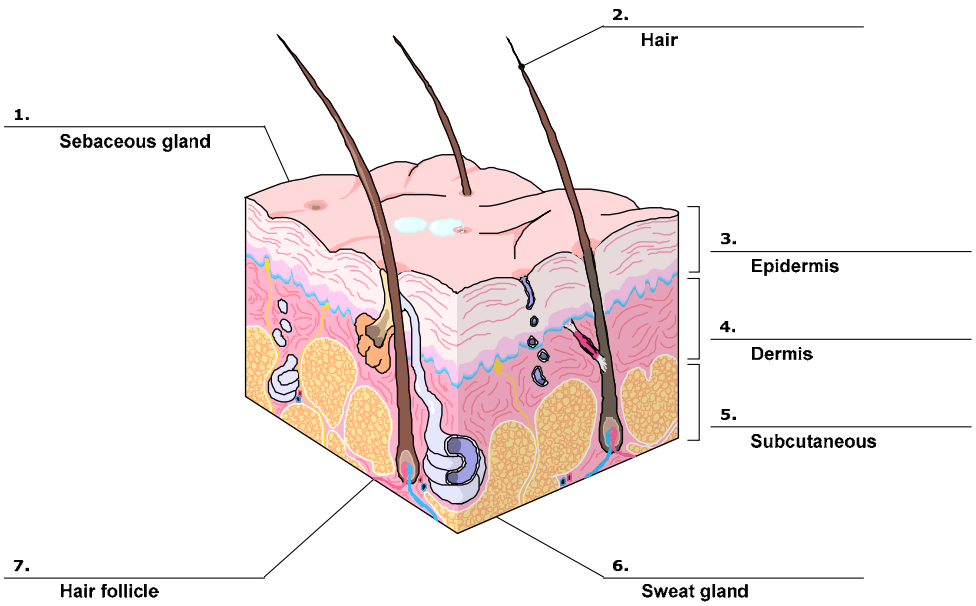
Is the skin merely a body covering, is it an organ, or is it a composite of parts that make it properly a system? Actually, it has some properties of each of these and so may be classified in three different ways: It may be called an enveloping membrane because it is a layer of tissue covering the entire body. It may be referred to as an organ (the largest one, in fact) because it contains several kinds of tissue, including epithelial, connective, and nerve tissues. It is also known as the integumentary system, meaning "covering", because it includes sweat and oil glands as well as other parts that work together as a body system The skin covers the entire surface of the body.

Although the skin has several functions, the three that are by far the most important are the following:

1. Protection of deeper tissues against drying and,
2. Protection against invasion by pathogens or their toxins (poisons) through a mechanical barrier.
3. Regulation of body temperature by dissipation of heat to the surrounding air:

Figure 54: The Skin

Below is a cross-section of the skin showing the different layers and featuring the anatomy of a hair follicle



The regulation of body temperature is also a very important function of the skin. Normal temperature may vary slightly, but we think of 37°C (98.6°F) as the standard when a thermometer is placed in the mouth for 3 to 5 minutes. The skin forms a large surface for radiating body heat to the air. When the blood vessels dilate (enlarge), more blood is brought to the surface so that heat can

be dissipated into the air. The evaporation of sweat from the surface of the body also helps to cool the body. As is the case with so many body functions, the matter of temperature regulation is complex and involves several parts of the body, including certain centres of the brain.

What is blood?

Blood is the life-maintaining fluid that circulates through the body's:

- heart
- arteries
- veins
- capillaries

Blood carries away from the body the following:

- waste matter
- carbon dioxide

What is the function of blood?

Blood carries to the body the following:

- nourishment
- electrolytes
- hormones
- vitamins
- antibodies
- heat
- oxygen

What are the functions of blood cells?

The primary function of red blood cells, or erythrocytes, is to carry oxygen and carbon dioxide. Haemoglobin (Hgb) is an important protein in the red blood cells that carries oxygen from the lungs to all parts of our body.

The primary function of white blood cells, or leukocytes, is to fight infection. There are several types of white blood cells and each has its own role in fighting bacterial, viral, fungal, and parasitic infections. Types of white blood cells that are most important for helping protect the body from infection and foreign cells include the following:

- neutrophils
- eosinophils
- lymphocytes
- monocytes
- granulocytes

White blood cells:

- help heal wounds not only by fighting infection, but also by ingesting matter such as dead cells, tissue debris, and old red blood cells.
- are our protection from foreign bodies that enter the blood stream, such as allergens & bacteria.
- are involved in the protection against mutated cells, such as cancer.

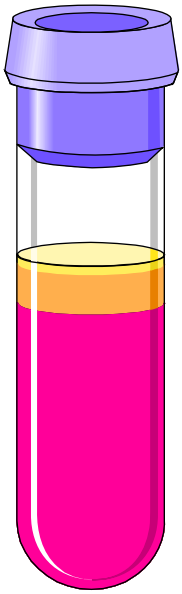
The primary function of platelets, or thrombocytes, is blood clotting. Platelets are much smaller in size than the other blood cells. They group together to form clumps, or a plug, in the hole of a vessel to stop bleeding.

Blood vessels (arteries, veins and capillaries)

Arteries carry blood away from the heart. The arteries are under constant pressure from the heart pumping. This pressure as the heart pumps can be felt as a pulse. Pulses are best felt on the neck (carotid pulse), on the wrist (radial pulse). If an artery is damaged (lacerated etc), it will be under high pressure causing the blood to spurt out. The blood will be bright red in colour, due to the high levels of oxygen.

