

Learner's First Aid Manual



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Introduction

Being confronted with an emergency situation can be very frightening. Knowing what to do to help the casualty in this setting is a wonderful skill.

Imagine knowing that you are able to change or even save the life of your family member, friend or workmate in an emergency.

The 4Life First Aid Manual is designed to assist a First Aider by providing comprehensive but accessible information and strategies for many emergency situations.

The skills required to perform emergency First Aid are

essentially simple but it is

important to understand how to perform them appropriately and effectively. Prompt,

confident application of First Aid can save lives.

This manual will assist with First Aid training, as well as being a useful resource. It will also enable the retention of practical skills and knowledge received during the training sessions.

This Manual adheres to all current Australian Resuscitation Council (ARC) guidelines.

What is First Aid?

First Aid is the initial care and treatment of the sick or injured person. It is care initiated

as soon as possible after an accident or onset of illness.

Prompt assistance and care in the period prior to the ambulance arrival can

significantly alter the outcome for the person involved. It may mean the difference between a full or partial recovery, or even the difference between life and death.

The main aims of First Aid are to:

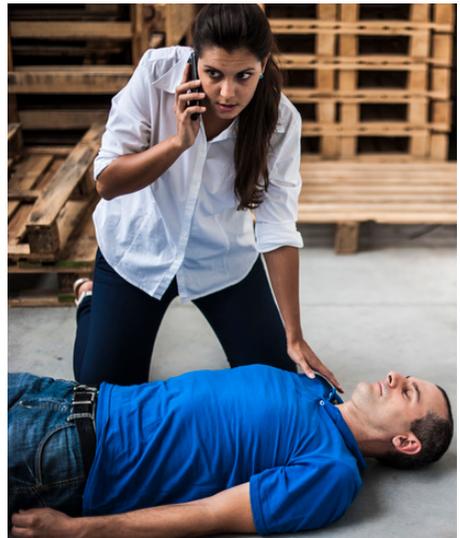
- preserve life
- protect from further harm
- relieve pain
- promote recovery.

In order to preserve life the First Aider may be involved in providing a number of simple life-saving treatments, including Cardiopulmonary Resuscitation.

Cardiopulmonary Resuscitation (CPR) consists of:

- rescue breathing, which
- is also commonly known as mouth-to-mouth
- external Chest Compression (ECC).
- CPR allows oxygenated blood to circulate to vital organs such as the brain and heart.

Even if rescue breathing is not possible by the First Aider, it is important to remember to apply external chest compression (ECC) as this will maintain oxygen to the person's brain until more advanced help arrives.



The Approach to Patient Care

Some First Aiders forget they are treating a person as well as a First Aid problem. It is essential to offer reassurance to the patient. This is especially important for children, so they can feel safe, secure and supported.

Remain calm and talk to the patient in a manner that will keep them calm and reduce their anxiety over what is happening. By combining reassuring words with good first aid management, the First Aider can ease the distress and discomfort of the patient.

- By easing anxiety and pain levels you promote recovery of the injured patient by decreasing their pulse rate.
- By decreasing the pulse rate, you slow any blood loss.
- By slowing blood loss, you slow the Shock Process.

Legal Considerations in First Aid

First Aiders should be aware of the potential legal consequences of becoming involved in an incident. However, State Acts (one of which is the 'Good Samaritan Act') exist to protect volunteers and First Aiders who are not accepting financial gain in a formal setting.

There are four main legal considerations which relate to First Aid.

1. Duty of Care

Common Law does not impose an automatic duty on First Aiders to render aid to a casualty.

However, if you choose to provide First Aid assistance you have a duty to use your knowledge and skills in a responsible way, to exercise reasonable care and to act in accordance with your level of training.



You should continue to provide First Aid until:

- someone with more qualifications than you (e.g., paramedic, doctor, nurse) relieves you
- another First Aider relieves you
- the casualty no longer requires First Aid
- you become incapable of continuing.

A nominated workplace First Aider has a duty of care imposed on them by law to assist another person in the workplace.

A duty of care can be imposed by legislation.

2. Negligence

It is an unlikely possibility that a First Aider may be sued in connection with providing First Aid. If it did occur, the likelihood is

that the Australian courts would find liability only if the First Aider's behaviour was grossly negligent.

3. Consent

Under Australian law, you should ask for and receive the casualty's consent to your treatment before you start.

If the casualty is unconscious, or unable to give consent due to his or her injuries, consent may be assumed.

For casualties under the age of 18, consent from a parent or guardian will be required. If a parent or guardian is not present you may proceed.



Note:

In an emergency, the law will imply the consent of the injured person if they are unconscious and seriously injured eg bleeding. This consent will only apply to

conditions that imperil the life or future health of that person.

Infants / Small Children

In an emergency situation, a person may take 'reasonable action' even without formal consent, which will be viewed as being acceptable in the normal conduct of life.

4. Recording

If possible, a First Aider should immediately document the incident, no matter how minor. This documentation may later be used as a form of evidence.



If you have a role as a First Aider at your workplace, you may have obligations under Occupational Health and Safety legislation.

When preparing a report, some general guidelines are recommended:

- use pen only

- do not use correction fluid
- sign and date the record
- ensure your notes are accurate, factual and are based on observations rather than opinions.

The information must be kept confidential. Any disclosure of personal information, particularly in the work setting, requires the written consent of the person involved.

Procedures for reporting & recording

You should always report First Aid incidents to the relevant supervisor.

The workplace First Aider must make a written report on completion of First Aid management. Refer to the sample Incident, Injury, Trauma and Illness record on the next page and note the information required on the form.

All serious incidents must be reported to the relevant Regulatory authority in your state within 24 hours of awareness of incident.

Incident, injury, trauma and illness record

(Circle relevant type of record)

Child details

Surname: Given names:

Date of birth: / / Age:

Room/group:

Incident/injury/trauma/illness details

Incident/injury/trauma

Circumstances leading to the incident/injury/trauma:

.....

Products or structures involved:

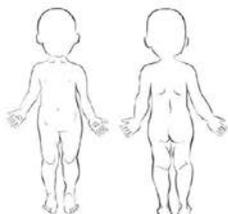
.....

Location: Time: am/pm Date: / /

Name of witness:

Signature: Date: / /

Nature of injury sustained:



- | | |
|---|---|
| <input type="checkbox"/> Abrasion, scrape | <input type="checkbox"/> Cut |
| <input type="checkbox"/> Bite | <input type="checkbox"/> Rash |
| <input type="checkbox"/> Broken bone / fracture | <input type="checkbox"/> Sprain |
| <input type="checkbox"/> Bruise | <input type="checkbox"/> Swelling |
| <input type="checkbox"/> Burn | <input type="checkbox"/> Other (please specify) |
| <input type="checkbox"/> Concussion | |

Illness

This form is for Training Only

Circumstances surrounding child becoming ill, including apparent symptoms:

.....

.....

.....

Time of illness: am/pm Date of illness:/...../.....

Action Taken

Details of action taken, including first aid administration of medication:

.....

.....

Medical personnel contacted: Yes / No

If yes, provide details:

.....

.....

Details of person completing this record

Name: Signature:

Time record was made: am/pm Date record was made / /

Notifications (including attempted notifications)

Parent/guardian: Time: am/pm Date: / /

Director/teacher/coordinator: Time: am/pm Date: / /

Regulatory authority (if applicable): Time: am/pm Date: / /

Parental acknowledgement:

I.....

(name of parent/guardian)

have been notified of my child's incident/injury/trauma/illness.
(Please circle)

Signature: Date: / /



Note:

In some circumstances there may be a legal obligation to provide additional reports.

In Education and Children's Services, parents should always be notified. All serious injuries must be reported to the regulatory authority.

Under WHS legislation, the employer has a duty to report notifiable incidents to their state work health and safety regulator.

(WorkCover NSW, WorkSafe VIC, Workplace Health & Safety QLD, SafeWork SA, WorkSafe WA, WorkSafe ACT, Workplace S



Education and care services national law

Regulations made under the Education and Care Services National Law include specific requirements covering:

- First Aid Incidents
- Infectious diseases
- First Aid Kits
- Medical Conditions Policy
- Administration of Medications
- Staff First Aid Qualifications

Incidents, Injury, Trauma and Illness

An education and care service must have procedures to be followed in the event that a child becomes ill or injured. A parent of the injured/ ill child must be notified as soon as possible and no later than 24 hours after an incident.

A written incident report must be completed within 24 hours and

include not only the first aid details (see page 204), but also the details of any person who witnessed the incident and the name of any person notified, including time and date of the notifications or attempted notifications.

All serious incidents must be reported to the Regulatory Authority within 24 hours.

Infectious Diseases

The provider must take all reasonable steps to prevent the spread of infectious disease at the service, including notification of a parent or authorised emergency contact as soon as possible.

First Aid Kits

The service must maintain an appropriate number of suitably equipped first aid kits that are easily recognisable and readily accessible to adults.

Medical Conditions Policy

The service must have a policy that sets out practices for management of medical conditions including asthma, diabetes and anaphylaxis. This

should include risk minimisation and medical management plans developed in consultation with the parents as well as communications plan to ensure awareness of the plans and procedures to be followed for changes to plans. All parents must be provided with a copy of the medical conditions policy.

Administration of Medications

The service must ensure that medication is not administered to a child unless that administration is authorised. Anaphylaxis or asthma emergencies are exempt from the authorization requirements. All details of medication administration must be recorded, including the signed authorisation from the parents. Medications must be administered in accordance with instructions on the medication or instructions provided by a registered medical practitioner.

Staff First Aid Qualifications

The provider must ensure that staff with current qualification in first aid, including asthma and anaphylaxis management, are in attendance at all times and at any place where children are being educated and cared for. The National Authority publishes a list

of approved first aid qualifications on its website: www.acecqa.gov.au/ Qualifications.

Safety & Risk Management

If we prevent injury we need less First Aid. One of the keys to this is maintaining a safe environment. To reduce the risk of accidents:

- immediately wipe up any spills
- keep doorways and main traffic areas clear
- store hazardous materials securely and well away from children
- store heavy items on low shelves
- check and maintain all equipment in safe condition
- empty wading pools and water play equipment daily
- check for unsafe furniture

Another key to safety is planning and supervision

- establish an emergency evacuation plan

- plan activities appropriate to the level of the child
- vary activities to prevent children becoming over tired or over excited
- watch for tiredness, anger, frustration and over excitement
- monitor arrivals and departures carefully
- show children the safe way to use equipment and materials
- observe that materials and equipment are always used correctly

Assessment Principles

First Aiders need to be able to recognise a variety of illnesses or injuries that require first aid response.

Sometimes it can be a challenge even to recognise that a person has a condition requiring urgent first aid management.

There are three categories of evidence that the first aider can use to recognise an illness or injury.

HISTORY

The story of the accident or illness, obtained from the surroundings, patient or by standers.

SIGNS

What you can see or hear: for example, redness, swelling, laboured breathing.

SYMPTOMS

What the patient feels and tells you:

Excursions

Curriculum Activity Risk Assessment (CARA)

Before undertaking an excursion, carers and teachers should prepare a Curriculum Activity Risk Assessment (CARA).

Each state system will have its own template, including private schools, however the following will provide an overview of what should be considered before undertaking an activity such as an excursion off the school / carer's premises.

Minimum Supervision

Adequate adult supervision must be provided at all times, and take into account a broad range of variables.

Some of the following will affect your decision about what constitutes adequate supervision:

- Nature of the activity to be conducted
- Number of students or size of groups, if more than one
- Needs of students and their expected capabilities e.g.

fitness, experience, competence

- The leader's experience
- The planned duration of the activity
- Suitability and availability of equipment
- Environmental and expected weather conditions
- Difficulties/distance/condition of the venue/site of the activity e.g. vehicle tracks, trails
- Remoteness of the activity
- Likelihood of leader becoming incapacitated or separated from participants

First Aid Kits

Possession of an appropriate, well-stocked First Aid Kit is vital in order to provide emergency assistance. Keep a kit in your car, at home and at work.



legislation. Check with local authorities before purchasing a “workplace” First Aid Kit, as there are specific requirements.

It is recommended that a personal First Aid Kit should have the following contents:

- resuscitation face shield
- bandaids
- hand towels/cloths
- tape
- non-adhesive dressing
- alcohol swabs
- safety pins
- large combine dressings
- small plastic rubbish bags
- crepe bandages
- scissors
- 2 eye pads
- splinter probes – tweezers
- gloves (disposable)
- saline eye wash solution
- wound dressings
- triangular bandages
- bite and sting cream



Workplaces must provide a First Aid Kit under State and Territory

First Aid Hygiene

Infectious diseases are those diseases which cause infections to the human body. In some cases they are transmitted by contact or cross infection.

A First Aider can do little to cure an infection but can do a great deal to limit the risk of infection by:

- avoiding direct contact with an infection
- avoiding transmitting an infection.
- The following simple steps are sufficient to prevent both the First Aider and casualty from infection:
- wash hands with soap and water or rinse with antiseptic solution
- wear gloves if available. This places a barrier between the First Aider and the casualty's body fluids. It is recommended that gloves are worn at all times but remember intact skin will still provide a good barrier for protection
- use a face shield or resuscitation mask if available when doing active Rescue breathing or Cardiopulmonary Resuscitation (CPR) – techniques which you will learn in this manual

- use clean bandages and dressings
- wash hands and change gloves between casualties
- clean up after treatment – dispose of used dressings, sharps, gloves and soiled clothing safely and correctly.
- Place used materials inside a plastic bag, then inside a second plastic bag, and tie securely. Do not place the bag in a rubbish bin. Dispose of it at the local council or hospital. Alternatively, give it to paramedics to dispose of.
- Wash hands again with soap and water, even if you used gloves.

Vital Signs Observations

Vital Signs Observations are a measure of a patient's:

- Pulse
- Breathing
- Conscious State
- Skin State

While taking Vital Signs Observations may seem to be unimportant to some first aiders, they are extremely important to

Ambulance, Nursing and Medical personnel. The history, and a good set of Vital Signs Observations can provide an excellent window into the patient's condition that may not be immediately apparent to the first aider. They also provide a guide to the patient's condition and response to treatment given.

PULSE

The best places to feel for a pulse are at the Carotid (Neck) and Radial (Wrist).

The easiest way to locate the carotid (neck) pulse is to place two fingers on the patient 's 'Adams Apple' and then slide them to either side of the neck into the groove between the windpipe and the large muscles of the neck.

Count these pulses for at least 30 seconds and multiply the result by 2 to obtain the number of beats (pulse rate) per minute. While counting, also note whether the pulse is regular or irregular.

Normal Pulse Rate	
Newborn	120-160 per min
Infants	100-160 per min
Children	80-100 per min
Adults	60-80 per min

Breathing Rates

When recording a patient's Breathing Rate per minute, count their breaths by watching for the rise and fall of their chest, or feeling with the back of your hand for breaths from their mouth or nose.

Normal Breathing Rates	
Newborn	16-20 breaths/per min
Infants 1-12mths	25-40 breaths/per min
Children 1-5yrs	25-30 breaths/per min
Children 6 -12yrs	16-25 breaths/per min
Adults	16-20 breaths/per min

The Handover

It is in the best interests of the patient to have seamless care

from the First Aider, through the links in the Chain of Survival, to further professional health care.

After arrival of ambulance paramedics or other health care professionals, it is vital to perform proper handover of the patient. How you go about handover depends partly on circumstances at the time of the paramedics' arrival.



If you are performing CPR and an ambulance arrives, don't immediately stop. Keep going until the paramedic is ready to take over. If paramedics can see that you are performing

CPR correctly, they may ask you to continue. This allows them time to prepare the advanced life support equipment before taking over patient care. It is also important for the changeover to be performed smoothly with minimal interruption to CPR.

Tell paramedics or other relieving health care professionals what you know of the incident. The handover should be comprehensive. You need to convey:

- the history, including time of the incident,
- any signs you have noticed,
- any symptoms that the patient has conveyed,
- what the patient was doing at the time,
- any drugs that may have been taken,
- what first aid actions you have taken,
- any other factors you consider relevant, including environmental factors.

Immediate Action

Quick action is vital. Remember the following:

- remain calm, do not panic
- careful and deliberate action is of most benefit to the casualty
- take control and be confident
- deliver appropriate treatment.

Evaluating First Aid Response

Following any first aid emergency in the workplace, it is important to review the first aid response. Questions to consider include:

- Did the response and the treatment provided follow organisational procedures and current action plans?
- If procedures were not followed, why were they not followed?
- Could procedures be improved to provide a better response and better outcomes?
- Was the required first aid equipment readily available?
- Did the first aid emergency reveal any shortcomings with communications?
- Were staff aware of their responsibilities?
- Were the First Aiders provided with appropriate training to the right level?
- Did First Aiders act within the limits of their training?

When conducting debriefings and reviews, it is important to recognise the possible psychological impacts on first aiders who have been involved in critical incidents. This is

especially true of incidents resulting in permanent impairment or death of the casualty.



Stress Management

What is stress?

Stress is a natural human response to pressure when faced with challenging and sometimes dangerous situations. That pressure is not only about what's happening around us, but often also about demands we place on ourselves.

CAUSES OF STRESS

Anything that requires a person to adjust to a change in their environment may potentially cause stress.

The body reacts to these changes with physical, mental and emotional responses that can be different for each person.

There are internal and external causes of stress.

