PREMIUMHealth
FIRST AID

Australia's premium first aid, mental health and health care training provider for over 35 years.

Provide First Aid in an ESI environment workbook

PREMIUMHealth

In the spirit of reconciliation Premium Health acknowledges the Traditional Custodians of country throughout Australia and their connections to land, sea and community. We pay our respects to their elders past and present and extend that respect to all Aboriginal and Torres Strait Islander peoples today.

OUR PROMISE

Premium Quality, without compromise. It's the Premium Health promise.

Phillipa Wilson
Founder & Managing Director of Premium Health

Our Trainers are Experienced Nurses and Paramedics	Passionate about sharing their experience
Premium Quality Programs	We pride ourselves on the depth of our course content and the quality of our training materials
Innovative Techniques, Empowering Outcomes	Methods remembered for years to come
Specialised Training, Contextualised to Your Workplace	Relevant and customised to workplaces

Welcome to your course and Premium Health.

The aim of this resource is to provide the essential knowledge and skills required in your training.

We select our Premium Health trainers and assessors carefully. All are either nurses or paramedics with appropriate training qualifications, technical expertise and experience.

PROVIDE FIRST AID IN AN ESI ENVIRONMENT

WHAT YOU NEED TO KNOW ABOUT YOUR COURSE

Welcome

Welcome to your course and Premium Health. The aim of this resource is to provide the essential knowledge and skills you require to provide first aid in an Electricity Supply Industry (ESI) environment.

Helping you to succeed in your course

We believe learning should be an enjoyable and challenging process and we understand that each learner is different. A variety of methods such as class participation, group discussion, scenarios, workbook exercises and opportunities for practice will help you to achieve competency.

We select our Premium Health trainers and assessors carefully. All are nurses or paramedics with appropriate qualifications, technical expertise and experience in both education and emergency first aid and in the disability or health care sector. This enables them to provide you with quality training which is grounded in experience and knowledge of the field.

Course learning outcomes

The performance criteria for all competency elements are provided in the Learner handout. This is important information to help you work out what you need to do to meet the assessment requirements for the unit.

What you need to know about assessment

Assessment takes place during your course enabling you to demonstrate your competence in a comfortable and familiar environment with your trainer/assessor. All assessment tasks are discussed beforehand.

Assessment is never a pass or a fail process. At the end of a set period, you are judged to be Competent or Competency Not Achieved.

If you are deemed Competency Not Achieved, your trainer/assessor will discuss areas of further work and advise training tasks or options to be undertaken in order to meet competency requirements. You may be asked to call Premium Health to make reassessment arrangements.

Statement of Attainment and currency

A Statement of Attainment will be issued upon successful completion of your course. The Australian Resuscitation Council recommends and industry requirements often specify, a CPR assessment be done every 12 months to ensure current competency. Premium Health recommends a competency assessment of other first aid management knowledge and skills is conducted every three years.

Evaluation of the program

Your feedback is vitally important to us as we use this as part of our continuous improvement cycle. We especially value any personal comments you would like to make. Please complete the online evaluation form at the end of your course.

Premium Health's customer service

We offer you an on-going service in relation to first aid, health care or mental health course information and invite you to call our office on 1300 721 292 or email us on customerservice@premiumhealth.com.au.

For more information about Premium Health products, services and policies, access our website www.premiumhealth.com.au

PROVIDING FIRST AID

LEGAL RESPONSIBILITIES AND OBLIGATIONS OF THE FIRST AIDER

Accidents or acute illness may occur in any setting - the workplace, at home, within the community, at social or public gatherings or sporting events, on the road etc. One consideration to the first aider is whether or not they have a legal responsibility to provide first aid.

Duty of care

You have a legal duty of care to provide first aid:

- if you are the designated first aider in the workplace where an illness or incident occurs
- when you are employed to care for vulnerable groups such as children, the elderly or people with a disability
- when you have been accepted and appointed as a first aider by a particular group such as a sports club or cricket team

This is a duty of obligation legally imposed on the first aider to provide care appropriate to the setting/casualty. This duty is completed or 'discharged' when:

- the casualty is considered to be in a satisfactory condition following first aid treatment, with or without a recommendation to seek medical assistance
- the care of the casualty, including all details of the accident injury or illness, is handed over to medical personnel i.e. ambulance officers, doctors and nurses
- the casualty withdraws consent to first aid

In most other situations a legal duty of care to attend to a casualty does not exist, you have a choice whether or not to provide assistance. However, once you commit to action in providing first aid to a casualty, a legal duty is established.