Veins carry blood back to the heart to be oxygenated and for the removal of waste products (carbon dioxide). So the cycle starts again. The veins are not under as much pressure as the arteries. If a vein is damaged (lacerated etc) the blood will flow freely. It will be dark red in colour as the blood is not as highly oxygenated and is carrying waste product (carbon dioxide) back to the heart. Capillaries are minute vessels containing both arterial and venous blood. It is here that the exchange of oxygen, carbon dioxide and other nutrients occurs with the cells. The capillaries are not under as much pressure as the arteries, so if damaged (by abrasion etc) the blood will only ooze out. The colour of the blood may be bright or dark red as it contains both arterial and venous blood.

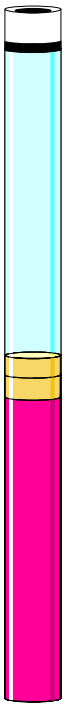
Figure 55: Haematology; Components of blood



White Blood Cells
6-9000/mm^3

Platelets
200-400,000/mm^3

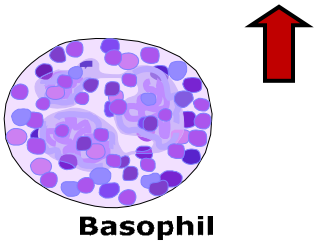
Red Blood Cells
4-5 Million/mm^3



Plasma

Buffy Coat (WBC & Platelets)

RBC's 36%- 54%

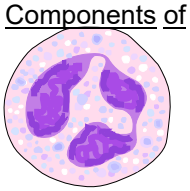


Basophil

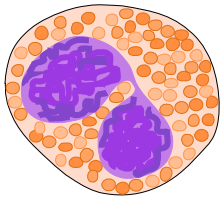
RBC

Whole Blood

Components of Blood

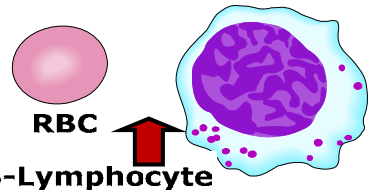


Neutrophil

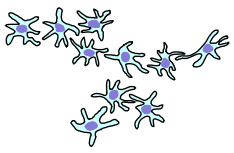


Eosinophil

Haematocrit (Packed Cell volume)

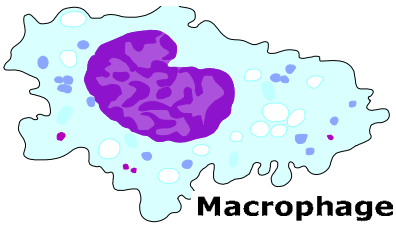


B-Lymphocyte



Platelets

T-Lymphocyte



Macrophage

3. Communicate details of the incident

3.1 Accurately convey incident details to emergency response services

3.2 Report details of incident to workplace supervisor as appropriate

3.3 Maintain confidentiality of records and information in line with statutory and/or organisational policies

3.1 Accurately convey incident details to emergency response services

After identifying the casualty's medical condition or injury and the extent of damage, a decision will have to be made as to what kind of further assistance is required, if any.

This is when a decision needs to be made promptly by somebody, usually the supervisor. Not all casualties will need an ambulance.

Let's take a few examples and think about what kind of further assistance will be required for the following:

- a sprained ankle;
- a broken leg;
- an asthma attack, where the casualty has fully recovered after using a Ventolin inhaler;
- a choking episode, where the casualty could not cough, speak or breathe;
- a fall off a ladder, where the casualty has hit their head and blood is oozing from the left ear.

Your answers may include the following:

- A relative can fetch the casualty and take them home or to their local doctor;
- Call an ambulance. The casualty needs to be transferred in a stretcher. If the thigh is broken, there could be major blood loss;
- No further treatment is necessary. Let the casualty rest for a while and then they can resume normal activities;
- Call an ambulance urgently;
- Call an ambulance urgently.

The phone number in Australia for an ambulance is 000, or 112 from mobile phones. This is a call centre style emergency service number. The operator will

ask you if you would like the police, fire or ambulance. If you aren't sure what service you will need, don't panic. The operator will help you.

Using relevant communication media and equipment

Communication systems may include but are not limited to:

- telephones, including landline, mobile and satellite phones;
- SMS;
- HF/VHF radio;
- two-way radio;
- flares;
- flags;
- electronic equipment;
- email;
- hand signals.

The equipment you use to alert emergency personnel will depend on where you are and what equipment is available. The most common way of contacting emergency services is to use a landline phone or a mobile phone.

Learning Activity 11:

You have been called to the following:

1. An amputated finger.
2. Breathing which has stopped from electrocution.
3. Small laceration to left forearm, with bleeding controlled with pressure bandage and elevation.
4. Dislocated finger.

What is the appropriate treatment for each- please write below:

In any first aid situation it is important that you quickly identify if there is need for further help. In all emergency and life threatening situations you should call for help at the earliest possible stage. Additional assistance might be sought from

- Emergency Services (Ambulance, Police, Fire Department);
- a medical practitioner or occupational health nurse;
- the workplace supervisor, work colleagues and bystanders.