Management of Stress

- Exercise regularly – regular exercise is a great way to manage stress. Have at least 20 minutes of exercise three times a week
- Avoid conflict – avoid situations that make you feel stressed such as unnecessary arguments and conflict. Assertiveness is fine but becoming distressed is not
- Relax – give yourself some time to relax each day and try to spend time with people who make you feel good about yourself
- Eat well – a nutritious diet is important. Eat plenty of fresh fruit and vegetables and avoid sweet and fatty foods
- Sleep – a good sleep routine is essential. Enjoy your life – it's important to make time to have some fun and to get a balance in your life.
- Understand what situations make you feel stressed
- Understand what situations you can and can't control

- Prepare for stressful events in advance, by thinking about the future
- Keep yourself healthy with good nutrition, exercise and regular relaxation
- Try to do happy things every day.

Children and stress

Following a first aid incident, it is important for teachers/carers to observe the children under their care for signs of stress.



- Do they look upset?
- Do they look sad?
- Are they crying?
- Has their behaviour changed?
- Have they become withdrawn?
- Have they become irritable or bad tempered?
- Are there signs of panic?

Adult support

Children need the adults who are looking after them to remain strong and calm. Therefore, teachers and childcare workers should first of all reflect on their own emotional state following a critical incident. Are the children reflecting their teacher's or carer's distress?

Sometimes, it may be necessary to find another staff member not directly involved in the first aid incident to help a child feel secure.

Talking with children

Young children do not readily talk about their feelings. They may not have the vocabulary to express their emotions, nor are they likely to initiate discussions around traumatic events.

If a child appears upset, ask them if they want to talk about it.

Offer reassurance in an honest, truthful way.

Don't pretend nothing has happened and say 'everything is OK': they won't believe you!

Listen attentively; be calm and supportive.

Consider letting them draw pictures instead of talking.

Talking with parents

Talk to parents about the events and any responses you have observed in their children.

Teachers and childcare workers are not expected to be professional psychologists, so take care not to draw too many conclusions from your observations.

If a child remains affected by a traumatic event, it will be the parents' responsibility to decide if professional assistance should be sought.

Getting Help (Calling Emergency Services)

To get expert medical assistance, call an ambulance on 000 or 112:

- 000 can be dialled from any fixed or mobile telephone
- 112 is an alternative number to use when dialling from a mobile phone.

It can be used when the phone is out of signal range, or even

without having a sim card or pin number

for the phone.

In the workplace, there may be an internal number to call in emergency. This should be displayed on or near the telephone.

When calling for help, there are three things to remember:

1. state which service you need
2. ambulance, police, fire
3. stay on the line until connected to the service requested
4. give as much information as you can about the emergency, including:
 - exact location/address
 - city or town
 - nearest cross road or street
 - landmarks, distance from town or landmarks
 - your name
 - phone number from where the call is being made
 - what has happened
 - the number and condition of the casualties.

Medical Alert Devices

Some individuals may wear or carry a medical alert device (e.g., bracelet, necklace, wallet card) to alert others as to the nature of their specific medical condition or illness (e.g., diabetes, allergies, asthma, epilepsy, heart conditions).

Check to see if a medical alert device is evident as the information may be vital to the casualty's treatment.

A number may appear on the back of the device.

This number will link to the casualty's file which will provide further information.

Reassuring the Casualty

Reassurance is a very important aspect of First Aid treatment. The First Aider should:

- comfort and reassure the casualty. Keep him/ her informed of what is

happening. This constant reassurance is of great psychological value

- remember that others involved in the emergency (e.g., workmates, relatives, bystanders) may also need reassurance. After the incident has ended, take time to gather everyone together. Praise their efforts and let them know how important their contribution was.

Emotional Responses

An emergency can cause unusual stress in those who have been involved or affected by it, including First Aiders.

Emotional responses can appear immediately or months/years later. They are normal and expected. Every person reacts differently.

Some common responses include:

- crying “for no apparent reason”
- difficulty in sleeping
- inability to think clearly or to make decisions
- feeling of disbelief, shock, anger

- constant apathy, tiredness
- feeling emotionally drained
- excessive drinking and/or drug use
- lack of appetite or extreme hunger
- anxiety, feelings of powerlessness
- fear, sadness, depression
- flashbacks
- headaches, stomach problems, feeling sick.

Understanding what you are feeling and taking positive steps such as contacting a person for counselling can help you to cope. If the feelings persist, seek professional help.

Human Anatomy

A basic understanding of the human body’s anatomy and physiology assists a First Aider to recognise:

- what is occurring within the body and why
- the potential outcomes of the initial injury or event
- how to best care for the casualty.

The human body is composed of several systems which allow the body to function effectively. An injury to one system can ultimately affect many systems or areas of the body.

The Nervous System

The Central Nervous System is made up of the brain and spinal cord. It is the control centre of the body and is extremely complex.

The brain regulates most of the body's functions, including the respiratory system.

Damage to the Central Nervous System can therefore have significant and long lasting effects on the rest of the body.

The Peripheral Nervous System is made up of the nerves which conduct messages from the brain and spinal cord to other parts of the body. These messages relate to movement and other sensations (taste, touch, smell etc).



The Cardiovascular System

This system involves the heart, blood vessels and blood. The heart acts as a pump, pushing the blood through the blood vessels to the body's organs and tissues.

Arteries carry the oxygen-rich blood from the heart to the cells of the body.

Veins carry the blood back to the heart, from where it is transported to the lungs and re-oxygenated before starting the process again.

As well as oxygen, the blood carries many sugars, proteins, chemicals and other substances to support the various systems of the body.

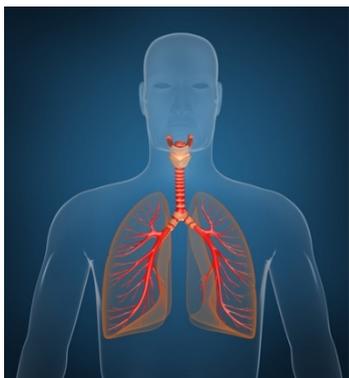
Each time the heart pumps, a pulse beat can be felt at various locations around the

body. The easiest pulse points to feel are the carotid (neck) and radial (wrist) arteries.

The resting heart rate of the average adult is between 60-100 beats per minute.

This is dependent on age, general fitness and other medical conditions.

The Respiratory System



This system comprises the:

- airway (mouth, nose) and air passages to the lungs
- lungs, including alveoli (the small air sacs within the lungs).
- The functions of the respiratory system are to:
 - provide oxygen to the blood
 - remove the waste products (carbon dioxide).

This process occurs at the alveoli in the lungs. The oxygen in the airways passes through the membranes of the alveoli and into the bloodstream, while the carbon dioxide moves the other way.

The Musculoskeletal System

This system comprises the bones, muscles, ligaments and tendons which support the body, protect the internal organs and provide movement.



necessary chemical substances the body requires.

The Urinary System

This system includes the kidneys and bladder. The function of this important system is to flush out waste products from the body, thereby maintaining a healthy state.

The Endocrine System

This system involves several glands and organs which secrete hormones to activate bodily functions. An example of this is the pancreas which releases insulin necessary in the control of blood glucose (sugar) levels.

The Digestive System

This system includes the oesophagus (food pipe), stomach and intestines. Food and drink travel to the stomach via the oesophagus. In the stomach the process of digestion commences.

The food is then absorbed into the body via the intestines. Other organs (liver, pancreas) also assist digestion by helping to process the food into the

The Lymphatic System

This system provides a draining mechanism for the body.

Lymphatic fluid is drained from the body's tissue, is strained in the lymph nodes (in armpits, neck

and groin) and then drains into the blood stream.

Most toxins (e.g., snake venom) or infections absorbed into the tissues are collected by the lymphatic system, which is slow moving.

It is possible to reduce the movement of toxins into the circulation by applying pressure and immobilisation, as this slows the lymphatic drainage. The Reproductive System

The female reproductive system consists of the:

- ovaries (which produce the human egg)
- uterus (where the fertilised egg attaches and grows)
- vagina (the birth canal).

The male reproductive system consists of the:

- testes (which produce sperm)
- penis.

The ovaries and testes are also known as the sex glands and are

therefore linked with the body's endocrine system.

The Skin

This system includes skin, hair and nails. The skin is the body's largest organ and its function is to protect the body from infection.

The skin's fibres are elastic and tough, so the skin can therefore stretch without easily tearing.

Emergency Action Plan: DRSABCD

The Emergency Action Plan to be followed during the treatment and care of a

casualty comprises seven steps:

- DANGER
- RESPONSE
- SEND FOR HELP
- AIRWAY
- BREATHING
- CPR
- DEFIBRILLATION
-

Refer to Basic Life Support Chart

DANGER

The ongoing safety of everyone at the scene must be ensured. Think of the safety of the following:

- yourself
- bystanders
- casualties.

Take time to look for potential dangers or hazards before you enter an emergency situation. Some examples of hazards are:

- fire
- smoke
- flammable materials
- gases/fumes
- electricity
- fallen power lines
- risk of explosion
- chemicals
- unstable structures
- sharp objects/metal
- slippery surfaces
- oncoming traffic.

Never enter an emergency situation if it is unsafe. Do not risk your own safety. Leave dangerous situations to the appropriate emergency service personnel who have the necessary equipment and training to manage the hazard.

At times, some hazards may be able to be removed

(e.g., turning off the electricity, removing broken glass at a motor vehicle accident).

Only move a casualty if there is a hazard which cannot be safely removed, such as fire or poisonous fumes.

The Touch and Talk Technique is an effective method to wake a sleepy person or to get a reaction from a sick

or inebriated person. If there is no response, the person is considered to be unconscious.

The three levels of consciousness are:

- fully conscious –
- alert, awake, orientated to time and place
- semi-conscious – drowsy, confused
- unconscious – unresponsive.

If the person responds to the Touch and Talk Technique:

- check his/her condition
- ask if assistance is required

- render assistance as required
- call an ambulance 000 if the person appears disorientated or incoherent.

If the person does not respond:

- call an ambulance 000
- shout for help
- check the airway.

RESPONSE

To check for a response from a person use the Touch and Talk technique:

- gently put your hand on the person's shoulder and talk loudly to them: "Are you alright?", "Can you hear me?"
- do not shake the person to gain a response.

SEND FOR HELP

Call an ambulance 000.



AIRWAY

A clear airway is essential.

To check if an airway is clear:

- open mouth and inspect that it is clear.

If visible material such as vomit and/or blood is in the airway it must be removed by the First Aider:

- turn the casualty onto his/her side to assist with the removal of the obstruction.

BREATHING

LOOK to see if the chest and upper abdomen rises

LISTEN for the sound of

breathing from nose and mouth

FEEL for movement of air against your cheek and place hand on the chest and upper

abdomen to check for the rise and fall.

If casualty is not breathing normally. Start CPR.

If casualty is breathing and unconscious consider recovery position. Refer to page 22.

CPR

- give 30 chest compressions followed by 2 rescue breaths (100 compressions in a minute).

DEFIBRILLATION

- an AED (Automated External Defibrillator) is a device that administers an electric shock through the chest wall to the heart
- If an AED is available apply now.

Basic Life Support Flow Chart*

Basic Life Support

D

Dangers?

R

Responsive?

S

Send for help

A

Open Airway

B

Normal Breathing?

C

Start CPR
30 compressions : 2 breaths

D

Attach Defibrillator (AED)
as soon as available, follow prompts

Continue CPR until responsiveness or normal breathing return



January 2016



NEW ZEALAND
Resuscitation Council
WHAKAHAUORA AOTEAROA

AED = Automated External Defibrillator

*Source: ARC Basic Life Support Flow Chart (2017)

Unconscious Casualty

An unconscious casualty is unable to safely control his/her own airway due to relaxation of his/her muscles. The tongue has the potential to fall back-wards across the airway,

and cause an obstruction. Food, blood or vomit may also obstruct the airway. It is important that such material be removed as soon as possible.

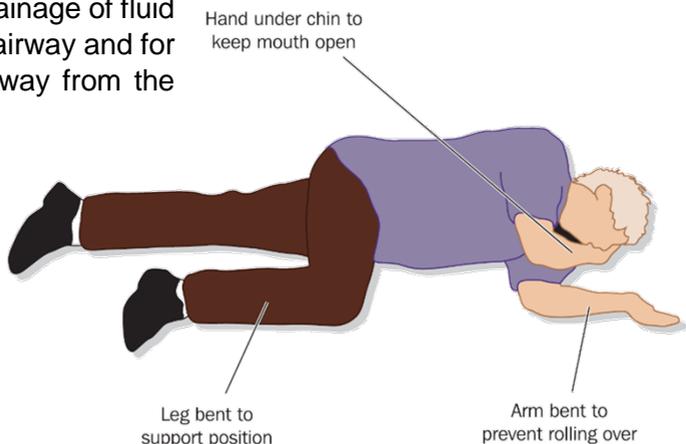
The risk of airway obstruction is increased if a breathing but unconscious casualty remains on his/her back.

The most effective way of eliminating this problem is to place the casualty into the recovery position, on his/her side. This will allow for drainage of fluid from the casualty's airway and for the tongue to fall away from the airway opening.

Recovery Position Technique

The First Aider should:

- offer reassurance and an explanation to a casualty, even if he/she is unconscious
- remove any objects from casualty's pockets such as keys/mobile phone
- kneel next to the casualty, align both legs straight
- place the casualty's arm furthest from you at right angles to his/her body
- place the casualty's nearest arm to you across the chest and place the back of his/her hand against the cheek
- take hold of the nearest
- leg just above the knee, pull it up, keeping the foot flat on the ground



- keep the casualty's hand pressed against the cheek and place pressure on the upper leg to roll him/her away from you (and onto his/her side)
- align the casualty's upper leg so that both the hip and knee are bent at right angle tilt the casualty's head back to maintain an open airway
- maintain close observation of the casualty (airway, breathing, circulation).

Airway Management

It is important to clear an airway in an unconscious casualty to prevent obstruction. An obstruction is often caused by the tongue falling backwards and blocking the airway.

It can also be caused by foreign material (such as food, blood or vomit) obstructing the airway.

Obstruction may occur at any point within the airway, from the upper airways (windpipe and voice box) to the bronchi deep within the chest.

Signs and Symptoms

Recognition of airway obstruction

To determine whether or not the casualty is breathing normally, do the following:

- LOOK for chest/abdominal movement
- LISTEN at the casualty's mouth and nose for breath sounds and abnormal noises
- FEEL at the casualty's mouth and nose for expired air.
- Abnormal sounds in airway obstruction include:
 - snoring – due to obstruction of upper airway by the tongue
 - gurgling – due to obstruction of upper airway by liquids (blood, vomit)
 - wheezing – due to narrowing of the airways deep in the chest
 - a complete airway obstruction makes no noise as no air is moving.

The First Aider must maintain the airway for an unconscious casualty. Airway maintenance takes priority over any other injury or illness.

Treatment

To maintain and clear the airway of foreign material such as vomit or blood, the following

is advised:

- roll the casualty onto his/her side
- carefully extend the head backwards with your hands
- to open airway, lift the chin forward by placing your fingers under bony part of the casualty's chin
- support the jaw and lift forward to open the casualty's mouth
- if the casualty has loose fitting dentures, remove to prevent airway obstruction.

Head Tilt

The Head Tilt Technique is used for a casualty who is placed

on his/her side or managed on his/her back to perform CPR. To perform this technique:

- place one hand on the casualty's forehead

- place fingers of opposite hand under bony part of chin
- lift the chin forward and support the jaw, helping to tilt the head back.

Jaw Thrust

The casualty's airway may be difficult to open. The jaw thrust technique can be applied in these circumstances.

To perform this technique:

- grasp the curve in the casualty's lower jaw with both hands
- lift with both hands – this should displace the jaw forward
- if the lower lip closes, open with thumbs.

Assess Severity (Source: ARC Airway obstruction flow chart (2016).)

AIRWAY (Adult)

A clear airway is essential

to breathe. To check that the person's airway is open and clear, do the following:

- tilt head back gently (placing your hand on the person's forehead)
- support and lift the chin to open airway
- tilt the jaw forward to open the mouth.

If a neck injury is suspected, tilt only enough to open airway.

If the casualty's airway is obstructed:

- turn the casualty onto his/her side
- remove any visible obstruction from the casualty's mouth, such as vomit or broken or dislodged false teeth (but leave well-fitting dentures

in place).

Once the airway is clear:

- check the casualty's breathing.

AIRWAY (Child)

To check that a child's airway is open and clear, do the following:

- support the child's head in horizontal position (the child is on his/her back)
- open mouth
- look inside

- clear the airway of foreign materials
- do not bend the head back

– this will block the airway. Instead, place the child on his/her back and with careful movement slightly tilt back the head.

AIRWAY (Infant)

To check that an infant's airway is open and clear, do the following:

- support head in horizontal position (the infant is on his/her back)
- open mouth
- look inside
- clear the airway of foreign materials
- do not bend the head back

– this will occlude (block) the airway. Instead, place the infant in the neutral position (that is, how the infant would normally lie on his/her back).

Breathing

BREATHING (Adult)

Keep the airway open and check for normal, effective breathing by

using the Look, Listen and Feel method,

as follows:

- LOOK to see if the chest and upper abdomen rises and falls
- LISTEN for the sound of breathing from nose and mouth
- FEEL for the rise of the chest and upper abdomen under your hand and for air against your cheek.

If breathing normally:

- turn the casualty to the Recovery Position (on his/her side)
- call an ambulance 000
- continue to monitor the casualty's condition.

If not breathing normally:

- call an ambulance 000
- start CPR (Refer to page 36 for details of CPR).