If the situation poses a significant danger to you in providing first aid, you may withhold your services until the danger is eliminated or contained. You are not expected to become a casualty in the provision of first aid in order to fulfil a duty of care.

Consent

Consent by the casualty is required before providing first aid. As a first aider you should not intervene if a casualty refuses assistance. Statements such as "I can see you've been hurt; I'm a trained first aider; can I help you?" declare your concern, qualifications and intent.

If first aid treatment is given to a conscious casualty against their wishes, a charge of assault may be brought against you. Consent is implied where the casualty is unconscious.

Liability

As a first aider you are always responsible for your actions/omissions in administering first aid. To be found negligent, therefore liable, it must be proven in a court of law that your actions/omissions as a first aider were unreasonable, and the casualty suffered damage as a direct result of these actions/omissions. It is important that you:

- act within the bounds of your training
- do not misrepresent your qualifications
- deliver first aid to the best of your ability in order to bring about the best outcome for the casualty

In the workplace the employer generally accepts vicarious liability for designated first aiders. In other words, employers are held responsible for the acts and omissions of their employees.

In the public arena, first aiders who give freely of their services are covered for liability under various Acts i.e. Wrongs Act or Public Liabilities Acts (with Good Samaritan clauses embedded). The following is an example of one of our states legislation.

http://classic.austlii.edu.au/au/legis/vic/consol_act/wa1958111/s31b.html

Work Health and Safety in Australia (WH&S)

In 2008, Workplace Relations Ministers from around Australia agreed to nationally harmonise work health and safety laws.

Governments from each state and territory and the Commonwealth formally committed to develop and adopt a Work Health and Safety Act supported by Regulations and Codes of Practice within their jurisdiction. The intention is to deliver the same work health and safety protections to all Australians.

Currently Victoria and Western Australia are the two states not to enact these changes. For more information you can refer to the commonwealth website:

www.safeworkaustralia.gov.au

Work Health and Safety principles are that:

- every worker has the right to a safe and healthy work environment
- employers have an obligation to provide a working environment that does not threaten their employees' health, safety and welfare
- employers should make the workplace safe, rather than simply protecting the workers from an unhealthy or unsafe workplace
- workers should follow the company's health and safety policies/procedures
- workers should participate with employers in making decisions about health and safety in the workplace

First aid in the workplace

Those states that have not enacted the change have differing regulatory requirements relating to first aid in workplaces.

Codes of Practice provide practical guidance concerning the provision of first aid facilities and persons suitably trained to provide first aid. The Code is not law but should be followed unless there is another option which achieves the same result or a better solution. Whereas WH&S regulations provide an overview of how to set up a first aid system that assists with achieving compliance with first aid responsibilities outlined in their WH&S laws.

The websites below will assist you to access information regarding the WH&S information for each State and Territory.

SafeWork NSW	www.safework.nsw.gov.au
WorkSafe WA	www.worksafe.wa.gov.au
Workplace Health & Safety QLD	www.worksafe.qld.gov.au
WorkSafe Tasmania	www.worksafe.tas.gov.au
WorkSafe Victoria	www.worksafe.vic.gov.au
SafeWork SA	www.safework.sa.gov.au
NT WorkSafe	www.worksafe.nt.gov.au
WorkSafe ACT	www.worksafe.act.gov.au

Appropriate first aid facilities

Currently establishing what is appropriate in a workplace is done by using a prescribed approach i.e. following the recommendations in the relevant code or undertaking a self-assessment procedure.

The assessment takes into account:

- the size and layout of the workplace
- the location of the workplace
- the number and distribution of employees including shift work arrangements
- the nature of work hazards
- known occurrences of accidents or illnesses
- the distance between the workplace and the nearest available and appropriate medical occupational health services, including the nearest ambulance service

The current Codes and Regulations give guidance regarding:

- number and location of first aid kits
- employee training and advice on first aid assistance
- the number of first aiders required and training levels
- the need for information to be provided in different languages

Employee instruction

All employees should be provided with practical instruction in the nature of the first aid facilities in the workplace, the location of first aid kits, the names and work locations of the trained first aiders and procedures to be followed when first aid is required.