Calling '000' Emergency Services

- '000' (triple zero) is Australia's primary Emergency Services number and is used to access emergency assistance (Ambulance, Police and Fire Department) from fixed, mobile and payphones, in the first instance.
- '000' is a 24 hour free call service and all calls to 000 are voice recorded.

112 – The digital alternative

112 is the international standard emergency number that can only be dialled on digital mobile phones. The advantages of using 112 are that it can be dialled anywhere in the world and the number is automatically converted to the local

emergency service number, it can be dialled on any network coverage area and does not require a SIM card or the entry of a security PIN number to access and gain connection to Emergency Services. You should check with your mobile service provider if you have any concerns about the correct number to call in an emergency.

106 is the text-based emergency call service for people with a hearing or speech impairment. This service operates using a TTY (teletypewriter) and does not accept voice calls.

106 – The Text Emergency Call Service

If you have a hearing or speech impairment and need to contact Emergency Services, you can lodge an emergency text call by calling 106 directly through your TTY (teletypewriter/textphone) or computer with modem.

For more information, contact Australian Communication Exchange (ACE) on 1800 555 660 (Voice) or 1800 555 630 (TTY).

Both 112 and 106 are secondary emergency service numbers because they are for use only in connection with particular technologies.

Lodging a call to Emergency Services

You should only call an emergency number in a time critical emergency.

1. Call 000 (or 112 from digital mobile phones) and tell the operator which service you require, for example, Ambulance, Police, or Fire.
2. Give a clear description of the address where the accident has occurred.
3. Give the name of the nearest cross street or landmark.
4. State the type of emergency, for example, car accident.
5. State the number of casualties, for example, two adults and one child.
6. Describe any special circumstances such as power lines down or flammable fluid spills.
7. Provide your contact phone number.

Caution – Calling Emergency Services **DO NOT** hang up the phone until directed to do so by the Emergency Services operator.

Alternative ways to call for help include:

- two way radio;
- flags or flares;
- yelling;
- email;
- notifying others to call for help;
- distress beacons;
- personal distress alarms;

- SMS.

Learning Activity 12:

Read below the demonstration on how to lodge a call for help to Australia's emergency services.

The phone rings and a 000 operator picks up.

Phone operator: Emergency. Police, fire or ambulance?

Caller: Ambulance.

Phone operator: What is the exact address of the emergency?

Caller: 12 Smith Street, Cammeray Hills NSW.

Phone operator: What phone number are you calling from?

Caller: 0401 767 135

Ambulance operator: What is the problem? Tell me exactly what happened.

Caller: My husband was fixing the roof and he has fallen two stories to the ground.

Ambulance operator: Is he conscious?

Caller: No, he has not moved and won't answer me.

Ambulance operator: Is he breathing?

Caller: Yes, I can see that he is breathing.

Ambulance operator: Is you husband the only casualty?

Caller: Yes.

Ambulance operator: An ambulance has already been dispatched and is on its way.

After reading the text for this call for assistance write down in your own words what occurred i.e. What was the person asked for in the first instance, then what information did they need to relay and what questions did the emergency personal ask?

_____

_____

_____

_____

_____

Once you have connected with the emergency service's operator and requested an ambulance, hold the line to tell them details such as:

- location of casualty - providing the exact address is best, but if you aren't sure of this, give some landmarks or nearest cross streets, and some directions;
- number of casualties;
- nature and extent of illness or accident - include the physical condition of the casualty, and any relevant signs and symptoms (see below for more details);
- the number of the phone you are using;
- your name.

Then hold the line to answer any further questions and provide any other relevant details, such as damaged power lines.

The casualty's condition

When providing details of the casualty's condition, include the following

- **Colour** - What colour is the casualty's skin?
- **Conscious state** - Is the casualty conscious?
- **Breathing** - Is the casualty breathing? If not, have rescue breaths and CPR commenced?
- **Bleeding** - Is the bleeding controlled? Is it bright red spurting blood or dark red flowing blood?
- **Pupils** - Are the pupils of equal size and reacting to light?
- **Shock** - Are there signs of shock (pale, sweaty, nauseous, cold)?
- **Movement** - Does the casualty have coordinated movement?
- Can the casualty **feel and move limbs**, if conscious?
- Anything **abnormal** (such as bruising, a bone sticking out or swelling).

Learning Activity 13:

Answer True or False by circling the correct answer

a. You should tell the 000 operator whether you need an ambulance, police or fire service. **True / False**

b. Conveying physical details of the casualty to 000 isn't important because the paramedics will judge for themselves when they arrive. **True / False**

The information that you have obtained about the casualty's condition and the nature of the incident should be passed on to relevant personnel.

Handing over to Emergency Services personnel

On the arrival of the ambulance:

- continue first aid management and observation of the casualty until the ambulance officer is ready to assume care
  - **h.** provide as much information as possible, this may include:
  - **i.** the nature of the accident to the time you arrived on the scene
  - **j.** the types of first aid management provided
  - **k.** the duration of any Basic Life Support
- provide any other information that is asked for, including your contact details
- stay and assist the ambulance officer if requested to do so.

3.2 Report details of incident to workplace supervisor as appropriate

Documentation may include:

- Injury report forms
- Workplace documents as per organisation requirements

Documentation may include recording: time; location; description of injury; first aid management; fluid intake / output including fluid loss via blood, vomit, faeces, urine; administration of medication including time, date, person administering, dose; vital signs.

It is vital that any first aid management, which occurs in the workplace, is recorded in a Record Logbook.