BREATHING (Child)

Keep the airway open and check for normal, effective breathing by using the Look, Listen and Feel method, as follows:

- LOOK to see if the chest and upper abdomen rises and falls
- LISTEN for the sound of breathing from nose and mouth
- FEEL for the rise of the chest and upper abdomen under your hand and for air against your cheek.

If breathing normally:

- turn the child to the Recovery Position (on his/her side)
- call an ambulance 000
- continue to monitor the child's condition.

If not breathing normally:

- call an ambulance 000
- start CPR (Refer to page 36 for details of CPR).

BREATHING (Infant)

Keep the airway open and check for normal, effective breathing by using the Look, Listen and Feel method,

as follows:

- **LOOK** to see if the chest and upper abdomen rises and falls
- **LISTEN** for the sound of breathing from nose and mouth

- **FEEL** for the rise of the chest and upper abdomen under your hand and for air against your cheek.

If breathing normally:

- turn the infant to the Recovery Position (on his/her side)
- call an ambulance 000
- continue to monitor the casualty's condition.
- If not breathing normally:
- call an ambulance 000
- start CPR (Refer to page 36 for details of CPR).

Rescue Breathing

When you are performing rescue breathing you are actually breathing oxygen into the casualty's lungs. Your exhaled breath contains 16% oxygen which is close to the 20% contained in the air you breathe in.

Rescue breathing is essential to provide oxygenation of the casualty's brain, which will hopefully prevent brain damage and eventual death.

Mouth-to-Mouth

To perform mouth-to-mouth resuscitation:

- gently tilt head back
- pinch the nostrils closed with thumb and index finger or seal nose with your cheek
- place your mouth tightly over the casualty's mouth
- blow 2 quick breaths and observe for rise and fall of the casualty's chest.

Mouth-to-Nose

If the casualty has suffered an injury to the mouth, or there

is some other reason why mouth-to-mouth resuscitation is impossible, you may need to ventilate through the nose:

- gently tilt head back
- cover the casualty's mouth firmly and close your mouth around the nose, forming a tight seal
- blow 2 breaths gently into casualty's nose
- open the casualty's mouth to allow air to escape as the chest falls. Cover again to blow into the nose, just enough to make the chest rise.

Mouth-to-Mouth-and-Nose

When an infant or small child is unconscious and not breathing normally, rescue breathing can be done through the nose and mouth:

- maintain the infant's head in a neutral position (avoid excessive head tilt) and ensure the airway is clear
- seal your lips around the infant's mouth and nose and breathe until the chest rises
- remove your mouth and, as the chest falls, allow the infant to exhale.

Slow gentle breaths are required for a young child or infant. The preferred technique is to puff breath from the

First Aider's mouth. This will prevent over-inflation of the infant's lungs.

Mouth-to-Stoma

In some instances, a casualty may breathe through an opening in the front of his/her neck called a stoma. This is due to surgery and having part of his/her trachea removed.

To perform mouth to stoma resuscitation:

- place mouth over stoma and tightly seal (there is no need to cover mouth and nose)
- do not tilt head back too far as this may block the airway
- breathe as for mouth- to-mouth
- if the casualty's chest does not rise, you should cover his or her mouth and nose and continue breathing through the stoma.

Mouth-to-Mask

The most desirable form of rescue breathing is by mouth- to-mask. It will help reduce the risk of cross infection and protect the First Aider from exposure to casualty's body fluids. To perform:

- gently tilt head back
- fit mask firmly over casualty's mouth and nose
- deliver rescue breaths via a valve or tube at top of mask
- blow 2 gentle breaths and observe for rise and fall of the casualty's chest.



When to Perform Rescue Breathing

- the casualty is not breathing normally
- the casualty's skin is blue in colour.

How to Perform Rescue Breathing

DANGER

- ensure the safety of yourself and others; check for potential dangers and hazards.

RESPONSE

- place the casualty flat on his/her back on a hard surface
- touch the casualty on the shoulder. Ask in a loud voice, "Are you okay?"
- if no response, call an ambulance 000.

SEND FOR HELP

Call an ambulance 000.

AIRWAY

- open the casualty's airway by tilting his/her head back with one hand while lifting up his/her chin with your other hand. Check that it is clear
- if the airway is obstructed, roll the casualty onto

his/ her side and clear the obstruction.

BREATHING

- check breathing – Look, Listen and Feel for breathing
- if the casualty is not breathing normally, start CPR.

Compressions – Adult, Child, Infant

EXTERNAL CHEST COMPRESSIONS

(Adult)



- place heel of one hand on centre of casualty's chest. With your other hand directly on top of first hand, depress sternum 1/3 depth of the chest
- perform 30 compressions to every 2 breaths (rate: 100 per minute).

EXTERNAL CHEST COMPRESSIONS

(Child)

- place heel of one hand on centre of casualty's chest. With your other hand directly on top of first hand, depress sternum 1/3 depth of the chest
- perform 30 compressions to every 2 breaths (rate: 100 per minute).

EXTERNAL CHEST COMPRESSIONS

(Infant)

- place 2 fingers of one hand on centre of infant's chest
- compress chest 1/3 depth of the chest
- perform 30 compressions to every 2 breaths (rate: 100 per minute).



Defibrillation

An AED (Automated External Defibrillator) is a device that administers an electric shock through the chest wall to the heart:

- if an AED is available apply now.

If you see this sign, this is where a defibrillator is located.



Defibrillation

Automated External Defibrillation (AED)

A Heart Attack can interfere with the heart's rhythm and ability to pump. Instead of the heart beating normally, the rhythm can be chaotic (ventricular fibrillation) or stop the heart altogether. When this happens it is known as a cardiac arrest.



When a person experiences cardiac arrest, CPR will help keep oxygen flowing to the brain, but the electric shock from an AED vastly improves the chances of restarting the heart.

What is an AED?

An AED is a device that administers an electric shock through the chest wall to the heart. The AED assesses the person's heart rhythm. It determines whether defibrillation is required and then administers the necessary level of shock by

the user pressing the appropriate buttons. Audible and/or visual prompts will step the user through the process.

First Aiders can be trained to use an AED. Most AEDs are designed to be used by people without medical backgrounds. AEDs are most effective when appropriate training programs are in place.

The following is the process which is undertaken when using an AED:

- switch on defibrillator
- attach the electrode pads to casualty as directed by diagram on pad
- follow spoken/visual directions
- ensure that nobody touches the person whilst the AED is analysing the rhythm.

If Shock is Indicated

- ensure that everybody is clear of the casualty
- in a loud voice say, "stand clear"
- when directed by AED push shock button
- repeat or "shock" as directed by AED.

Caution

When using an AED remember the following:

- always turn off and remove oxygen that the casualty may be using
- make sure the area is dry around the casualty
- the AED should be used by trained personnel
- maintain safety standards
- never connect the AED to anyone who is conscious
- never use near explosive materials.



Cardiopulmonary Resuscitation

Cardiopulmonary Resuscitation (CPR) consists of external chest compression (ECC) and rescue breathing. CPR allows oxygenated blood to circulate to vital organs such as the brain and heart. CPR can maintain oxygen

to the person's brain until more advanced help arrives.

When to Start CPR

A First Aider should commence CPR when a casualty:

- is not breathing normally.

Hand Positioning for Adults and Children



The First Aider should:

- kneel at the casualty's side
- place heel of one hand on the centre of the chest
- place other hand on top interlock the fingers of both hands
- with elbows straight push down to a depth of 1/3 of chest
- compress at a rate of 100 times per minute
- allow the chest to rise after each compression.

Hand Positioning for Infants

The First Aider should:

- use 2 fingers to perform chest compressions
- find the centre of the chest
- push down approximately 1/3 the depth of the chest
- keep hand and fingers clear of the abdomen
- compress at a rate of 100 times per minute
- allow the chest to rise after each compression.



CPR – Adult, Child, Infant

DANGER

- ensure the safety of yourself and others; check for potential dangers and hazards.

RESPONSE

- place the casualty flat on his/ her back on a hard surface
- touch the casualty and ask in a loud voice, “Are you okay?”

SEND FOR HELP

Call an ambulance 000.

AIRWAY

- open the casualty’s airway by tilting his/her head back with one hand while lifting up his/ her chin with other hand
- check that it is clear
- if the airway is obstructed, roll the casualty onto side and clear.

BREATHING

- check breathing – Look, Listen and Feel for breathing
- if casualty is not breathing normally, start CPR.

CPR

(Adult and Child)

Give 30 chest compressions followed by 2 rescue breaths (100 compressions in a minute).

- stop compressions if casualty commences breathing normally.



CPR

(Infant up to 1 year old)

Give 30 chest compressions followed by 2 rescue breaths (100 compressions in a minute).

- place two fingers in the centre of the chest
- push down 1/3 the depth of the chest

- perform 30 compressions to every 2 breaths
- (rate: 100 times per minute)
- stop compressions if casualty commences breathing normally.



When to Stop CPR

Whether performing 1 or 2 person CPR, you should stop:

- the person responds or begins breathing normally
- it is impossible to continue (e.g. exhaustion)
- a health care professional arrives and takes over CPR
- a health care professional directs that CPR be ceased..

DEFIBRILLATION

An AED (Automated External Defibrillator) is a device that

administers an electric shock through the chest wall to the heart:

- if an AED is available apply now.



Cardiac Arrest

Instead of the heart beating normally, the rhythm can be chaotic (ventricular fibrillation) or the heart can stop altogether. When either of the above happens it is known as a cardiac arrest.

Signs and Symptoms

- the casualty is unconscious

- the casualty has no normal breaths but may appear to gasp on occasions
- the casualty has a short period of jerky body movement.

Treatment

This is an extreme medical emergency. Without immediate help the person will die. The First Aider should proceed as follows:

- DRSABCD
- call an ambulance 000
- commence immediate CPR.



The Chain of Survival

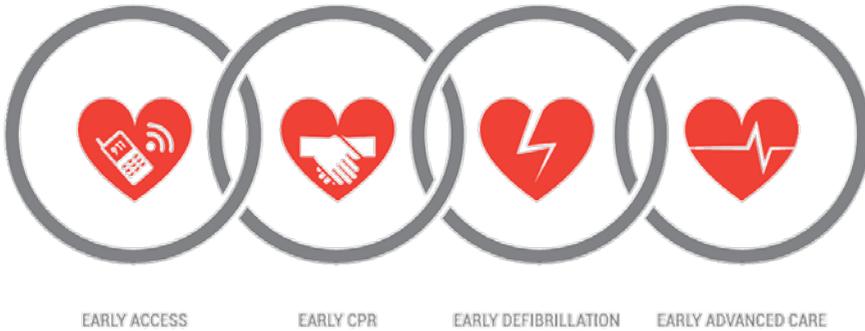
Chain Of Survival is a term used to describe the four- stage approach for a response to an emergency situation such as cardiac arrest. The survival of a casualty from cardiac arrest can

significantly improve when all four links of the Chain of Survival are strong.

2nd Link – Early CPR

Early CPR helps circulate blood that contains oxygen to the vital organs. This buys

time, which can be life-saving.



3rd Link – Early Defibrillation

Most victims of sudden cardiac arrest need an electric shock called defibrillation to restore the heart to a regular rhythm.

4th Link – Early ACLS (Early Advanced Care Life Support)

This is given by trained medical personnel such as Paramedics who provide further care.

The four Links in the Chain of Survival are:

1st Link – Early Access

Call fast (000). Get emergency medical help quickly to the cardiac arrest casualty.

Assessing an Accident Scene

On approaching a scene the first priority is your own safety. Before approaching, make sure the scene is safe for yourself, bystanders and the casualty.

Once the scene is safe you should note the following:

- the number of casualties
- the possibility for assistance from bystanders
- what has actually occurred (e.g., car accident, house fire or heart attack).

Primary assessment

The aim of the primary assessment is to detect serious and immediate life-threatening injuries. The primary assessment is a systematic approach of assessing and treating a casualty. It can be applied to both medical and trauma-related emergencies.

Once you have gained access to the casualty, check to

see if he/she is conscious or unconscious.

Unconscious

If the casualty is unconscious:

- check that the airway is clear (If not, clear the airway)
- check for normal breathing
- check for any haemorrhage. If present, control with direct pressure over wound
- call an ambulance 000.

Conscious

Do not delay urgent treatment in order to gain a detailed history from the casualty. This history can be obtained later or, if possible, have a bystander speak to witnesses or relatives to gain vital information.

Start with open ended questions, such as:

- “Can you describe what happened?”
- “Where is the pain?”

- “Can you take a deep breath?”
- “Can you cough?”

Simple questions will enable the First Aider to gather important information quickly. It will also give a good indication of what the

casualty may be suffering from. The information gained by the First Aider is also very

important once the casualty has been transferred to hospital.

Your history-taking and observations may be crucial in the treatment of the casualty.

Secondary Assessment

A secondary assessment is conducted following the primary assessment. The secondary assessment involves:

- history-gathering, to determine any medical and/or trauma-related problems that a casualty may be suffering
- a systematic head to toe examination of a casualty.

The head-to-toe examination should be systematic and

thorough so that no injuries are missed:

make sure you are able to see the skin when examining the casualty. Take special care when checking the body and limbs:

- ask the casualty if you may look under or remove clothing
- explain to the casualty why this is necessary
- if possible, have another person present
- be careful not to unnecessarily move the casualty while performing the secondary survey as movement may cause further injury.

HEAD

Look at and feel the casualty's head and face. Look for the following:

- abrasions
- bruising
- fluids in the nose or ears
- damage to the eyes.

NECK

Look at and feel the casualty's neck for the following:

- tenderness
- bruising
- deformity
- bleeding.

Check for Medical Alert necklace/bracelet.

SHOULDERS AND CHEST

Look at and feel the casualty's shoulders, collarbone and chest for the following:

- tenderness when touching ribs
- bruising
- swelling
- check for unequal rise and fall of chest during respirations.

ABDOMEN AND PELVIS

Look at and feel the casualty's abdomen and pelvis for the following:

- tenderness
- bruising
- swelling
- rigidity
- wounds
- press on both of the protruding bones in the pelvis and note if there is any pain or deformity.

ARMS AND LEGS

Look at and feel the casualty's arms and legs for the following:

- bruising
- deformity
- haemorrhage
- pain and tenderness
- sensation in all limbs
- check the pulse in both wrists

- check the pulse at the top of each foot
- check for full range of movement.

Check for Medical Alert bracelet/necklace

BACK AND SPINE

Look at and feel the casualty's back and spine for the following:

- bruising
- deformity
- haemorrhage
- pain and tenderness.

To perform an examination of the back and spine, slide your hand carefully under the casualty.

Reassuring the Casualty

Reassurance is a very important aspect of First Aid treatment. The First Aider should:

- comfort and reassure the casualty
- keep him/her informed of what is happening
- this constant reassurance is of great psychological value
- remember that others involved in the emergency (e.g., workmates, relatives,

- bystanders) may also need reassurance
- after the incident has ended, take time to gather everyone together
 - praise everybody's efforts and let them know how important their contribution was.

Emotional Responses

An emergency can cause unusual stress in those who have been involved or affected by it, including First Aiders.

Emotional responses can appear immediately or months/ years later. They are normal and expected. Every person reacts differently. Some common responses include:

- crying for no apparent reason
- difficulty sleeping
- inability to think clearly or to make decisions
- feeling of disbelief, shock, anger
- constant apathy, tiredness
- feeling emotionally drained
- excessive drinking and/or drug use
- lack of appetite or extreme hunger
- anxiety, feelings of powerlessness
- fear, sadness, depression
- flashbacks

- headaches, stomach problems, feeling sick.

Understanding what you are feeling and taking positive steps can help you to cope. If the feelings persist, seek professional help.

Bleeding and Shock

The average adult body contains between five and seven litres of blood, which circulates around the body in order to keep the organs supplied with oxygen.

Blood is composed of:

- red blood cells, which carry oxygen and waste products
- white blood cells, which fight infection
- platelets, which assist in the clotting process
- plasma, the liquid which supports all these cells.

Blood moves around the body under pressure through the heart and blood vessels. If either the blood volume or pressure is inadequate the body's functions soon begin to fail.

Bleeding or haemorrhage causes both the volume and the pressure to decrease through loss of blood

through the system, and therefore poses a great threat to survival. It is one of the most common causes of death in accidents.

There are two types of bleeding: external and internal.

External Bleeding

Some indicators of external bleeding include:

- it is obvious and apparent
- it is caused by cutting, perforating or tearing of the skin
- serious wounds involve damage to blood vessels
- the severity depends on the type of wound and which blood vessels are damaged.

Arteries

Arteries carry blood rich with oxygen away from the heart. The blood can spurt with each heart beat and is bright red in colour.

Veins

Blood from veins is dark red and flows from the wound.

Capillaries

Blood from capillaries is dark red in colour and oozes from the wound which is usually close to the skin.

Types of Wounds

Types of wounds which

can cause external bleeding include:

- graze – abrasion of skin
- incision – a wound made by slicing (e.g., sharp knife/ piece of metal) which can bleed extensively
- laceration – deep wound with tissue loss
- amputation – severed body part (e.g., a limb)
- puncture/embedded object (e.g., bullet/knife wound).

Management of External Bleeding

When treating life-threatening bleeding, the First Aider should do the following:

- DRSABCD
- call an ambulance 000

- as soon as possible
- expose the wound and check for visible embedded object (do not remove the embedded object).