The Record Logbook should include the following information:

- name of casualty;
- witnesses;
- detailed description of incident;
- time and date;
- outcome;
- signature of those involved, and their position;
- management comment and recommendations;
- follow up.

This record would be sent to management who would then be expected to read and follow up on the incident, including making recommendations to prevent or

minimise the incident from occurring again. The record would be kept on the premises for future reference.

Physical condition

When you are recording the details regarding the physical condition of the casualty, you need to write objectively, not subjectively, and include observation of the facts i.e. the signs and the symptoms.

Case Study: sprained ankle

The correct way

An example of writing objectively about the casualty's physical condition is:

At 1.10 pm 1/11/02, (casualty's name) was found by (your name) lying on the floor of the tearoom holding his left ankle. (Casualty's name) stated that he tripped over his untied shoe laces and that his left ankle was very painful. On inspection, his left ankle was swollen and slightly bruised. (Your name) called for help and (first aider's name) arrived on the scene.

The incorrect way

Do not use emotive language when reporting on the casualty's physical condition.

Below is an example of how not to write:

At 1.10 pm 1/11/02, I went to the tea room because I was hungry and I was late for my lunch break and I found (casualty's name) lying on the floor. I panicked and ran for help because I thought (casualty's name) had broken his leg. When I returned, I had calmed down and saw that his left ankle was huge. My supervisor took over the first aid management as I wasn't sure what to do.

Changes in conditions

Any changes in the casualty's physical condition also need to be reported, again in an objective manner.

Case Study: Asthma attack

Here is an example of documenting changes in the physical condition:

At 11.20 am 12/5/02 (casualty's name) was having difficulty breathing, was wheezing and very distressed. She was pale and clammy. (Your name) sat her in a chair and called for help. At the same time (your name) loosened her clothing, opened the window and turned on the fan. Suddenly, (casualty's name) started turning bluish around her mouth.

Management

It is important that all management given to the casualty is fully documented.

Sprained ankle

(Casualty's name) was helped to the closest chair, his shoe removed, left foot elevated, and an ice pack and a compression bandage were applied to the left ankle.

Asthma attack

(Casualty's name) stated she needed her Ventolin inhaler which (first aider's name) gave to her. (Casualty's name) took four puffs of the inhaler. One minute later, she turned very blue around the mouth and collapsed. She was found to be unconscious and not breathing.

Response to management

In addition to reporting on the physical condition of the casualty and first aid management, you will also need to report on the response to the first aid management. In other words, what happened after first aid was given. Was the first aid management effective? Did the casualty recover?

We will use the two scenarios above to document the first aid management response.

Sprained ankle

(Casualty's name)'s wife was telephoned. She arrived at the workplace at 1.55 pm with a pair of crutches to take (casualty's name) to the local doctor and to have an X-ray. (Casualty's name)'s wife was directed to keep the ice pack on for 20 minutes every two hours for the first 24 hours and for 20 minutes every four hours for the next 24 hours, as well as to keep the left foot elevated and leave the compression bandage in place. She was also asked to phone the workplace the next day to let staff know about (casualty's name)'s condition. Management has also been informed and this report filed.

Asthma attack

(Your name) ran to call an ambulance while (first aider's name) commenced expired air resuscitation. The ambulance arrived at 11.35 am and took over the

resuscitation. The ambulance crew took (casualty's name) to Accident and Emergency at St Paul's General Hospital. The family has been informed and will phone us later with an update of (casualty's name)'s condition. Management has also been informed and this report filed.

Learning Activity 14:

Answer True or False by circling the correct answer

a. The outcome is the most important thing to focus on when reporting. **True/False**

b. After filling out the accident/incident report, submit it to management. **True/False**

3.3 Maintain confidentiality of records and information in line with statutory and/or organisational policies

A degree of confidentiality exists in all professions and organisations and, it has legal consequences for everyone involved in the medical/health profession. It is very important that you understand what confidentiality means and how you should handle various situations.

What do you think is meant by the term 'confidentiality'? What does it mean when someone tells you something 'in confidence'? Has there been a time in your life when you told somebody something in confidence and later found you couldn't trust them? Has there been a time when you have heard gossip about someone or something they have done which you felt they might not want spread around?

'Confidentiality' is another way of saying 'secrecy'. Confidentiality requires trust. If someone wants something to remain confidential, they want it to be kept a secret or treated as a private matter. As someone who is privy to confidential information, no matter what it might be, you are in a position of trust. As a first-aider this goes beyond your personal needs. You are trusted not to divulge confidential information to anyone, unless directed by management or given permission to do so by the patient.

You can breach confidentiality by:

- showing or giving records to people within or outside the workplace without the patient's written consent;
- talking about patients or leaving records lying about;
- discussing a patient with someone over the telephone.

National Privacy Act

One of the most important pieces of legislation for the health industry is the National Privacy Act. The Privacy Act (Private Sector) 2000, formally the Privacy Act 1988, includes the 10 National Privacy Principles that became effective from December 2001. These principles set the minimum standard that health service providers must abide by when they collect, use, disclose and store patient information.

Whether you are working in the public sector or the private sector, if you are working with patient records, either clinical or financial, you are legally obligated to observe confidentiality and privacy of information according to the Privacy Act.

The Internet site to visit for these principles is
http://www.privacy.gov.au/health/pubs/index.html#2

Privacy principles

The NSW Privacy Committee Data Protection Principles outline the privacy principles that all NSW community services organisations must follow. These guidelines are to protect client rights and ensure that only essential information about the client is collected.