No Embedded Object

- apply direct pressure with sterile or clean pad
- lie the casualty down
- elevate and support the injured part (if possible, above the level of the heart)
- apply firm bandage to hold pad in place
- If bleeding does not stop, remove bandage and apply firm pressure to the wound
- treat for shock if required (Refer to page 53)
- check circulation regularly.



Embedded Object/Puncture Wound:

- DRSABCD

- call an ambulance 000
- check wound but do not remove any embedded object
- apply indirect pressure around the wound
- stabilise with ring pad and non-stick dressing
- apply a firm bandage
- elevate the injured limb and immobilise.



Treatment Abrasions/Grazes:

- DRSABCD
- check wound

- swab with antiseptic solution or sterile water
- apply non-stick dressing.

- freezing will kill tissue so do not allow the body part to directly contact ice.

Incisions/Lacerations:

- DRSABCD
- call an ambulance 000
- check wound for foreign matters
- apply pressure – bring sides of wound together
- apply a non-stick dressing and bandage
- immobilise and elevate.

Amputation:

- DRSABCD
- call an ambulance 000
- apply direct pressure to reduce the bleeding
- apply large pad or dressing to wound
- treat for shock (Refer to page



Nose Bleed



Treatment

Treat a nose bleed in the following way:

- have the casualty lean slightly forward and pinch the fleshy part of the nose just below the bone
- maintain this position for at least 10 minutes.

Warm weather or exercise may mean that up to 20 minutes or

more may be required to cease the bleeding.

However:

- if bleeding persists, obtain medical assistance
- advise the casualty not to blow or pick nose for several hours.

Internal Bleeding

Internal bleeding is often difficult to detect, as there may be no direct evidence of the bleeding. A thorough history of the incident or illness is vital to give the First Aider the necessary clue as to whether internal bleeding is a possibility

Some visible indicators of internal bleeding include:

- obvious blood loss
- signs of shock (pale, cool, clammy skin).

Treatment and Care

- DRSABCD
- call an ambulance 000
- rest and reassurance
- if the casualty is conscious, position him/her supine (face up) with legs raised

- if the casualty is unconscious, place him/her in recovery position
- give nothing by mouth.

Shock

Shock is a life-threatening condition. It occurs when the body's blood circulation is inadequate to meet the oxygen demands of the major organs of the body.

Shock is a deteriorating condition which requires active treatment, as the casualty may rapidly progress to a state of total body shutdown. A delay of even a few minutes may lead to death, so prompt care is vital.

Common Causes of Shock

- loss of blood
- loss of body fluids
- heart attack
- anaphylaxis
- sepsis (severe infection).

	Normal	Signs of Shock
Skin	Pink, Warm and Dry	Pale, Cold and Clammy
Conscious Level	Alert and Orientated	Confused, drowsy, aggressive

Treatment and Care

Normal Signs of Shock

Skin

Pink, Warm and Dry Pale, Cold and Clammy

Conscious Level

Alert and Orientated Confused, drowsy, aggressive

Signs and Symptoms

A casualty suffering from shock may display the following symptoms:

- pale, cool, clammy skin
- rapid, shallow breathing
- rapid, weak pulse
- casualty is irritable or confused
- nausea/vomiting
- casualty is collapsed/ unconscious.

- DRSABCD
- call an ambulance 000
- control any bleeding
- rest and reassurance
- maintain the casualty's body temperature by covering with a blanket
- if the casualty is conscious, position him/her supine (face up) with legs elevated
- if the casualty is unconscious, place him/her in recovery position.



Burns

Burns can be a minor problem or a life-threatening emergency.

Distinguishing

a minor burn from a more serious burn may be difficult and involves determining the degree of damage to the casualty's skin and tissues.



Causes

The causes of burns are various and can include the following:

- fire
- sun
- chemicals
- heated objects
- fluids
- electricity.

Signs and Symptoms

Superficial (first-degree) burns:

- only the outer layer of the casualty's skin is affected
- the skin is usually red

- severe pain and swelling may occur.

Partial thickness (second-degree) burns:

- the first and second layers of the casualty's skin are affected
- the skin is red and blistered
- severe pain and swelling may occur.

Full thickness (third-degree) burns:

- all layers of the casualty's skin are affected
- there is charring or whitening of the skin
- due to nerve damage, the casualty may feel no pain at all.

Treatment

When treating a burn the First Aider should do the following:

- DRSABCD
- call an ambulance 000
- if the casualty's skin is not broken, run cool water over the burn for 20 minutes. Do not use ice
- cover the burn with a sterile bandage or non-stick clean cloth

- plastic wrap is a commonly used dressing for burns
- do not apply lotions, creams or powder
- remove clothing that has not adhered to casualty's skin
- remove any constrictive clothing and jewellery
- do not break blisters
- flush skin of any chemicals that may cause burning.

Note: if a chemical gets into the casualty's eyes, flush them with water immediately. Continue to flush the eyes with running water for at least 20 to 30 minutes.

Airway Burns

This can be due to smoke and heat from a fire, which can cause swelling. This swelling can lead to a life-threatening condition due to airway obstruction.

Signs and Symptoms

A casualty suffering from an airway burn may display the following symptoms:

- facial hair loss
- soot around nose and mouth
- coughing, hoarse voice/ casualty unable to talk
- difficulty breathing.

Serious burns that need immediate emergency attention include those which affect the airways and cause breathing difficulty.

Treatment

- DRSABCD
- call an Ambulance 000.

Head Injuries

The main concern with a head injury is that there may be bleeding or swelling inside the skull. This can occur even if the skull does not appear damaged. Blood and/or swelling that collects within the skull may eventually put pressure on the brain and cause serious brain damage.



Head injuries may be classified as:

1. Open Head Injury – head injury accompanied by an open head wound.
2. Closed Head Injury – there is no obvious sign of injury present.

Signs and Symptoms

- unconsciousness
- pain at the site of injury
- deformity of the skull
- blood or straw-coloured fluid draining from the ears or nose
- change in the level of consciousness (the person gets progressively sleepier)
- agitation and combativeness
- nausea and vomiting
- bruising around the eyes and ears after the injury
- poor memory.

Treatment

- DRSABCD
- call an ambulance 000
- treat and control haemorrhage
- cover wound with dressing
- rest the casualty and watch closely
- if the casualty has an altered level of consciousness and you are concerned about airway obstruction, place in the recovery position making sure

the head and neck are kept in alignment

- cover ear with sterile pad.

If you suspect a head injury in a person, or he/she has been knocked unconscious, seek medical advice immediately.



E

Occasionally foreign bodies or insects lodge in the ear canal. This may lead to an ear infection or a far more serious injury such as a ruptured ear drum.



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- than the non-affected side
- redness visible in the ear canal
- the First Aider can see a possible foreign body in the casualty's ear
- smell or discharge from ear.

Treatment Object in Ear

- calm and reassure the casualty
- if the object is sticking out gently remove it by hand or with a pair of tweezers
- if you think a small object may be lodged within the ear but you cannot see it, do not reach into the ear canal with tweezers. You may do more harm than good
- try using gravity to remove object
- tilt head to affected side
- shake it gently towards the direction of the ground to hopefully dislodge the object
- if the object does not come out, seek medical help.

If the casualty has a ruptured ear drum he/she will experience severe pain. The First Aider should:

- place sterile pad over ear
- if casualty has drainage from ear then lie the casualty with the affected ear down to allow drainage to occur
- seek medical help.

Eye Injuries

An eye injury can be serious and difficult to manage. It may lead to permanent damage.

Seek medical help if concerned.

Signs and Symptoms

- squinting and/or spasm of the eyelids
- rubbing of the eye
- discharge, watery eye
- redness of the eye.

Insect in Ear

- do not let the casualty place finger in the ear as may cause the insect to go further in
- turn the casualty's head so the affected side is facing up
- the insect may then crawl to the top of the ear
- pouring a small amount of olive oil or baby oil into the ear may



- if the foreign body cannot be removed, pad the eye and seek medical assistance.

Treatment Chemical Injuries

- call an ambulance 000
- flush the eye for at least 20 minutes, including under the eyelids. It may be necessary to hold the eyelids apart
- lightly pad the injured eye.

Embedded Objects

- call an ambulance 000
- do not attempt to remove the object
- reassure the casualty
- assist the casualty to rest in the most comfortable position.



Foreign Bodies

- flush the eye with disposable eyewash or clean running water for a short period of time
- if flushing does not remove the object it may be possible to remove it from the eye with a well-moistened surgical spear on an applicator stick

Chemical Burn to Eye

- call an ambulance 000
- flush with cold water for 20 minutes
- lightly pad the affected eye.

Tooth Injuries

A permanent tooth can often be saved if prompt action is taken and the tooth is handled carefully. A permanent tooth has the best chance of survival if replaced within 30 minutes.

Treatment

If a casualty loses a tooth the First Aider should do the following:

- hold the tooth by the crown (the top) not the root
- rinse the tooth immediately
- do not scrub the tooth
- the best place to preserve the tooth is back in the socket
- replace it gently then have the casualty bite down on a gauze pad to keep it in place
- if replacing the tooth is not possible, place the tooth in milk
- see a dentist immediately.

Spinal Injuries

The spinal cord, along with the brain, makes up the central nervous system. It is vital to be very cautious when handling a casualty you suspect has a spinal

injury in order to avoid cord damage.

The spine is made up of the vertebrae, the spinal cord, the intervertebral discs and the tendons, muscles and ligaments that hold all of this together.

When the spine is injured, vertebrae may fracture or a disc may rupture and the spinal cord can be severely damaged.

Sometimes, however, the cord is uninjured. Therefore, how you manage the casualty is very important.



Signs and Symptoms

- history of trauma (e.g., diving, fall)
- unnatural positioning of the body
- complaint of tingling in fingers

- no feeling in limbs
- unable to move arms and or legs.

Treatment

- DRSABCD
- call an ambulance 000
- perform examination of the casualty with extreme caution
- restrict any movement of the casualty to a minimum to avoid further injury
- treat haemorrhage or any
- other life-threatening injury
- treat the casualty for shock
- maintain the casualty's head in alignment with his/her shoulders
- if the casualty requires to be placed in the recovery position, obtain help and do so with the Log Roll Technique as pictured.

Helmet Removal

Leaving the helmet in place keeps the neck from bending back too far. Helmets also fit snugly and cradle the head, minimising head and neck motion.

Thus, if an injured casualty is breathing and does not require airway management, the helmet should be left on to help support the head and neck.

However, if a casualty requires airway intervention, immediately remove the helmet.

In most situations, the First Aider should not remove the helmet unless they cannot establish an airway which allows for effective breathing or unless the helmet is not adequately stabilising the casualty's head.

Chest Injuries

Injuries to the chest can range from mild (with minimal

discomfort) to life-threatening. Major injuries to the chest may lead to collapse of breathing or circulation due to damage to the heart or lungs. The First Aider must be aware for the signs of shock.

A chest injury may involve the ribs and/or lungs.

Signs and Symptoms

- pale, cool, clammy skin
- rapid weak pulse
- rapid shallow breathing
- increased pain
- pain on touching affected area

- guarding of the affected area
- bruising, swelling.

Treatment

- DRSABCD
- call an ambulance 000
- watch closely for breathing difficulties
- give oxygen if available.

Penetrating Chest Wound

A penetrating chest wound can be rapidly life-threatening.

A First Aider should suspect a penetrating chest wound if:

- there is a wound on the chest and the casualty is in respiratory distress
- there is a stick or other foreign object protruding from the chest area.

- pale, cool, clammy skin
- rapid weak pulse
- rapid shallow breathing
- pain at site of injury
- visible open chest wound
- visible object still in place.

Treatment

- DRSABCD
- call an ambulance 000
- if foreign object still in place, support object with padding around wound and tape in position
- if the chest wound is open, apply a non-adherent dressing to site. Tape on
- 3 sides only to allow for air or fluid to escape
- place casualty in a position of comfort
- watch closely for breathing difficulties.



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Abdominal Injuries

Signs and Symptoms

Injuries to the abdomen can damage the internal organs such

as the liver, spleen, kidneys or intestinal tract. The majority of abdominal injuries are caused by blunt trauma through motor vehicle accidents. Penetrating trauma is caused by such events as stab wounds or gunshot. Bleeding can be profus and life-threatening.

The First Aider must be aware for the signs of shock.

Signs and Symptoms

- pale, cool, clammy skin
- rapid weak pulse
- rapid shallow breathing
- pain on touching abdominal area
- guarding of the abdomen
- rigid abdominal area
- vomiting of blood
- bruising, swelling.

Treatment

- DRSABCD
- call an ambulance 000
- give nothing to drink or eat

- if the object is embedded, do not remove but stabilise by applying padding
- if possible, and if the casualty is conscious, carefully place the casualty onto his/her back
- raise the casualty's legs to help with shock process

If abdominal contents are on view this is known as evisceration.

If you suspect evisceration:

- do not attempt to place abdominal contents back into abdominal cavity
- apply a non-stick dressing (or, if unavailable, a moist pad or plastic wrap) over the casualty's organs
- the non-stick dressing may then be covered by a loose bandage.

Crush Injuries

A crush injury is caused by a substantial weight on top of a casualty. This may lead to a life-threatening situation.

Signs and Symptoms

A casualty suffering a crush injury may display the following range of signs and symptoms:

- large area of the casualty's body is involved
- no detectable pulse in limb below crush injury
- pale, cool, clammy skin
- rapid, weak pulse.

Treatment

For the treatment of a crush injury do the following:

- DRSABCD
- call an ambulance 000
- reassure the casualty
- all crushing forces should be removed as soon as possible
- treat any other injuries
 - keep the casualty warm.

Fractures

A fracture is any break in the continuity of a bone. Fractures can cause total disability or in some cases death due to the severing of vital organs and/ or arteries. First Aid includes immobilising the fractured part in addition to applying lifesaving measures when necessary. The basic splinting principle is to immobilise the joints above and below the fracture.

Fracture Classification:

- A closed fracture is a broken bone that does not break the overlying skin. The tissue beneath the skin may be damaged.
- An open fracture is a broken bone that breaks (pierces) the overlying skin. The broken bone may come through the skin.
- A complicated fracture involves damage to internal organs or blood vessels that are located in the vicinity of the fracture.



Signs and Symptoms

- deformity

- tenderness
- swelling
- pain
- inability to move the injured part
- haemorrhage
- bruising of skin at the injury site
- crepitus (a grating noise made when the ends of fractured bones rub together).

Treatment

Fractures often occur along with other injuries. Assess which injury takes priority. For example, heavy bleeding is more urgent

- and requires higher priority care
- than a fracture.

Purposes of Immobilising Fractures

Immobilise the fracture area on both sides of the fracture site (above and below) by using splints wherever available. A fracture

is immobilised to prevent the sharp edges of the bone from moving and cutting tissue, muscle, blood vessels, and nerves. This reduces pain and helps prevent or control shock.

In a closed fracture, immobilisation keeps bone fragments from causing an open wound, which can become contaminated and lead to a risk of infection.



Fracture Management (forearm, upper arm, leg)

- DRSABCD
- call an ambulance 000
- reassure the casualty
- check for a pulse at the base of limb
- if pulse not present, you may need to apply gentle traction to assist with return of circulation
- treat any wounds
- apply an appropriate splint.

Fractured Pelvis

- DRSABCD

- call an ambulance 000
- reassure the casualty
- bend casualty's legs at knees, gently bring them together and support with bandages
- place folded blanket either side of the casualty's hips for support.

Fractured Jaw

- DRSABCD
- call an ambulance 000
- reassure the casualty
- support jaw with pad
- lean the casualty forward to help with drainage of fluid from mouth
- if the casualty is unconscious, place in the recovery position.

Splints

Splints may be improvised from such items as boards, poles, sticks, newspaper, or cardboard.

Slings

A sling is a bandage suspended from the neck to support an upper extremity. The triangular bandage is ideal for this purpose. The casualty's hand should be higher than his/her elbow, and the fingers should be showing at all times. The sling should be applied

so that the sling is tied on the unaffected side.

Triangular Bandage Sling

To apply this type of sling:

- insert the triangular bandage under the injured arm so the arm is in the centre, the apex of the sling is beyond the elbow, and the top corner of the material is over the shoulder of the injured side
- position the forearm with the hand slightly raised
- bring the lower portion of the triangular bandage over the injured arm and over the shoulder of the uninjured side
- tie the two corners in a non-slip knot on the side of the neck on the uninjured side
- twist the apex of the sling and tuck it in at the elbow.



Collar and Cuff

This sling can be used for a fractured upper arm:

- the elbow on the injured side must hang naturally at the side of the casualty
- the hand on the injured side must be extended towards the shoulder on the non- injured side
- the triangular bandage is used as a clove hitch: form two loops, one towards you, one away from you
- place the loops together by folding both towards each other
- gently place the clove hitch over the hand and pull firmly to secure on the casualty's wrist
- place ends of bandage on either side of neck
- tie off on the unaffected side
- the casualty's arm should hang comfortably
- if further support is required, place another triangular bandage around the upper arm and body to maintain support of arm against body of casualty
- this will help restrict movement.



Soft Tissue Injuries

Muscles, tendons and ligaments all surround bones and joints and are known as soft tissues. Tendons attach muscle to the bone and cross over at the joint. Ligaments join bone to bone at the joint. Dislocation can also be included in soft tissue injuries.



- bruising and swelling at or near the injury
- difficulty or reluctance in moving the affected part
- pain and tenderness at or near the injury.