1. Collect information directly from the client, except if:
   a. the client agrees otherwise;
   b. the other information source also follows these principles.
2. Make sure the client knows whether it is compulsory or optional to give the information.
3. Make sure the client knows the purpose for collecting the information.
4. Make sure the client knows who you usually pass information on to (and who they usually pass it on to).
5. Make sure the client can look at and correct their information (unless the law stops this), and the client knows this right.
6. Make sure the information is actually needed for your purpose.
7. Limit your use of the information to:
   a. the purpose you collected it for;
   b. other purposes with the client's consent;
   c. preventing harm to the client or someone else.
8. Make sure the information is accurate, up-to-date and complete.
9. Make sure the information is protected from unauthorised access.

10. Make sure the information is kept for no longer than necessary for the purpose it was collected for.
11. Make sure that the information is only used or disclosed with the freely given, clear written consent of the client if the information concerns their:
    a. ethnic or racial origin;
    b. political opinions;
    c. religious or philosophical beliefs;
    d. trade union membership;
    e. health;
    f. sexual life.

You can get more information from Law link NSW: A Brief Summary of the Information Protection Principles or go to: http://www.ipc.nsw.gov.au/privacy/public_media/privacy_individ_public/indiv_info_protect_principles.html

4. Evaluate the incident and own performance

4.1 Recognise the possible psychological impacts on self and other rescuers involved in critical incidents

4.2 Participate in debriefing to address individual needs

4.1 Recognise the possible psychological impacts on self and other rescuers involved in critical incidents

Ask yourself how you are doing. It is reasonable to ask yourself 'Am I doing a good job?'

Consider these options:

- self-appraisal;
- informal feedback;
- formal feedback;
- professional development.

Self-appraisal

You self-appraise by monitoring your own work performance. You do that through observing others and the way that they work and then evaluating your own standard of work and completion of activities.

Informal feedback

Ask for informal feedback from your colleagues or supervisor about your standard of work. This means that your supervisor or another team member will oversee what you are doing on a day-to-day basis and will then be able to evaluate your contributions and strengths and ascertain where you might need to improve.

It is, therefore, a good idea to be able to approach your supervisor and ask for feedback about your work performance. While this may be a rather scary thought, remember that by seeking feedback you are showing that you are willing to make changes and eager to perform at your best. By acting on feedback, you will gain support from your colleagues and supervisor.

Formal feedback

Ask for formal feedback or assessment from your supervisor or colleagues, known as a performance appraisal. These tools usually directly relate to your job specification and will give you feedback that relates directly to the standards expected in the workplace.

Professional development

Research current theory and professional practice in first aid and attend training.

Seek feedback from appropriate clinical expert

In a casualty situation, the appropriate clinical expert could be:

- ambulance officer;
- paramedic;
- health worker;
- doctor.

Seeking feedback

What do we mean by ‘feedback’? Can you think of situations when you’ve been asked for your feedback? Or when you have asked for feedback (eg, ‘What do you think of my suggestion?’)

Put simply, feedback is about what you think of something you have seen or experienced (e.g., a service or product). In your feedback, you might voice a concern, complain, point out a factual error or express your opinion or thoughts.

Guidelines for seeking feedback

- Ask for feedback as soon as possible after you have done something that you would like feedback about. The only exception to this is if you are very angry, as it may come across as a demand rather than a request.

- Ask about specific things, eg how they think you managed the situation. Just asking 'What do you think of me as a first-aider?' may be seen as an invitation for personal criticism, or it may just be confusing.
- Choose the time and place for feedback. If your supervisor is obviously very busy or stressed, it may not be advisable to seek the feedback immediately. It is also not appropriate, for example, to ask for feedback in front of the families of the clients.
- Sometimes immediate feedback won't be possible. If that is the case, carefully prepare your questions as close to the event as possible. This way, when you get a chance to ask for feedback, your recollection will be better.
- Ask for the feedback you want but don't receive. Sometimes we receive feedback about certain aspects of our behaviour when it is really other aspects that we want to know about. Ask for it if you think it will be useful.
- Once you ask for feedback, don't try to tell the other person why they are wrong! It may be hard, but just keep quiet and listen. If the feedback is vague, ask for an example of what they mean.

Receiving feedback

Listen carefully. Don't immediately reject or respond to the feedback. It is better to 'digest' what has been said.

Check your understanding. Ask for clarification if you are unsure or unclear.

Do with it what you will! The feedback is the giver's opinion. You don't have to do anything with it. You don't have to change. It is your decision. Remember, though, if it is coming from your superior in the workplace, it may be advisable not to ignore it!

Check it out with others. If more than one person gives you the same feedback, it is probably worthwhile doing something with it.

Make a decision about what you will do with the feedback. Assess the value of ignoring or using it and decide what you will do as a result.

Thank the person for giving you the feedback. It may have been painful to hear but it may also have been difficult to give. Also it is a valuable practice worth encouraging.

Feedback has no value unless it is used to improve performance. So you need to evaluate all feedback received. How can I evaluate feedback?

When evaluating feedback, look at its reliability, validity and the degree of influence that the person giving feedback has;

- **Reliability:** How reliable are your sources? Will they give you honest feedback or do they have other agendas?
- **Validity:** Do they have a full understanding of your position in the organisation and how it relates to others?

- **Degree of influence:** Do you respect their position? How much influence do they have, not only on your perception of yourself, but also on others' perception of your position?

If you are involved in first aid management it is a good idea to think about ways you can 'de-stress' so that the trauma doesn't have a lasting and detrimental impact upon you.

De-stressing strategies can include:

- debriefing the situation with a supervisor
- writing down what happened and your feelings about it
- talking with a friend or colleague about how it felt to be involved
- doing some exercise to dissipate the adrenaline that might have built up in your system (Most of us have a classic fight or flight response to dealing with conflict and, as a result, have a surge of adrenaline in our systems that acceptable (rational) means of conflict resolution might not deal with.)
- listening to a relaxation tape
- spending time reflecting and getting back into balance by going for a bushwalk, sitting near the water or in the bush
- doing something nice for yourself.

You will all know what works best for you. If your traditional ways of dealing with stress don't work, you might want to seek supervision or counselling yourself to help you to make sense of why the conflict has had a particular impact upon you.

Individuals can take responsibility for their own stress management by taking good care of their general physical and mental health. Improving health for stress management involves:

- Reducing the physical impact of stress by relieving muscle tension, lowering heart rate etc., after stressful experiences;
- Improving physical fitness and general health in order to prepare the body to deal effectively with stress next time.

Seven simple strategies that work:

1. **Slow down your breathing:** Take a few deep breaths, exhaling slowly each time.
2. **Use exercise to wind down:** Physical activity releases the energy and muscle tension built up by stress.

3. **Relax your muscles directly:** The stress response produces muscular tension and this causes aches and pains. Relaxing your muscles could involve:
    a. Tensing muscles before you consciously relax them. You can achieve this with simple activities such as shrugging the shoulders, rolling the neck from side to side, clenching and releasing your hand.
    b. Massage. For deeper muscle relaxation - massage your own scalp, hands or feet. Or get someone else to give you an all over massage.
    c. Warmth. Use warm water or hot packs to relax tense muscles.
4. **Posture:** Your body has to work harder if you are standing or sitting incorrectly. Check your posture regularly, especially if you have to perform the same task for extended periods of time. Change your position as often as possible, stretching your muscles as you move.
5. **Release tension emotionally:** Physical activity helps to use up the adrenalins created by stress. When physical activity is not possible, try releasing tension by sharing your feelings with someone else. Putting feelings into words helps to release pent-up emotions and assists in problem solving. Laughter has been called "the best medicine", and not without cause. Stress often makes us focus on the serious and negative aspects of our life. Laughter releases chemicals such as endorphins which help us to feel more relaxed and often enables us to see things from a more balanced perspective.

6. **Slow down:** Deliberately slow your movements down - walking, driving, working. The calmer pace will reduce the impact of stress on your body and help to prevent accidents.
7. **Take a break:** Allow for adequate rest breaks in your work day. Not taking breaks in order to save time increases the risk of accidents. When you take a break try to find a physical environment and an activity that are different from your usual work environment. This may mean something as simple as going for a walk. It could also mean temporarily switching from one job to another.

A program of physical care should include activities that occur before exposure to stress, during stressful periods, and afterwards.

Figure 56: Physical care program

Before	During	After
Activities for good health	**On the spot relaxation**	**Activities that relax or that burn energy**
Regular exercise • aerobic • weight • bearing • flexibility Medical check ups Diet Sleep Holidays	Posture Controlled breathing Muscle tense & relax Venting emotion Time out Laughter Slow down	Relaxation Massage Warm baths Exercise Dancing Singing Laughing Venting emotion

A particular sort of stress may affect you after a violent incident - Post Traumatic Stress Disorder. This involves, for instance, anxiety, sleep problems and depression. This is a normal reaction to a traumatic incident, and is best dealt with by professional counselling

4.2 Participate in debriefing to address individual needs

Your response to the accident/incident

After witnessing an accident or being involved in providing first aid, some people might suffer an immediate or delayed emotional response to the situation. The way people respond might differ but symptoms such as flashbacks, nightmares, depression and a wide range of physical complaints can occur.

If you have offered first aid, or witnessed an accident, it might be beneficial to seek some form of debriefing or counselling, especially if you suffer from any changes in your physical or emotional health. You can find out about professional counselling and debriefing services through your workplace supervisor, Emergency Services, your local doctor or community health centre.

Appendix 1

Illness/Injury First Aid Report Form

PLEASE COMPLETE THE RELEVANT BOXES.			Office Use Only Report Number	
Workplace	ABC PTY LTD	Section Bldg G		
Supervisor	Lorraine Lim	Signature:	Date	4-Aug-04

1. INJURED PERSON DETAILS

Name	*Surname:*	Stokes	Date of Birth	12-Jul-70
	First name:	Bradley	Gender	Male
Address		222B Pendara Way, Bellambi Heights, NSW, Australia		
Phone number		02 42 417 9716	Postcode	2534
Occupation	Labourer	☐ Full-time ☐ Part-time	☐ Block Release ☑ Casual	☐ Seasonal ☑ Temporary

2. ILLNESS/INJURY DETAILS (refer to attached page for codes)

Date of illness/injury/incident	4-Aug-04	Time of illness/injury/incident	8:45 AM
Brief description of how the injury/illness happened	Bradley tripped and fell down a flight of 6 stairs in Buidling G - level 2 North Wing fire escape.		
		Code:	
Type of injury/illness	Sprain and possible fracture to the right wrist. Small laceration to the palm of the right hand.	Code:	
Bodily location of injury/illness		Code:	
Other comments			