Treatment

The treatment for soft tissue injury is R.I.C.E:

REST to reduce the pain

ICE or cold compress to affected area

Causes

Many soft tissue injuries are related to sporting accidents and may be caused by the following:

- overstretching of a ligament at the joint, causing a sprain
- partial tearing of a muscle or tendon, causing a strain
- complete tearing of a muscle or tendon, causing a rupture
- deep bruising, causing a large amount of bleeding into the muscle.



Signs and Symptoms

COMPRESSION compression bandage for support



Rest: ensure that the casualty is in a comfortable position. This will also include resting and carefully steadying and supporting the injured body part.

Ice: cool the area with a cold compress (e.g. an ice pack wrapped in a cloth). Cool for 10 minutes every 2 hours.

This treatment should be continued for up to 24 hours after the injury.

Compression: apply a compression bandage to the affected area. This will provide gentle and even support to the injury.

ELEVATE the injury to reduce swelling.



Elevation: gently raise and support the injury in order to reduce bleeding and therefore reduce swelling and pain.

If pain is severe or the casualty cannot use the injured part, further medical assessment can determine if a fracture is present

Syncope (Fainting)

Syncope (fainting) is defined as sudden loss of consciousness due to a decline in blood flow to the brain. Syncope usually lasts for less than one minute and the person makes a full recovery.



Signs and Symptoms

Signs of syncope can include the following:

- the person may complain of feeling light-headed and/or nausea
- the person's heart rate slows
- the person's skin is clammy and pale in colour.

Causes

Syncope may be caused by lack of blood supply to the brain due to the following:

sudden stress

- severe pain
- prolonged standing
- quickly standing upright, especially after bed rest.

Treatment

- assist the person to lie down flat
- elevate the person's legs by placing on a chair
- encourage the person to take deep breaths.
- If the person remains unconscious:
- DRSABCD
- call an ambulance 000.

If a person complains of feeling faint, then assist him/her to sit or lie down immediately to prevent syncope.

Anaphylaxis

WHAT IS ALLERGY?

Allergy is an abnormal immune response. In an allergic reaction the individual's immune system responds to a harmless substance as though it may cause harm.

An allergic reaction can affect different body systems:

- respiratory system - breathing, airways, throat, nasal passage;
- skin - hives, rash, swelling;
- gut - vomiting, stomach cramps, diarrhea;
- heart and circulation — fall in blood pressure resulting in collapse/unconsciousness;

What is anaphylaxis?

Anaphylaxis is a life-threatening allergic reaction requiring immediate medical attention, so always call 000.

Anaphylaxis is usually triggered by food, insect stings or medicines.

People with allergies fall into two categories: those with mild to moderate reactions and those who suffer severe (anaphylactic)

reactions. Mild to moderate reactions are quite common. Anaphylactic reactions can occur due to an individual's hypersensitivity to certain allergens.



Allergens

An allergen is any substance (often a protein) that induces an allergic reaction. Airborne allergens like pollen and animal dander may trigger a mild allergic reaction such as sneezing, runny nose and itchy eyes. For those with a history of anaphylaxis, the allergen is most likely to be something in food, an insect sting, a medication or a latex product.

There are four ways an allergen can enter the body. It may be ingested, inhaled, injected or absorbed through the skin. People who suffer from anaphylaxis should always remain vigilant in avoiding their known allergens. Avoidance is much better than treatment.

Food Allergens

For those with food allergy, it is the food proteins that trigger the allergic reactions. An individual may be allergic to one specific protein in just one food or to multiple food proteins. Specialist medical advice should be obtained, as each individual's allergy is specific to them.



In Australia, the foods most likely to trigger an allergic reaction are:

- peanuts and tree nuts
- cow's milk
- egg
- fish and seafood
- wheat, soy and sesame

Most food allergies disappear as children grow to adulthood, but peanut, tree nut, fish and seafood allergies are usually life-long.

Note that tree nuts include almonds, brazil nuts, cashews, hazelnuts, hickory nuts, Indian nuts, macadamia nuts, non-gai

nuts, pecans, pine nuts, pistachios and walnuts.



Milk can come in many forms including butter, ghee, ice cream, yoghurt, milk powder, whey, cheese, casein and caseinate. Beware also that some margarines contain milk products.

Food additives can also cause allergic reactions, most notably sulphites, which are used as preservatives.

To avoid foods likely to cause an allergic reaction:

- Keep food preparation areas clean to avoid cross-contamination.
- Beware of hidden ingredients; don't just rely on what the labels say. Although there may be warnings, it is safer to

check with the manufacturer or simply avoid the product if unsure.

- Avoid self-service or buffet-style eating places, as cross-contamination can easily occur.
- Check when booking a restaurant that they can provide a meal without the problem food(s).
- When in a restaurant, alert the staff to any food allergies. Note that menu items will not necessarily describe every ingredient. Ideally, speak directly to the chef about the meal you have ordered.
- Those with a known allergy to tree nuts should also avoid foods such as pesto, marzipan and pralines.
- For allergies to milk, be aware of the great variety of milk products and the large number of processed foods that contain milk in one form or another.
- Note that egg may be found in many products including battered food, cakes and biscuits, confectionary, icings, binding in rissoles and meatloaf, and many more items.

Detailed dietary avoidance sheets are available from the Australasian Society of Clinical Immunology and Allergy (ASCI).

Visit allergy.org.au for more information.

Stings and Bites

In Australia the honey bee is one of the most common cause of anaphylaxis. Different insects have different types of venom, so being allergic to bees doesn't necessarily mean that other biting and stinging insects will cause a reaction. Remember that each individual's allergy is specific to them, so we can't make any certain predictions.



Other insects known to cause anaphylaxis are Paper Wasps, European Wasps and Jack Jumper Ants.



Bites are less likely to cause anaphylaxis than stings. Severe allergic reactions to mosquitoes or march flies are very rare. Common bull ants can cause anaphylaxis. Tick bite is another possible cause.

- Complementary and alternative medicines (CAM)
- Aspirin and non-steroidal anti-inflammatory drugs (NSAIDs)
- Anaesthetic agents
- Antibiotics - penicillins and sulfonamides

To reduce the risk of bites and stings:

- Avoid any obvious areas where stinging and biting insects can be seen or maybe suspected.
- Use non-allergenic insect repellents.
- When outdoors, keep foods covered, including cans of soft drinks.
- Ensure outdoor eating, barbeque and garbage areas are regularly cleaned.
- Avoid rubbish bin areas.
- When mowing lawns and working or walking in gardens, avoid disturbing insect nests.
- Wear suitable protective clothing, including footwear.
- Avoid perfume, sprays and lotions that attract insects.

Medications

- Medicines that are known to cause allergic reaction may be divided into:



Asteraceae flowering plants are the basis for many herbal medicines. Pollens from some of these -ragweed, mugwort, sagebrush, wormwood, feverfew - are significant causes of allergic rhinitis (hay fever) and asthma. Echinacea is a popular herbal remedy that is known to have caused anaphylaxis.

Allergic reactions to aspirin range from mild to severe (anaphylaxis). Note that aspirin is included in a number of medicines including cold and flu tablets and antacids.

Even though most individuals with aspirin or NSAID sensitivity are only sensitive to the one drug, up to 20% may also have unpredictable allergy to similar medicines.

The most reported medication allergy is penicillin, though research suggests the real incidence is significantly less than the number of people who believe they have this allergy. Anaphylactic reactions occur in a small number of cases. Reactions to sulfonamide antibiotics also range from mild-moderate to anaphylaxis. Sulfonamides include Bactrim, Pyralin, Resprim, Salazopyrin, Septrin, Sulfacetamide (antibiotic eye drops), Sulfadiazine (tablets, injection or cream) and Sulfadovine (for malaria).

Latex

It is estimated that somewhere between one and six per cent of the population are allergic to the proteins found in latex or to the chemicals used in manufacturing latex products. It is a problem most

often encountered among health care workers, where this figure

can be as high as one in ten-affected. Symptoms range from dermatitis or itchy skin through to anaphylaxis.



Approximately half those with latex allergy will also have a reaction to fruits containing some of the same proteins found in latex. These include avocado, banana, chestnut, kiwifruit, passionfruit, plum, strawberry and tomato.

As stated earlier, avoidance of the known allergen is always preferable to treatment. People with latex allergy should select synthetic, non-latex alternatives. Products that use latex include rubber bands, balloons, infant pacifiers (dummies), soles of shoes, condoms, gloves, catheters and stethoscopes. Note also that food handlers and hairdressers may be wearing latex gloves.

Mild to Moderate Allergic Reaction

The onset of a mild to moderate allergic reaction may be recognised by:

- itching
- swelling of the lips, face and eyes
- tingling mouth
- hives or welts (rash)
- abdominal pain, vomiting (these indicate a severe allergic reaction to insect bites and stings)

Anaphylaxis

(severe allergic reaction)

Anaphylaxis is characterised by rapid onset. The patient's allergic reaction can quickly progress from mild symptoms to potentially life-threatening symptoms affecting breathing, heart and blood pressure. It may be recognised by any ONE of the following:

- pale and floppy appearance (babies/toddlers)
- swelling of the tongue
- swelling or tightness in the throat
- difficulty talking or hoarse voice

- difficulty breathing, shortness of breath
- wheeze and/or a persistent cough
- loss of consciousness, collapse

ADRENALINE

Adrenaline is used when you have evidence of anaphylaxis, such as inability to breathe or a drop in blood pressure. The risks of not giving adrenaline far outweigh any potential side effects of the medication.

Common side effects from adrenaline are increased heart rate, an increase in blood pressure, thumping of the heart, shaking, nervousness or a transient headache.

Adrenaline is best stored at room temperature, below 25°C and should not be refrigerated. Check it is clear and not brown and cloudy. Check expiry. The shelf life is usually 1 to

2 years from the date of supply. Regularly check the expiry date.

The adrenaline is most rapidly absorbed when injected into the outer muscle of the mid-thigh. Injecting there makes it extremely unlikely that damage to any

nerves or tendons will occur, or that it will be inadvertently injected into an artery or vein. It is also the least painful part of the body to give an injection! It can be injected through thin clothing, but be careful of seams.

The adrenaline auto-injector device was originally developed for military use to administer antidotes to poison gas attacks. Each auto-injector has only one dose of adrenaline. It is designed to be used as a First Aid device by people without formal medical or nursing training.

Adrenaline auto-injectors come in two dosages — 0.3mg and 0.15mg. The 0.3mg dose is for adults and older children over 20kg. The 0.15mg dose auto-injector is generally prescribed for children aged 1 to 5 years or below 20kg.

First aid management of anaphylaxis

If the patient has an ASCIA Action Plan for Anaphylaxis, always follow the plan.

Otherwise:

If Conscious

- Use the DRS ABCD approach to the incident: quickly deal with any dangers to self, casualty and others first. Note that dangers may include the source of the allergic response. (Bees, latex ...)
- Lay the patient flat. If they have difficulty breathing let them sit. Do NOT allow the patient to stand or walk around.
- Promptly send for help to Locate the patient's adrenaline auto-injector and call 000.
- Administer their adrenaline auto-injector, following manufacturer's instructions.
- Record the time the adrenaline was administered.
- Check that an ambulance has been called - 000
- Loosen any tight clothing around neck, chest and waist, remove any watches, rings or bracelets in case of swelling.
- Monitor and care for Airway, Breathing and Circulation as per the Basic Life Support Flow Chart (page 7).
- Re-administer using a new adrenalin auto-injector if the patient's condition does not improve after 5 minutes.
- If an infant or child, ensure that the parents or guardians are

notified ASAP after 000 and administration of medication.

- For adults, notify the emergency contact noted in their workplace HR records.



1. Remove EpiPen® from its canister
2. Grasp the EpiPen® with the blue end facing upwards and remove the blue safety release (this 'arms the unit' ready for use)
3. Holding the EpiPen® in your fist with clenched fingers wrapped around it, press the orange end gently against the outer mid-thigh;
4. Push harder until a loud 'click' is heard. This means that the device has been activated. NOTE: The EpiPen® 'pop' is often quite loud.
5. Hold in place for about 10 seconds while the adrenaline is injected under pressure.
6. Remove the pen from the thigh. The EpiPen® will shield the needle.
7. Massage in the adrenaline for about 10 seconds. There may be some slight bleeding at the injection site. Apply firm pressure with a cloth, tissue, clean handkerchief or bandage.
8. Send for help.
9. Record the time that the EpiPen® was given
10. The used EpiPen® should be handed over to paramedics.

the Basic Life Support Flow Chart

WARNINGS

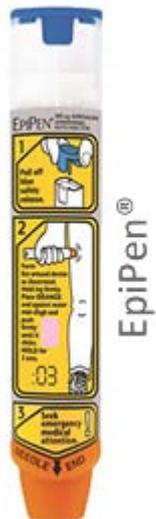
Child Care Centres should have spare EpiPens that can be used if the first has not worked or for someone who is experiencing their first Anaphylactic reaction.

HOW TO USE AN EPIPEN®

EpiPen® adrenaline auto-injector (0.3mg)



EpiPen® Jr.
adrenaline auto-
injector (0.15mg) for
children up to 30kg



Example Allergy Action Moderate



ascia
australian society of clinical immunology and allergy
www.allergy.org.au

ACTION PLAN FOR Allergic Reactions



Name: _____

Date of birth: _____

Confirmed allergens:

Family/emergency contact name(s):

Work Ph: _____

Home Ph: _____

Mobile Ph: _____

Plan prepared by medical or nurse practitioner:

I hereby authorise medications specified on this plan to be administered according to the plan

Signed:

Date: _____

Action Plan due for review: _____

Note: This ASCIA Action Plan for Allergic Reactions is for people with mild to moderate allergies, who need to avoid certain allergens

For people with severe allergies (and at risk of anaphylaxis) there are ASCIA Action Plans for Anaphylaxis, which include adrenaline (epinephrine) autoinjector instructions

Instructions are also on the device label

Note: All EpiPen®s should be held in place for 3 seconds regardless of instructions on device label

SIGNS OF MILD TO MODERATE ALLERGIC REACTION

- Swelling of lips, face, eyes
- Hives or welts
- Tingling mouth
- Abdominal pain, vomiting (these are signs of anaphylaxis for insect allergy)

ACTION FOR MILD TO MODERATE ALLERGIC REACTION

- For insect allergy - flick out stinging if visible
- For tick allergy - freeze dry tick and allow to drop off
- Stay with person and call for help
- Give other medications (if prescribed).....
- Phone family/emergency contact

Mild to moderate allergic reactions (such as hives or swelling) may not always occur before anaphylaxis

WATCH FOR ANY ONE OF THE FOLLOWING SIGNS OF ANAPHYLAXIS (SEVERE ALLERGIC REACTION)

- | | |
|---|--|
| <ul style="list-style-type: none"> Difficult/noisy breathing Swelling of tongue Swelling/tightness in throat Wheeze or persistent cough | <ul style="list-style-type: none"> Difficulty talking and/or hoarse voice Persistent dizziness or collapse Pale and floppy (young children) |
|---|--|

ACTION FOR ANAPHYLAXIS

1 Lay person flat - do NOT allow them to stand or walk

- If unconscious, place in recovery position
- If breathing is difficult allow them to sit



2 Give adrenaline (epinephrine) autoinjector if available

3 Phone ambulance - 000 (AU) or 111 (NZ)

4 Phone family/emergency contact

5 Transfer person to hospital for at least 4 hours of observation

If in doubt give adrenaline autoinjector

Commence CPR at any time if person is unresponsive and not breathing normally

ALWAYS give adrenaline autoinjector FIRST if available, and then asthma reliever puffer if someone with known asthma and allergy to food, insects or medication has SUDDEN BREATHING DIFFICULTY (including wheeze, persistent cough or hoarse voice) even if there are no skin symptoms

Asthma reliever medication prescribed: Y N

© ASCIA 2017 This plan was developed as a medical document that can only be completed and signed by the patient's medical or nurse practitioner and cannot be altered without their permission

Example Allergy Action Severe



ascia
australian society of clinical immunology and allergy
www.allergy.org.au

ACTION PLAN FOR

Anaphylaxis

For EpiPen® adrenaline (epinephrine) autoinjectors

Name: _____
Date of birth: _____



Confirmed allergens:

Family/emergency contact name(s):

Work Ph: _____
Home Ph: _____
Mobile Ph: _____
Plan prepared by medical or nurse practitioner: _____

I hereby authorise medications specified on this plan to be administered according to the plan
Signed: _____

Date: _____
Action Plan due for review: _____

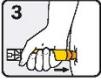
How to give EpiPen®



1 Form fist around EpiPen® and PULL OFF BLUE SAFETY RELEASE



2 Hold leg still and PLACE ORANGE END against outer mid-thigh (with or without clothing)



3 PUSH DOWN HARD until a click is heard or felt and hold in place for 3 seconds
REMOVE EpiPen®

All EpiPen®s should be held in place for 3 seconds regardless of instructions on device label

SIGNS OF MILD TO MODERATE ALLERGIC REACTION

- Swelling of lips, face, eyes
- Hives or welts
- Tingling mouth
- Abdominal pain, vomiting (these are signs of anaphylaxis for insect allergy)

ACTION FOR MILD TO MODERATE ALLERGIC REACTION

- For insect allergy - flick out sting if visible
- For tick allergy - freeze dry tick and allow to drop off
- Stay with person and call for help
- Locate EpiPen® or EpiPen® Jr adrenaline autoinjector
- Give other medications (if prescribed).....
- Phone family/emergency contact

Mild to moderate allergic reactions (such as hives or swelling) may not always occur before anaphylaxis

WATCH FOR ANY ONE OF THE FOLLOWING SIGNS OF ANAPHYLAXIS (SEVERE ALLERGIC REACTION)

<ul style="list-style-type: none"> Difficult/noisy breathing Swelling of tongue Swelling/tightness in throat Wheeze or persistent cough 	<ul style="list-style-type: none"> Difficulty talking and/or hoarse voice Persistent dizziness or collapse Pale and floppy (young children)
---	--

ACTION FOR ANAPHYLAXIS

- 1 Lay person flat - do NOT allow them to stand or walk**
 - If unconscious, place in recovery position
 - If breathing is difficult allow them to sit





- 2 Give EpiPen® or EpiPen® Jr adrenaline autoinjector**
- 3 Phone ambulance - 000 (AU) or 111 (NZ)**
- 4 Phone family/emergency contact**
- 5 Further adrenaline doses may be given if no response after 5 minutes**
- 6 Transfer person to hospital for at least 4 hours of observation**

If in doubt give adrenaline autoinjector

Commence CPR at any time if person is unresponsive and not breathing normally

ALWAYS give adrenaline autoinjector FIRST, and then asthma reliever puffer if someone with known asthma and allergy to food, insects or medication has SUDDEN BREATHING DIFFICULTY (including wheeze, persistent cough or hoarse voice) even if there are no skin symptoms

Asthma reliever medication prescribed: Y N

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Asthma

Asthma is a condition affecting the airways in which there is narrowing and spasms of the small air passages in the lungs. This is further complicated by swelling and excessive mucus.

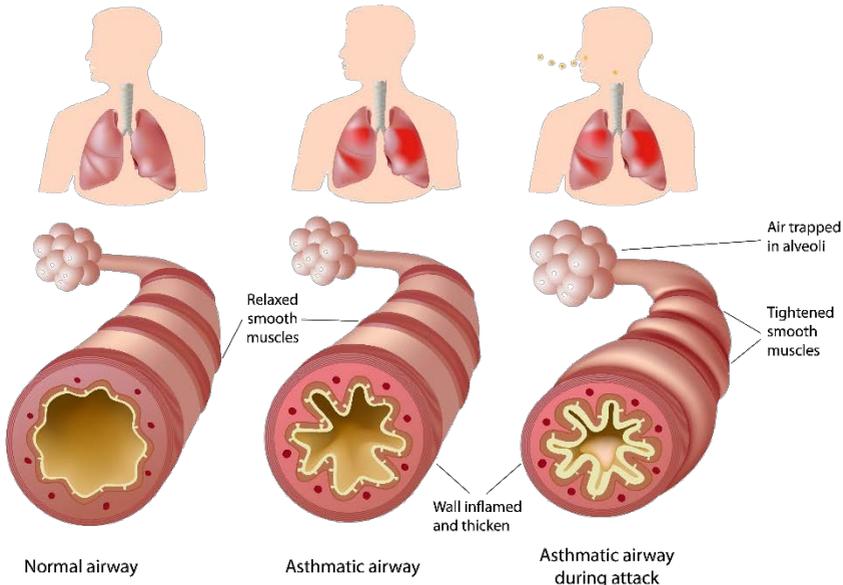
As a consequence, the patient finds it increasingly difficult to breathe, particularly when breathing out.

The onset of an asthma episode can be triggered by such things as changes in the weather, allergies, exercise, smoke, upper respiratory tract infections, or quite often for no apparent reason.

Although there is no cure for asthma, it is treatable. People with asthma can lead normal, active lives if the condition is properly managed.

Note: Severe Asthma is a life-threatening medical condition that needs immediate treatment. Asthma accounts for an average of 8 deaths per week in Australia.

Pathology of Asthma



People with Asthma have extra sensitive airways. The airways react by narrowing when they become irritated. This makes

it difficult for air to move in and out. The narrowing or obstruction is caused by:

- airway inflammation, meaning that the airways in the lungs become swollen and narrow
- bronchoconstriction, meaning that the muscles that encircle the airways tighten or go into spasm.

Signs and Symptoms

Asthma attacks can range from mild to very severe and how a person's symptoms appear will depend on how severe the attack is. An attack can be recognised by some or all of the following:

- wheezing
- coughing
- distress
- difficulty with speaking
- shortness of breath or difficulty breathing
- skin is pale/blue in colour.

Common Asthma Triggers

Common causes of bronchoconstriction can include everyday stimuli such as:

- cold air
- dust
- strong fumes
- exercise
- inhaled irritants
- smoke
- pollen
- animals
- house dust mite.

Treatment

Using an inhaler with a spacer



It is always preferable to use a spacer with the inhaler. This greatly reduces side-effects and the medication is less likely to stay in the throat and mouth and

more medication goes to the lungs.

If the person is conscious and able to respond to verbal commands the following treatment should be initiated:

- reassure the person and remain calm
- help the person to sit upright
- give 4 separate puffs of a blue/grey reliever, one puff at a time
- encourage the person to breathe in 4 times after each puff
- if there is no improvement after 4 minutes, call an ambulance 000
- continue to give 4 separate puffs with 4 breaths in between
- wait 4 minutes between each set of 4
- continue until ambulance arrives
- if available, use a spacer.

If the person is unconscious:

- DRSABCD
- call an ambulance 000
- if the person is in cardiac arrest, start CPR.

A person with severe Asthma is exhausted through the fight to breathe and can appear quite calm. This is often a dangerous stage. Even if medication appears to be effective, medical advice should be sought. Call an ambulance 000.



Asthma First Aid

1 Sit the person upright

- Be calm and reassuring
- Do not leave them alone



2 Give 4 separate puffs of blue/grey reliever puffer

- Shake puffer
- Put 1 puff into spacer
- Take 4 breaths from spacer

Repeat until 4 puffs have been taken

Remember: Shake, 1 puff, 4 breaths

OR give 2 separate doses of a Bricanyl Inhaler (age 6 & over) or a Symbicort Inhaler (over 12)



3 Wait 4 minutes

- If there is no improvement, give 4 more separate puffs of blue/grey reliever as above

OR give 1 more dose of Bricanyl or Symbicort Inhaler



4 If there is still no improvement call emergency assistance - Dial Triple Zero (000)

- Say 'ambulance' and that someone is having an asthma attack
- Keep giving 4 separate puffs every 4 minutes until emergency assistance arrives

OR give 1 dose of a Bricanyl or Symbicort every 4 minutes - up to 3 more doses of Symbicort



Call emergency assistance immediately - Dial Triple Zero (000)

- If the person is not breathing
- If the person's asthma suddenly becomes worse or is not improving
- If the person is having an asthma attack and a reliever is not available
- If you are not sure if it's asthma
- If the person is known to have Anaphylaxis - follow their Anaphylaxis Action Plan, then give Asthma First Aid

Blue/grey reliever medication is unlikely to harm, even if the person does not have asthma



Contact your local Asthma Foundation
1800 ASTHMA Helpline (1800 278 462) asthmaaustralia.org.au

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Translating and
Interpreting Service
131 450

ASTHMA AUSTRALIA 1800 278 462 FROM 01/17 MONITOR 2016

Hyperventilation

Hyperventilation means breathing faster than normal. Both adults and children can find hyperventilation very frightening. Always remember there are many people who hyperventilate – this may be due to a serious illness and must be treated as such.

Signs and Symptoms

A person suffering from hyperventilation may display signs and symptoms as follows:

- rapid breathing/shortness of breath
- rapid heart rate
- anxiety
- visual disturbance
- tingling in fingers
- sometimes loss of consciousness.

The symptoms usually last 20-30 minutes but it may seem like hours to the person. Although frightening, hyperventilation is not usually dangerous.

Causes

Hyperventilation is likely to occur due to the following:

- anxiety
- fear
- emotional stress.

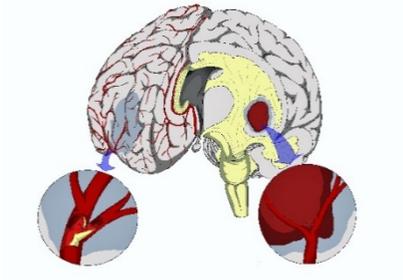
Treatment

The best way to prevent Hyperventilation is to avoid situations and activities that may cause anxiety but if an attack occurs the following treatment should be initiated:

- reassure the person and remain calm
- remove the person from the cause if possible
- encourage the person to slow their breathing
- do not use a bag for the person to breathe into
- if the person shows no improvement call an ambulance 000.

Stroke

Stroke occurs when the arteries that lead to the brain become either blocked or ruptured. When this happens, the brain does not receive the oxygen that is required and so brain cell death occurs.



Signs and Symptoms

A person suffering from a stroke may show signs and symptoms as follows:

- total or partial weakness on one side of the body
- inability to talk
- inability to understand or remember certain things
- trouble swallowing
- pain
- numbness
- problems with sight.

Causes

The two most common causes of stroke are as follows:

- a blood clot forms and blocks blood flow in an artery leading to the brain
- a cerebral haemorrhage occurs when a defective artery in the brain bursts.

Think FAST!

Facial weakness

Arm weakness

Speech difficulty

Time to act fast

Treatment

If the person is conscious and able to respond to verbal commands, the following treatment should be initiated:

- reassure the person and remain calm
- loosen tight clothing

- protect the person's airway and place the person on his/her non-paralysed side
- keep the person warm
- call an ambulance 000.

If the person is unconscious:

- DRSABCD
- call an ambulance 000
- if the person is non-breathing, start CPR
- if the person is in cardiac arrest, start CPR.

While a person suffering from a Stroke may not be able to communicate he/she may be able to understand what is

going on about them. Therefore, it is important to explain all procedures and to offer constant reassurance to the casualty.

Choking

Choking in a conscious casualty may occur when the upper airway, usually the throat or trachea, is blocked by an object. The blockage may be partial or complete. When the airway is blocked the casualty is deprived

of oxygen. Rapid First Aid for choking can save a life.

Signs and Symptoms

The casualty suffering from partial obstruction may display signs and symptoms as follows:

- shortness of breath
- blue/pale/cold skin
- wheezing
- coughing
- noisy breathing.

The casualty suffering from Complete Obstruction may display signs and symptoms as follows:

- unable to breathe, cough and/or speak
- clutching the throat or chest
- face and extremities turning blue.

Causes

Choking is more likely to occur due to the following:

- swallowing large, poorly-chewed food
- consumption of large amounts of alcohol
- wearing poor-fitting dentures
- talking or laughing while eating.

Treatment (Adult, Child)

If the casualty is conscious and able to respond to verbal commands and can also cough effectively, the following treatment should be initiated:



Effective Cough

- reassure the casualty and remain calm
- call an ambulance 000
- help the casualty to sit upright and encourage coughing
- maintain continuous checking of casualty until recovery or deterioration (deterioration is recognised if the casualty turns blue or becomes limp).

If the casualty is conscious but has an ineffective cough, the following treatment should be instigated:

Ineffective Cough

- give up to 5 back blows between the shoulder blades using the heel of your hand.
- If back blows unsuccessful:
- give up to 5 chest thrusts.

Chest Thrusts

Chest thrusts are similar to chest compressions in CPR but sharper and delivered at a slower rate:

- place dominant hand in centre of the chest, place other hand on top and interlock fingers of both hands
- push down approximately 1/3 depth of the chest, up to 5 times.

Unconscious casualty

- call an ambulance 000
- commence CPR
- CPR refer page 36.

Treatment (Infant) Effective Cough

- reassure the casualty and remain calm
- call an ambulance 000
- help the casualty to sit upright and encourage coughing
- maintain continuous checking of casualty until recovery or deterioration (deterioration is recognised if the casualty turns blue or becomes limp).

Ineffective Cough

- place infant in downward position across your knees with head lower
- give up to 5 back blows between the shoulder blades using the heel of your hand.

If back blows unsuccessful:

- give up to 5 chest thrusts.

Chest Thrusts

- place 2 fingers in centre of the chest
- push down approximately 1/3 depth of the chest, up to 5 times

(Chest thrust similar to chest compressions in CPR but sharper and delivered at a slower rate)

Unconscious casualty

- call an ambulance 000
- commence CPR.
- CPR refer page 36.

Febrile Convulsion

Febrile Convulsion can affect infants and children less than 5 years of age and is caused by a high temperature (above

38.5 Celsius). The condition is generally not life-threatening.

Signs and Symptoms

A child suffering from febrile convulsion may display the following signs and symptoms:

- possible high temperature
- cold-like symptoms
- eyes roll back
- the child may first become unconscious, followed by a stiffening of the legs, arms and body

- the head is flung backwards and the arms and legs commence jerking
- the child's skin colour may become pale or even turn blue
- the convulsion ends after a few minutes and normal
- colour and conscious state returns.

Causes

Common causes of febrile convulsion include the following:

- the child is genetically predisposed to the condition
- the child suffers frequent illness, which includes high temperature.

Treatment

The following treatment should be initiated:

- position the child on his/her side
- remove the child's clothing
- do not place the child in cold water
- do not over-cool the child
- call an ambulance 000.

A child who has suffered a febrile convulsion must be transported by ambulance to hospital to determine the cause of the convulsion.

Diabetes

Diabetes is a disorder of the body's ability to use glucose (sugar), the body's main source of energy.

Two conditions suffered by a diabetic which may be encountered by a First Aider

are hypoglycaemia (low blood sugar) and hyperglycaemia (High blood sugar)

Hypoglycaemia

Hypoglycaemia is also called low blood sugar. This condition occurs when a person's blood sugar level drops too low to provide enough energy for the body's activities.

Signs and Symptoms

A person suffering from hypoglycaemia may display signs and symptoms as follows:

- hunger
- sweating
- dizziness
- drowsiness
- confusion
- difficulty speaking.

Treatment

The following treatment should be initiated:

- call an ambulance 000
- if the person remains conscious and able to swallow give a sweet drink (remember not diet drink). Alternatively, administer 8-10 jelly beans to the casualty
- repeat the treatment if the person responds
- when the person recovers and is able to swallow, help with the administration of food such as a biscuit, piece of fruit or sandwich.

If the person is unconscious, place them into the recovery position and call an ambulance to provide additional treatment. Do not administer insulin to a person suffering from a hypoglycaemic attack.

Hyperglycaemia

Hyperglycaemia is an increase in glucose (sugar) circulating in the blood.

Signs and Symptoms

Hyperglycaemia has a slower onset compared to

- hypoglycaemia and is also less common. Signs and symptoms include:
- excess urine production
- increased thirst
- increase in hunger
- hot dry skin
- the person may experience visual disturbance
- tiredness
- the person may become unconscious.
- high blood sugar reading on glucometer.

Treatment

The following treatment should be initiated:

- call an ambulance 000
- if the person is unconscious, place him/her into the recovery position. Never place anything in an unconscious person's mouth
- offer reassurance, even to an unconscious casualty.

Seizure (Fitting)

A seizure is a sudden change or disturbance in the way the cells of the brain function caused by chaotic electrical signals.



Treatment

The following treatment should be initiated:

- cushion the person's head and remove eye glasses

Signs and Symptoms

The signs and symptoms may present in different ways depending on the severity.

- blank staring
- chewing
- wandering
- confused speech.

If the seizure is severe, signs and symptoms may include:

- collapse
- loss of consciousness
- uncontrolled jerky movements of the person's arms/legs/body.

- call an ambulance 000
- loosen tight clothing
- protect person from harm
- do not restrain
- do not place anything in the person's mouth
- once the seizure activity has finished, place the person on his/her side
- when the person gains consciousness, reassure him/her.

Heart Conditions

The heart is a muscle that is located a little to the left of the middle of the chest, and generally it is about the size of your fist. The heart is like a pump and it sends blood around the body. The blood provides the body with the oxygen and nutrients it needs.

The heart is a pump that should beat regularly. Certain heart conditions can create an irregular pulse.

Chest Pain

Chest pain is usually a sign of lack of oxygen to the heart muscle.

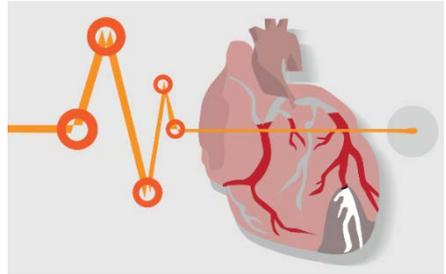
- call an ambulance 000 to provide emergency care.



Angina and Heart Attack

Heart Attack and angina can present in a very similar way and

it can be difficult to determine between the two.



Signs and Symptoms

- chest pain or discomfort
- pain or heaviness in the arms, shoulders, throat and/or jaw
- sweating
- breathlessness
- collapse.



Treatment

If the person is conscious and able to respond to verbal

commands the following treatment should be initiated:

- DRSABCD
- call an ambulance 000
- reassure the person and remain calm
- loosen tight clothing
- restrict activity and ensure that the person rests.

If the person is unconscious:

- DRSABCD
- call an ambulance 000
- if the person is in cardiac arrest, start CPR.

A person who has been diagnosed with angina may also be prescribed a medication by their doctor. This medication is taken as a spray or tablet beneath

the tongue. If the person has this medication it must be administered by the person not by the First Aider.

Poisoning

Poisoning can be defined as substances entering the body

either through inhalation, absorption, injection, or skin contact which cause injury, illness or death.



Signs and Symptoms

Look for these signs and symptoms if you suspect poisoning:

- burns or redness around the mouth and lips, which can result from drinking certain poisons
- breath that smells like chemicals, such as petrol, insecticide or other chemicals
- burns, stains and odours on the casualty or his/her surrounds
- vomiting
- difficulty breathing
- altered conscious state/ confusion.