3. TREATMENT DETAILS (to be completed by first aid officer)

Was first aid received?	☑ YES ☐ NO	Person providing first aid	Andrew Park
Treatment	Right hand immobilised and supported in a sling. Ice pack applied to swelling.		
Did the person:	☐ RETURN TO WORK ☐ GO HOME ☐ GO TO THE DOCTOR ☑ GO TO THE HOSPITAL		
	☐ OTHER (specify)		

4. WORKERS' COMPENSATION (for staff only)

	☑ YES	☐ NO	☐ UNSURE

5. WITNESS DETAILS (if applicable)

Name	Nil	Phone number	
Home address		Postcode:	

COMPLETED FORM SENT TO WORKPLACE SUPERVISOR

DO NOT ATTACH THIS PAGE WITH THE INJURY/ILLNESS/INCIDENT AND FIRST AID REPORT

	DESCRIPTION OF INJURY/ILLNESS
01	Fall of a person (including trips and slips)
02	Falls object (hitting object with a part of the body)
03	Explosion/implosion
04	Step on/strike object
05	Caught in or between objects
06	Muscular effort - single event
07	Muscular effort - repetitive/continuous
08	Muscular effort - postural
09	Non-person related incident (property/equipment damage)
10	Struck by object (cut by knife, tools etc)
11	Extreme temperature
12	Electrical current
13	Harmful substances (excludes insect/spider bites and stings)
14	Radiation
15	Exposure to noise
16	Exposure to mental stress factors
17	Motor vehicle accident
18	Other (specify)

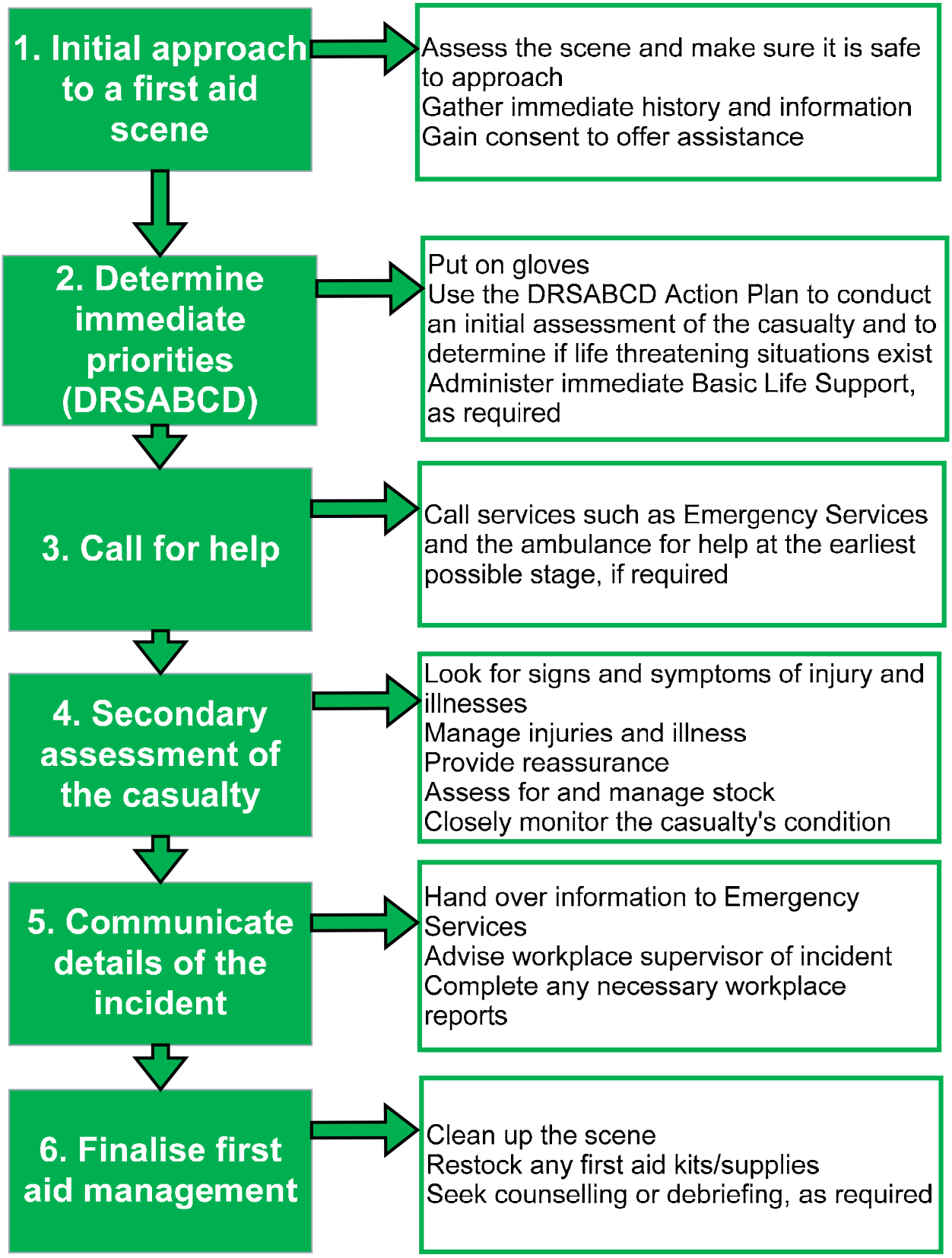
	BODILY LOCATION OF INJURY/ILLNESS
01	Eye
02	Ear
03	Face
04	Head (other than eye, ear and face)
05	Neck
06	Back
07	Trunk (other than back and excluding internal organs)
08	Shoulders and arms
09	Hands and fingers
10	Hips and legs
11	Feet and toes
12	Internal organs (located in the trunk)
13	Multiple locations (more than one of the above)
14	General and unspecified locations