Causes

Causes of poisoning can include the following:

- inhalation of substance
- absorption
- injection of substance
- skin contact.

Treatment Swallowed Poisons

Note that some poisons may not cause immediate symptoms in a casualty. In some instances, it may be several hours before symptoms show. However, damage may still be occurring during this time. If you suspect a casualty has swallowed poison you should do the following:

- take the container with you to the telephone
- CALL POISON INFORMATION CENTRE 13 11 26
- call an ambulance 000
- DO NOT make the patient vomit.

Absorbed Poisons

- If a casualty has absorbed poison through the skin:
- thoroughly flush the area immediately with copious amounts of water
- CALL POISON INFORMATION CENTRE 13 11 26
- call an ambulance 000
- continue to flush with running water until ambulance personnel arrive
- ensure no-one else on scene is affected.

Inhaled Poisons

If inhalation of poison is a possibility, the First Aider should suspect an inhalation injury even if there are no apparent signs and symptoms. In such an instance:

- move the casualty to fresh air quickly without putting yourself in danger
- if safe to do so, open windows and doors wide
 - Call poison information centre 13 11 26
 - call an ambulance 000.

**POISON
INFORMATION
CENTRE
131126**

Poison Safety

Remember the following key points relating to poison safety in the home and workplace:

- keep medicines and chemicals out of sight and out of reach in a locked or child-resistant cupboard
- do not leave chemicals unattended whilst in use
- read directions for use carefully
- do not decant chemicals
- always purchase household products with child-resistant packaging
- avoid taking medication in front of small children.

Drug Overdose

A drug is usually a substance used to treat an illness, relieve a

symptom or prevent disease in the body. It comes in many

forms such as capsules, tablets, powders, liquids, aerosols and pastes. A doctor's prescription is generally required for the purchase of most drugs.

However, the use of illegal drugs in our communities is very common and can lead to major health problems or even death.

Prescription and Non-Prescription Drugs

Prescription drugs require a doctor's prescription to be written prior to purchase. Less dangerous non-prescription drugs can be purchased over the counter from pharmacists or supermarkets.

Natural and Synthetic Drugs

A natural drug is made from a plant or animal. Most medicines prescribed by a doctor are synthetic as they are made from chemicals.

Legal and Illegal Drugs

Legal drugs, whether prescription or non-prescription, can be

bought in pharmacies and shops. Illegal drugs are those that are imported, grown or manufactured illegally. Often, illegal drugs are dangerous

and cause the user to become addicted. Some examples of illegal drugs include cocaine, heroin, ecstasy and marijuana.

Overdose

A drug overdose occurs when you consume more drugs than your body can tolerate. Drugs affect how the body works.

When taken incorrectly or as an overdose they may be very toxic to the body and cause serious injury or death.

Signs and Symptoms

A drug overdose may be a life-threatening situation

depending on the type of drug and the amount taken.

A person suffering from a drug overdose may display the following signs and symptoms:

- altered level of conscious state
- unconsciousness

- blurred vision
- slurring of speech
- pinpoint pupils
- slow shallow respiration
- slow pulse or, alternatively, rapid weak pulse
- evidence of needle injection marks
- respiratory arrest
- cardiac arrest
- empty medication containers/packets.

Care and Treatment

If a person is suffering from a drug overdose you should do the following:

- DRSABCD
- call an ambulance 000
- if unconscious place in recovery position
- if the casualty is in cardiac arrest, start CPR.

Heat Exhaustion

Heat Exhaustion is a common condition seen by First Aiders and occurs when people exercise (work or play) in a hot, humid place and their body fluids are lost

through sweating, causing the body to overheat.



Signs and Symptoms

The following are the most common symptoms of heat exhaustion although each individual may experience symptoms differently:

- profuse sweating
- pale skin
- the person may feel faint or may collapse
- nausea
- the person complains of a headache.

Treatment

For the treatment of heat exhaustion, initiate the following care:

- call an ambulance 000
- reassure the casualty and remain calm

- relocate the casualty to a cool place
- remove enough clothing to cool the casualty without chilling him/her
- lightly fan the casualty's skin
- apply/wrap ice packs to casualty's groin and armpits
- administer oral fluids (water), small frequent amounts.

Heatstroke

Heatstroke is a life-threatening condition. It is due to the body's elevated temperature. Heatstroke can be caused by many different situations such as:

- excessive exercise and excessive heat.

Signs and Symptoms

The following are the most common symptoms of heatstroke although each individual may experience symptoms differently:

- headache
- dizziness
- disorientation, agitation or confusion
- hot dry skin that is flushed but not sweaty

- high body temperature
- altered conscious state
- rapid shallow breathing
- increased pulse rate and breathing.

Treatment

For the treatment of heatstroke implement the following care:

- DRSABCD
- call an ambulance 000
- reassure the casualty and remain calm
- relocate the casualty to a cool place
- remove enough clothing to cool the casualty
- lightly fan the casualty's skin
- apply/wrap ice packs to casualty's groin and armpits
- gradually cool the body with tepid sponging or wet cloths.
- If the casualty is unconscious:
 - DRSABCD
 - call an ambulance 000
 - place the casualty on his/her side
 - if the casualty is in cardiac arrest, start CPR.

Hypothermia

Hypothermia is a condition in which the person's core body temperature has dropped to significantly below normal (35 degrees Celsius).

Causes

The main causes of hypothermia are:

- immersion in cold water
- exposure to a cold environment.

Signs and Symptoms

The following are the most common symptoms of hypothermia although each individual may experience symptoms differently:

- shivering
- confusion
- change in conscious state/
unconsciousness
- dry cold skin.

Treatment

For the treatment of Hypothermia initiate the following care:

- DRSABCD
- call an ambulance 000

- handle the casualty gently and remove him/her from cold environment
- if clothing is wet, carefully remove.



If casualty is conscious and shivering:

- re-warm the casualty slowly (e.g., wrap in warm blankets or clothing)
- treat for shock.

If the casualty is unconscious:

- DRSABCD
- call an ambulance 000
- place the casualty on his/her side
- if the casualty is in cardiac arrest, start CPR.

CAUTION

- do not rub or massage the casualty
- do not give alcohol

- do not use hot water bottles or place the casualty in hot water.

Mild hypothermia casualty conscious and shivering

Drowning

Drowning is second only to motor vehicle accidents as a cause of accidental death in Australia.

Signs and Symptoms

The casualty who has been rescued may display:

- shortness of breath
- blue/pale/cold skin
- unconsciousness
- non-breathing.

Treatment

If the casualty is conscious and able to respond to verbal commands the following treatment should be initiated:

- reassure the casualty and remain calm
- help the casualty to sit upright and take regular deep breaths
- call an ambulance 000
- if the casualty is cold, warm with blanket.

If the casualty is unconscious:

- DRSABCD
- call an ambulance 000
- due to drowning, a large amount of water may be in the mouth. This can be drained by turning the casualty on to their side
- if the casualty shows no signs of life, start CPR
- CPR refer to page 36.

Never cancel an ambulance even if the casualty appears to have made a full recovery. It is imperative that the casualty is seen at a hospital as his/her condition may deteriorate.

BITES AND STINGS – ENVENOMATION

Snakes

Approximately 70% of Australian snakes are venomous. Venom can be a lethal substance and may cause a diverse array of reactions in a casualty.

Not everyone that is bitten by a snake is poisoned.

Treatment

The main goal of treatment is to restrict the transport of venom through the body:

- call an ambulance 000
- make a thorough physical assessment and, where possible, identify the snake
- offer the casualty reassurance and try to relax him/her both physically and psychologically
- apply a firm pressure immobilisation bandage technique (see below) to the affected area/limb

- apply a second roller bandage, starting at the toes or fingers and continuing up the limb
- where possible, apply an immobilisation splint. (Do not remove once in place)
- do not wash the bite site as this may be used for venom detection
- do not apply a tourniquet or constrictive bandage.

Pressure Immobilisation Bandage Technique

Apply a wide bandage over the bite site. This bandage should be firm but still allow blood flow to the limb.



If the casualty is unconscious:

- DRSABCD
- call an ambulance 000
- if the casualty is in cardiac arrest, start CPR.

Spiders- Red Back

The venom takes a long period of time to act, causing complications up to three

hours later. The venom is rarely life-threatening in adults.



Signs and Symptoms

A casualty suffering from

- a red-back spider bite may display the following signs and symptoms:
- immediate pain at the bite site, and pain to increase with time
- skin may appear red
- profuse sweating at the bite site
- skin may be hot to touch at the bite site
- local swelling at bite site
- nausea/vomiting
- abdominal pain
- blurred vision.

Treatment

Treatment should proceed as follows:

- offer the casualty reassurance and try to relax

him/her both physically and psychologically

- make a thorough physical assessment
- apply ice to the bite site and elevate. (Do not apply a pressure bandage as this will increase the pain)
- undertake constant assessment of the casualty
- call an ambulance 000.

Funnel Web

The funnel web is more commonly found in the eastern states and a person is more likely to be bitten at night. Deaths are rare due to availability of appropriate treatment.

The male is highly aggressive when disturbed or cornered and is able to inflict multiple strikes with its hardened fangs.



Signs and Symptoms

A casualty suffering from a funnel web spider bite may display the following signs and symptoms:

- profuse sweating and salivation from the mouth
- skin may be cold and the casualty may shiver
- local swelling at bite site
- nausea/vomiting
- abdominal pain
- blurred vision.

Treatment

The main goal of treatment is to restrict the transport of venom through the body.

- DRSABCD
- call an ambulance 000
- make a thorough physical assessment
- offer the casualty reassurance and try to relax him/her both physically and psychologically
- apply a firm pressure immobilisation bandage

technique to the affected area/limb (Refer to page 102)

- apply a second roller bandage, starting at the toes or fingers and continuing up the limb
- where possible, apply an immobilisation splint. (Do not remove once in place)
- do not wash the bite site as this may be used for venom identification
- do not apply a tourniquet or constrictive bandage.

Bee, Wasp and Ant Stings

Bee, wasp and ant stings are painful but are generally not life threatening unless the casualty is allergic.



Signs and Symptoms

A casualty suffering from an insect sting or bite may experience:

- itchy skin
- rash
- swelling of the area
- nausea/vomiting
- altered state of consciousness/collapse
- shortness of breath.

Treatment

The main goal of treatment depends on the presentation of symptoms:

- DRSABCD
- call an ambulance 000
- make a thorough physical assessment
- offer the casualty reassurance and try to relax him/her both physically and psychologically
- remove the sting by scraping but do not squeeze the sting as this will release more venom

- apply an ice pack or cold compress to the site for relief of pain
- if the casualty has an allergic reaction, call an ambulance 000 and apply pressure immobilisation bandage technique (Refer to page 102).

If the casualty is unconscious:

- DRSABCD
- call an ambulance 000
- if the casualty is in cardiac arrest, start CPR.

Marine Creatures

Blue-Ringed Octopus

The blue-ringed octopus is a common octopus species which can be found in crevices and under rocks at

the seashore. It can be found in most states of Australia.

The Blue Ringed Octopus is not normally aggressive and attacks only if provoked.

It is the most venomous octopus in the world.

Although bites are infrequent they are known to be harmful due to the effect on breathing.

Signs and Symptoms

A casualty suffering from a blue-ringed octopus sting may present the following symptoms:

- painless bite site with a visible spot of blood
- numbness in the lips, tongue, face and neck within minutes
- visual disturbances
- difficulty speaking
- generalised weakness
- the casualty may collapse requiring resuscitation.

Treatment

The main goal of treatment is to restrict the transport of venom through the body:

- DRSABCD
- call an ambulance 000
- make a thorough physical assessment
- offer the casualty reassurance and try to relax him/her both physically and psychologically
- apply a firm pressure immobilisation bandage technique to the affected area/limb (Refer to page 102)

- where possible, apply an immobilisation splint. (Do not remove once in place)
- do not wash the site as this may be used for venom identification
- do not apply a tourniquet or constrictive bandage
- If the casualty is unconscious:
- DRSABCD
- call an ambulance 000
- if the casualty is in cardiac arrest, start CPR.

Cone-Shell

The cone-shell has venom glands and can inject venom when handled or stepped on. The venom can cause

progressive muscle weakness that can lead to sudden death.

Although bites are infrequent they are known to be harmful due to the effects on breathing.

Signs and Symptoms

- painless bite site with a visible spot of blood
- numbness in the lips, tongue, face and neck within minutes.
- visual disturbances
- difficulty speaking

- generalised weakness
- paralysis of respiratory muscles leading to difficult breathing
- respiratory arrest
- the casualty may collapse requiring resuscitation.

Treatment

The main goal of treatment is to restrict the transport of venom through the body:

- DRSABCD
- call an ambulance 000
- make a thorough physical assessment
- offer the casualty reassurance and try to relax him/her both physically and psychologically
- apply a firm pressure immobilisation bandage technique to the affected area/limb (Refer to page 102)
 - where possible, apply an immobilisation splint. (Do not remove once in place)
- do not wash the site as this may be used for venom identification
- do not apply a tourniquet or constrictive bandage.
- If the casualty is unconscious:
- DRSABCD
- call an ambulance 000

- if the casualty is in cardiac arrest, start CPR.

Box Jellyfish

Box jellyfish are pale blue and transparent. They are cube-shaped with four distinct sides, hence their name.

They are usually found in tropical regions.

Signs and Symptoms

A casualty suffering a sting from a box jellyfish may display the following symptoms:

- severe pain of the affected area
- blistering and red marking on skin
- altered state of consciousness
- shortness of breath
- respiratory arrest
- heart irregularities.

Treatment

The main goal of treatment is to restrict the transport of venom through the body:

- DRSABCD
- call an ambulance 000

- make a thorough physical assessment
- offer the casualty reassurance and try to relax him/her both physically and psychologically
- remove any tentacles from the patient. This can be done by washing the area with large amounts of vinegar
- (first wash then try to remove)
- apply cold packs or wrapped ice to relieve pain.
- If the casualty is unconscious:
- DRSABCD
- call an ambulance 000
- If the casualty is in cardiac arrest, start CPR.

Fish Stings

Stonefish and Bullrouts have many spines that inject venom deeply under the casualty's skin. This causes severe pain.

Signs and Symptoms

A casualty suffering from stone fish or bullrout venom may display the following signs and symptoms:

- intense pain at the site of injury
- swelling at the site

- an open wound may be present at the site
- barbs may still be visible
- the casualty may be very anxious
- a local grey/blue discolouration and/or bleeding.

Treatment

The main goal of treatment is to restrict the transport of venom through the body:

- make a thorough physical assessment
- offer the casualty reassurance and try to relax him/her both physically and psychologically
- submerge the affected area in hot water (as hot as can be tolerated by the casualty)
- do not restrict movement of the limb
- call an ambulance 000.

If the casualty is unconscious:

- DRSABCD
- call an ambulance 000
- if the casualty is in cardiac arrest, start CPR.

Tick Bite

The tick is very small and may attach anywhere to the body such as hairy areas and in body crevices. It can cause paralysis and allergic reactions.

Signs and Symptoms

- local skin irritation
- tiredness
- muscle weakness
- double vision
- breathing/difficulty swallowing.

Treatment

- Prompt removal of the tick is essential.
- remove tick with forceps by pressing down skin around tick's mouth part
- with forceps, grip mouth part firmly but slowly and gently remove
- avoid squeezing tick
- seek medical help.

Triage – Prioritisation of Casualty Treatment

The word triage comes from the French word trier, which

means 'to sort'. It is a system of rapidly identifying casualties who

have life threatening injuries and who have the best chance of survival. This system is generally used in a mass casualty situation.

Only commence a triage system when there are two or more injured people. For a single casualty, always implement First Aid.

As a First Aider at a mass casualty scene you may have to choose patients who require immediate transport to the hospital to save their lives as opposed to patients who can wait for help later. This can be a very difficult and traumatic task.

In most situations you will be relieved of this task by an ambulance paramedic.

To triage effectively you will need to be objective and consider the following:

- do not treat the deceased
- give CPR to a casualty in cardiac arrest ONLY if there are NO other seriously injured casualties who require urgent treatment
- remove those casualties who can be helped by immediate transportation

- delay transportation of casualties whose condition will not be affected by delay
- treat casualties with minor injuries and the walking-wounded who need help less urgently last
- allocate your limited first aid assistance and resources to those who are most likely to survive.

Road/Machine Accidents

Trauma from road accidents is one of the leading causes of accidental death and serious injury in Australia, despite the developments in manufacturing of motor vehicles such as

air bags, crumple zones and seat belts.



The First Aider is often first at the scene of an accident and may dramatically influence the outcome for the casualties involved. First Aiders need to remain calm and provide systematic assistance.

If you are involved in attending a road accident, the following approach should be applied:

Approaching the Incident – Hazards

Safety is your first priority. Be aware for hazards to yourself, bystanders and the casualty, which can include:

- power lines
- fuel
- other road traffic
- stability of the vehicle
- sharp objects
- potential for fire.

Remember do not enter the scene unless everything is secured and safe.

Manage the Scene

A road accident scene may become chaotic. Remain calm

and give good clear directions to bystanders so they can help you manage the situation.

Make sure an ambulance has been called 000.

Assess the Scene

It is important to gather relevant information about the scene and what has happened. Relay this information to Emergency Services on placing the initial phone call. Important information includes:

- the number of casualties involved
- the number of fatalities
- the number of unconscious casualties
- whether any casualties are trapped.

Treatment

Approach the management of the casualties requiring treatment as per the primary

assessment (Refer to page 42). Remember that the Emergency Action Plan (DRSABCD) to be followed during the treatment and care of a casualty comprises six steps:

- DANGER
- RESPONSE
- SEND FOR HELP
- AIRWAY
- BREATHING
- COMPRESSIONS
- DEFIBRILLATION

Treat the casualties for shock, keep them warm and reassure them about their situation.

Removal of the casualties from the vehicle should only be performed if they cannot be managed due to the following:

- fire (rare event)
- the First Aider is unable to manage the casualty's airway
- the First Aider is unable to manage severe bleeding
- the First Aider needs to perform CPR.

When the ambulance crew arrives give an accurate handover of what has happened, including the condition and treatment of casualties. The details you provide are very important as it will assist in the management of the casualties by ambulance personnel and later by medical staff at the hospital.

Diving Emergencies

A diving emergency could be any casualty who has suffered an emergency underwater regardless of depth which has affected their state of health.

Scuba divers breathe air from a tank via a regulator. This ensures the correct amount of air is delivered to the diver. If a diver suffers from an emergency condition whilst

diving, it is very important that medical treatment is initiated as soon as possible.

DECOMPRESSION SICKNESS (The Bends)

A serious diving emergency is decompression sickness (DCS), otherwise known as

The Bends. This happens when the diver ascends too quickly to the water's surface.



The rapid ascent causes nitrogen gas to become trapped in

the tissues of the body. This trapped gas may find its way into the diver's bloodstream.

Signs and Symptoms

A casualty suffering from DCS may display a range of symptoms including:

- fatigue
- deep pain to muscle and joints
- itchy skin
- pins and needles
- paralysis
- choking or coughing
- rapid breathing
- unsteadiness/staggering when walking
- chest pain
- unconsciousness.

Treatment

For treatment of DCS do the following:

- DRSABCD
- call an ambulance 000
- call Divers 24-hour Emergency Service 1800 088 200
- reassure and calm the casualty
- lie flat
- if the casualty is in an altered conscious state or is unconscious, place in a recovery position
- if oxygen therapy is available, administer 100% high flow oxygen
- if the casualty is experiencing difficulty with breathing the First Aider may have to support into an upright position
- keep the casualty warm.

Ruptured Lung

A diver can suffer a ruptured lung.

Treatment

To treat a ruptured lung do the following:

- DRSABCD
- call an ambulance 000

- call Divers 24-hour Emergency Service 1800 088 200
- reassure and calm the casualty
- if the casualty is in an altered conscious state or is unconscious, place in recovery position
- if oxygen therapy is available, administer 100% high flow oxygen
- if the casualty is experiencing difficulty with breathing the First Aider may have to support into an upright position
- keep the casualty warm.

Ruptured Eardrum

The eardrum is a thin membrane that separates the inner ear from the outer ear. A Ruptured Eardrum means that it has a tear or hole in

it. This may be caused by a change in pressure whilst diving.

Signs and Symptoms

A casualty suffering from a ruptured ear drum may display the following symptoms:

- sudden, sharp ear pain
- bleeding or discharge from the ear
- hearing loss
- ringing in the ear
- dizziness.

Treatment

To treat a Ruptured Eardrum do the following:

- place a clean sterile pad over the affected ear
- seek medical advice.

Do not place any fluid or drops in ear unless prescribed by a doctor.

Behavioural Emergencies

Abnormal behaviour may be due to many medical factors. A casualty suffering from abnormal behaviour should be approached with safety as your main priority.

Treatment and Approach

- call an ambulance 000
- assume the same eye contact level in order to reduce the feeling of being stood-over (which may distress the person)

- speak in a non-judgmental manner in order to minimise any feelings of guilt the person may be experiencing
- allow the person time to respond to your questions. If you rush to get answers to your questions you may agitate the person and cause further distress
- avoid sudden movements, as the person may see these as a threat
- do not touch the person without his/her permission, as the person may see this as a threat and believe that you are going to harm them
- approach the person with caution: never place yourself in danger
- never turn your back to the person
- position yourself so you have the ability to exit quickly if necessary.

Assessing the situation is always the main priority to ensure your personal safety and that of others. The First Aider must take precautions to avoid confrontation at all times. Remember that

support and understanding of a person with an abnormal behaviour is very important.

Oxygen Administration

Oxygen is a colourless, odourless gas. The body requires oxygen for normal cell function and obtains it through the respiratory and circulatory systems. The atmosphere contains approximately

21% oxygen, of which 4-5% is used by the body while at rest.

If the body is under stress or has a disorder of the respiratory or circulatory system, oxygen demands are increased. That demand can exceed the body's ability to deliver adequate oxygen to the tissues. At these times, providing a supplementary external source of oxygen can be of great benefit to the casualty.

Oxygen should be used in the following situations:

- cardiac and respiratory arrest
- altered state of consciousness
- shock
- shortness of breath, whatever the cause
- chest pain
- severe injury or trauma
- blood loss
- seizures.

Oxygen Therapy Delivery Systems

Oxygen can be delivered to a casualty by the following devices:

- Face Mask (Hudson)
- Nebuliser Mask
- Soft Bag and Mask Device.

Face Mask (Hudson)

Features of the Hudson Face Mask are:

- it has a series of holes to allow air to mix with oxygen on inspiration; these holes allow exhaled air to escape and prevent the build up of carbon dioxide
- the percentage of oxygen inspired depends on flow rate,

and rate and depth of the person's respirations

- that it is used at a flow rate of at least 8 lpm in an emergency setting.

Nebuliser Mask



This is the same as a face mask except that:

- it has an attachment that enables reliever medication to be administered
- oxygen and reliever medication are administered at the same time.

Soft Bag and Mask

The primary use of the soft bag and mask device is

to ventilate non-breathing patients. This device:

- should be used to deliver high concentrations of oxygen to critically ill breathing casualties. A bag valve mask on a breathing patient has a non- rebreathing valve to permit the escape of exhaled air
- must use supplemental oxygen of at least 8 lpm
- is more effective at flow rate of 14 lpm
- can deliver 80 to 95% concentration of oxygen.

Medical Oxygen

Medical oxygen is supplied in the following ways:

- metal cylinders
- aluminium cylinders
- carbon fibre/fibre glass wrap cylinders.

Oxygen is stored at a pressure of approx 15,000 kPa or 200 PSI. Oxygen is delivered from the cylinder via a regulator which reduces the pressure to a safe working pressure of 414 kPa.

The valve on medical oxygen cylinders is a yoke type with holes on the valve stem.

These holes and the pins on the regulator ensure that only medical grade oxygen can be used with medical oxygen delivery devices. The pin fittings also prevent the fitting of an incorrect regulator.

Cylinders are available in the following sizes

(when full):

- B – 200 litres
- C – 400 litres
- D – 1500 litres
- G – 7600 litres.

Medical Oxygen Regulators



- inlet connections comply with
- national standards to prevent connection
- to incorrect gas cylinders

- the system is protected from dust and grit by 3 filters
- contents gauge is fitted with a safety back to relieve pressure in event of gas leakage
- regulator is also protected from delivery of excessive pressure by safety valves.
- combustible materials such as OIL or GREASE must not come into contact with the cylinder, regulator, fittings, valves, or hoses
- do not seal outlets with adhesive tape, because most are petroleum-based – static spark can be generated on removal use acetate bags and rubber bands
- never smoke in any area where oxygen is used or stored
- store below temperature of 50 degrees
- ensure the cylinder is within 5 years of last test date before refilling

Flow Meters

- Flow meters allow for variable rates of oxygen to be delivered depending on the needs of the casualty.

Storage and Handling of Cylinders

The storage of oxygen must meet the requirements of each State or Territory. Contact relevant government officials to determine the correct procedures relevant to your situation.

Storage and handling points to consider:

- cylinders should always be placed on side
- handle cylinders with care – avoid knocking or dropping
- do not lift by valve or regulator

- oxygen cylinders must be secured during transport
 - only use with correct, current checked regulator (never modify equipment)
 - do not use damaged cylinders
 - tag and send for inspection.

Daily Checks

To maintain good safety standards with the use of oxygen it is important to perform daily checks with oxygen equipment.

Ensure the following:

- the bottle is medical oxygen (black and white bottle)
- the bottle is clean and free of grease and oil
- there is no damage to oxygen bottle
- the bottle is full of oxygen.

Oropharyngeal Airway

Oral airways are designed to keep the tongue from falling back and blocking the upper airway. This plastic device has a rigid flange and a hollow curved tube.

Oral airways are only used in unresponsive casualties

who do not have a gag reflex. The airway must be inspected prior to inserting an airway device to remove any potential obstruction.

Oral Airway Sizing

To select the correct airway in an unresponsive casualty:

- place the airway against the side of the casualty's face
- it should extend from the corner of the mouth to the angle of the jaw.

Oral Airway Insertion

To insert the oral airway into an unresponsive casualty:

- open the casualty's mouth
- insert the oral airway with tip pointing up to avoid pushing the tongue backwards
- rotate the oral airway tip slowly 180 degrees
- downward until the curve of the oral airway matches the curve of the tongue
- the flange of the oral airway should rest against the casualty's lips.

Safe Manual Handling

A large percentage of the population at some point during their lives will suffer from a back injury. The spine is a very complex structure, with a delicate spinal cord protected by the vertebrae. Between the vertebrae are discs, which have a tough outer casing and a

jelly-like centre.

Many back problems are caused by the ligaments and muscles

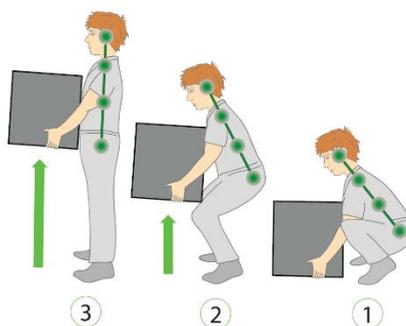
in the lower back becoming weakened which in turn leads to the discs becoming weakened. In certain types of back injury the outer covering of the disc can split, allowing the jelly-like contents to squeeze out. If this occurs it may lead to severe pain and a chronic debilitating injury. Another frequent cause of back injury is the lifting of heavy objects whilst not maintaining correct posture and lifting techniques.

Being overweight and not exercising enough can also increase your risk of a back injury.

Avoiding Back Injuries

- take frequent small breaks and rest between lifts if you are lifting a number of objects
- make sure you do not strain to lift. If you have to strain to carry the load, it is too heavy
- make sure you have enough room to lift safely. Clear a space around the object before lifting it
- look around before you lift, and look around whilst you carry. Make sure you can see where you are walking. Know where you are going to put down the load

- avoid walking on slippery, uneven surfaces while carrying a load
- get help before you try to lift a heavy load. Use a mechanical appliance to move the load
- maintain the normal curves of the spine when standing, sitting or lifting a load (See next section). This will provide support for ligaments, joints and discs underneath.



Lifting or Moving a Load

- use slow and controlled movements
- hurried, uncontrolled movements can strain the muscles in your back
- keep your body facing the load whilst lifting. Twisting while lifting can cause a serious injury
- keep the load close to your body. Having to reach out to

lift and carry a load may cause a back injury

- try to carry the load in the space between your shoulder and your waist. This puts less strain on your back muscles
- lift with your legs not your back; bend your knees and not your back
- to pick up the load, keep your back straight, balance feet on floor, bend from the hips and knees and avoid twisting the body
- where possible, slide instead of carrying.

Remember the management of your back and the prevention of injury is in your hands. A chronic back injury will affect your quality of life significantly.

Acute Management of a Painful Back

- stop the aggravating activity
- rest, preferably in a lying position on a firm surface
- use icepacks to reduce inflammation and pain
- seek medical advice for a thorough assessment even if pain subsides.

Hand Washing

Hand washing is a very important technique and is one of the most basic ways to prevent the spread of disease.



Good hand washing technique is easy to learn and essential when performing aseptic dressing procedures:

- have access to appropriate hand washing facilities
- remove any items of jewellery worn on hands or wrists
- turn on water and regulate to appropriate temperature
- wet your hands with warm running water
- apply liquid soap from dispenser (bar soap should be avoided whenever possible due to potential of cross infection)

- rub hands together, making a soapy lather, wash the front and back of hands, as well as between your fingers and under your nails. Work lather over hands and wrists all the way up to elbows. This must be done for at least 1 minute

- if nail brush to be used it must be single use brush only and discarded after use

- rinse soap off thoroughly using a single use disposable hand towel

- turn off tap by using hand towel or back of elbow. Do not turn off with bare hands

- discard hand towel into foot pedal operated bin.

Temperature

A temperature can be taken with a thermometer. There are several types of thermometers available to take a temperature with:

- digital
- glass with a bulb containing mercury.



Taking a Temperature

- wash hands prior to procedure
- explain to casualty the procedure you are about to perform
- wipe the thermometer with an alcohol wipe prior to use. Digital thermometers also come with a plastic probe cover for hygiene purposes.
- if using glass thermometer shake mercury into base of thermometer
- if using digital press “on” button.

Oral Method

- place thermometer bulb (glass) or probe (digital) under tongue, hold in place with mouth closed
- keep in place for 2 minutes
- if using digital a beep will be heard when ready
- remove thermometer, read temperature on display and record result

- clean thermometer with alcohol wipe and place back into storage container.

Underarm Method

- make sure under arm is dry
- point the thermometer upward and place the tip well into the casualty's underarm
- fold casualty's arm over chest to hold in place and keep air away from underarm
- keep in place for 4 minutes
- if using digital listen for beep
- remove thermometer, read temperature on display and record result
- clean thermometer with alcohol wipe and place back into storage container.

Eye Irrigation

The purpose of eye irrigation is to dilute or remove chemicals from the eye.



It can also help to relieve pain and burning that can be associated with a foreign body:

- explain and reassure the casualty
- wash your hands
- if possible, put on gloves
- position the casualty for comfort and easy access to perform the procedure. Ensure adequate lighting
- prepare equipment required (eye irrigation solution, towel to protect casualty and surrounds, bowl to catch fluid from irrigation)
- ask casualty to open both eyes
- taking care not to apply direct pressure to the eyeball, hold the lids open on affected eye
- direct a gentle and steady flow of eye wash solution from the inner aspect of eye to outer aspect of eye. Catch excess fluid in bowl
- encourage the casualty to move eye in all directions
- re-examine eye after irrigation procedure
- repeat if unsuccessful
- ensure casualty is clean, dry and comfortable after procedure
- an eye patch may need to be applied for further protection.

Dressing Technique

Aseptic dressing technique is an important procedure performed for the management of chronic, acute and infected wounds. It is important that the procedure is undertaken in the correct way to promote wound healing and prevent infection:

- check for a care plan regarding the wound and its treatment
- prepare and protect the appropriate working surfaces with disinfectant solution before commencing procedure
- assemble necessary equipment for procedure
 - antiseptic solution, new dressing and dressing pack
- place disposable waste bag within easy access of working surface to discard used dressing material in.
- prepare the wound for dressing. Loosen dressing for easy removal
- wash hands
 - open the outer cover of dressing pack and remove inner pack placing onto prepared surface
 - with the forceps which can be viewed on outer surface of pack open inner pack and arrange contents
 - with forceps used for arranging items, remove loosened dressing and discard dressing and forceps into rubbish bag
 - open appropriate dressings required and place on sterile dressing surface or pour solutions that are required into sterile dressing container
 - wash hands using appropriate technique
 - put on sterile gloves if available
 - if no gloves are available, use the non-touch technique
 - sterile dressing towel should now be placed between wound and person performing dressing to
 - maintain sterile dressing field
 - using dressing forceps pick up and moisten swab with solution in container
 - clean wound by using one swab at a time, swab from outside of wound to within. One swab for each stroke
 - once wound has been cleansed, dry wound and cover

with new sterile dressing. Secure with tape

- all used dressing items to be placed onto used dressing tray and wrapped up
- place wrapped items into waste bag. Waste bag is then disposed of into medical waste
- disinfect working surface
- wash hands thoroughly
- complete any paper work regarding procedure.

Taking a Pulse

A pulse represents the beating of the heart.e

Radial Pulse

This is the pulse that is taken at your wrist. The radial pulse may not be present if the person is in shock. To take the radial pulse:

- use 2 fingers, preferably the 2nd and 3rd finger
- place them in the groove in the wrist that lies below the thumb
- move your fingers along until you can feel a slight pulsation, this is the radial pulse.

Carotid Pulse

This is the pulse felt in your neck. The carotid pulse can be more easily felt and is sometimes stronger than the radial pulse. A Carotid pulse should be the preferred pulse check site:

- use 2 fingers, preferably the 2nd and 3rd finger
- place them alongside the outer edge of the trachea (windpipe)
- move your fingers along until you can feel a slight pulsation – this is the carotid pulse.

The pulse rate is the amount of beats counted over one minute. For example, a pulse may be recorded as 70 beats per minute.

References

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- Australian Institute of Sport, Sports Medicine Department (Vic)
- Department of Health
- Early Childhood Australia
- Communicable Disease Prevention and Control Unit - Health Protection
- International Liaison Committee on Resuscitation (ILCOR)
- Australian Red Cross
- National Asthma Council of Australia
- Better health channel
- Poisons Information Centre (Melbourne).
- The Royal Children's Hospital (Melbourne), General Medicine, Respiratory Medicine & Infectious Diseases departments
- Safe Work Australia
- Australasian Society of Clinical Immunology and Allergy (ASCIa)
- Australian Resuscitation Council (ARC)
- Australian Children's Education and Care quality Authority
- Education and Care National regulations 2011
- The National Quality Standards