	TYPE OF INJURY
01	Fractures/dislocation
02	Sprains and strains
03	Concussion
04	Laceration/open cuts
05	Damage to glasses, hearing aids etc
06	Occupational overuse/injury (e.g. RSI)
07	Poisoning and toxic effects of substances
08	Grazes/abrasions
09	Foreign bodies on external eye, in ear or nose or in respiratory, digestive or reproductive systems (including choking)
10	Burns and scalds
11	Puncture/penetration wounds
12	Amputations
13	Electric shock
14	Multiple injuries (only to be used where no principal injury can be identified)
15	Bites/stings
16	Other injury (specify)

	TYPE OF ILLNESS
17	Deafness
18	Epilepsy
19	Dermatitis/skin rashes
20	Dizziness/fainting
21	Nausea/vomiting
22	Circulatory system/heart problem (including heart disease, hypertension, hypotension, varicose veins)
23	Respiratory system/breathing problems (including asthma, legionnaires disease, asbestosis, pneumoconiosis)
24	Infectious and parasitic diseases
25	Psychological disorders (e.g. stress, depression)
26	Headaches
27	Shock
28	Other diseases (specify)

	AGENCY OF INJURY/ILLNESS
01	Animals
02	Biological agencies
03	Chemicals
04	Equipment (including powered tools)
05	Fixed or mobile plant/machinery
06	Floors and passageways
07	Foreign bodies
08	Ground and pathways
09	Hand tools (non powered)
10	Inadequate training
11	Insect(s)
12	Manual Handling
13	Objects
14	Person/people
15	Physical environment
16	Road Transport (cars, bikes etc)
17	Slips/trips/falls
18	Stairs
19	Syringes
20	Other

Appendix 2


1. Initial approach to a first aid scene
Assess the scene and make sure it is safe to approach
Gather immediate history and information
Gain consent to offer assistance
2. Determine immediate priorities (DRSABCD)
Put on gloves
Use the DRSABCD Action Plan to conduct an initial assessment of the casualty and to determine if life threatening situations exist
Administer immediate Basic Life Support, as required
3. Call for help
Call services such as Emergency Services and the ambulance for help at the earliest possible stage, if required
4. Secondary assessment of the casualty
Look for signs and symptoms of injury and illnesses
Manage injuries and illness
Provide reassurance
Assess for and manage stock
Closely monitor the casualty's condition
5. Communicate details of the incident
Hand over information to Emergency Services
Advise workplace supervisor of incident
Complete any necessary workplace reports
6. Finalise first aid management
Clean up the scene
Restock any first aid kits/supplies
Seek counselling or debriefing, as required

Bibliography

Reporting an incident

https://www.worksafe.qld.gov.au/injury-prevention-safety/incidents-and-notifications

Approved code of practice for first aid in workplace:

http://www.safeworkaustralia.gov.au/sites/swa/about/publications/pages/first-aid-in-the-workplace

http://www.avru.org/faqsnakes.html Highly recommended sites for current and additional information

http://www.redcross.org.au/ourservices_acrossaustralia_firstaid_default.htm

http://www.cfmeuvic.com.au/downloads/ohs-checklist/first-aid-kit.pdf

http://www.youtube.com/watch?v=Da-pc86rJdI

http://www.youtube.com/watch?v=5NnQidV7CEM

http://www.safework.sa.gov.au/uploaded_files/FSCoPFirstAidWorkplace.pdf

This American video is an excellent practical demonstration related to the first aid treatment of a seizure patient

http://www.youtube.com/watch?v=fY5OG3DURBA&feature=channel

Treatment for shock

http://www.youtube.com/watch?v=jp32sTgeFTY&feature=channel

http://redcross.e3learning.com.au/content/legal/SA.pdf

http://www.betterhealth.vic.gov.au/bhcv2/bhcarticles.nsf/pages/Shock – VIC

http://www.commerce.wa.gov.au/worksafe/first-aid-0

https://www.commerce.wa.gov.au/sites/default/files/atoms/files/code_first_aid_0.pdf – Western Australia

http://www.allenstraining.com.au/f.ashx/downloads/ACT-codes-of Practice.pdf – ACT

http://www.worksafe.vic.gov.au/wps/wcm/connect/wsinternet/WorkSafe/Home/Forms+and+Publications/Compliance+Code/ –Victoria

http://www.workcover.nsw.gov.au/newlegislation2012/general-risk-management/Pages/first-aid.aspx – NSW

http://worksafe.tas.gov.au/industry_and_safety/topics/subject/first_aid - Tasmania

http://www.allenstraining.com.au/f.ashx/513651.pdf – Northern Territory

http://www.seton.net.au/resourcecenter/first-aid/australian-first-aid-state-legislation.html – This one provides a link to all by clicking on state initials