This instruction should occur:

- when an employee first becomes employed
- when there is a change in the nature or type of duties performed
- at regular intervals

FIRST AID KITS

Generally the maximum distance between the employee's usual workstation and the nearest kit is dependent upon the risk or likelihood of an accident occurring. Immediate access is required in areas of particular hazard. Where there are separate work areas it may be appropriate to locate first aid facilities centrally and provide portable first aid kits in each work area. This may include motor vehicles.

First aid kits should be clearly visible and accessible to employees. Employers should ensure that they are regularly maintained.

The container needs to protect the contents of the first aid kit from dust and damage. If any additional first aid kit modules are to be included, the container needs to be large enough to hold them, preferably in separate compartments.

The container needs to be easily recognisable (e.g. with a white cross on a green background prominently displayed on the outside and clearly marked as 'First Aid Kit') and should not be locked.

Kits will vary in contents and size depending on risks and hazards, potential and likely injuries, and work location.

A first aid kit may include:

- emergency services telephone numbers and addresses
- name, phone number/extension of the nearest first aider
- basic first aid notes
- note pad, pencil
- individually wrapped sterile adhesive dressing
- sterile eye pads
- sterile covering for serious wounds
- triangular bandages
- small medium and large sterile un-medicated wound dressing
- adhesive tape
- gauze squares
- crepe bandage (of different sizes)
- normal saline
- disposable gloves
- CPR shield
- thermal blanket
- instant ice packs
- scissors
- disposable masks

Additional first aid kit modules

The employer needs to assess whether additional first aid kit modules are required where particular hazards exist. Some examples of additional modules are those dealing with eyes, burns and remote workplaces.

A blue reliever metered dose inhaler or "puffer" (usually Ventolin) and a spacer could be added to the above first aid kit or kept in a separate container.

RECORDING AN INCIDENT

A first aider should take care to fully document all incidents where a casualty requests advice or first aid is administered. This can be recorded in a first aid record book and/or the accident/incident register according to the procedures of the particular workplace (see examples of incident reports following). *No matter how small the treatment, the first aider has a responsibility to record all treatments given.*

A handover report of all first aid incidents should be given to the appropriate person, e.g. paramedic, nurse, supervisor, etc. A casualty should always be referred to appropriate medical or nursing personnel when a first aider is unsure of what first aid management to give, or is concerned about the casualty's condition. An incident report may also be required to enable investigation of the cause of an accident.

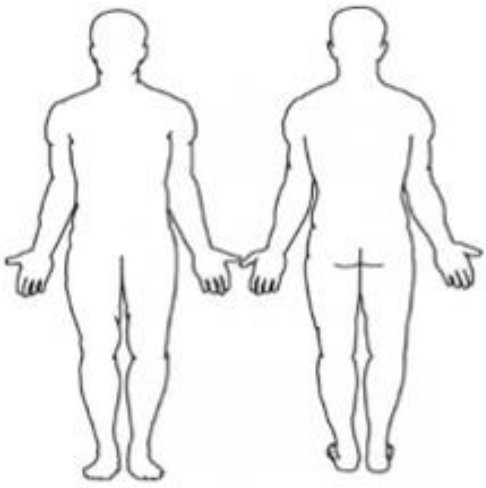
Guidelines for recording of information are as follows:

- Write in ink.
- Sign and date the report including any alterations.
- Do not use correction fluid to alter an entry, but draw a line through the incorrect area and initial and date the alterations made.
- Record the facts as stated by the casualty.
- Record your observations but do not offer comments for which you have no supporting evidence.
- If possible, the casualty should sign the report.
- The contents of the report are strictly confidential.
- The record book must be kept for 30 years.

Information that may be recorded on the register/report form:

- name of the casualty
- address, work department
- nature of the incident
- where incident occurred
- date and time of incident
- nature of the injury or illness
- signs and symptoms
- first aid management
- referral

Workplace incident report form (example)

Workplace Incident Report Form (EXAMPLE)								
Name of casualty:			Date of injury:		Time:			
Job title at the time of incident:			Sex:		Age:			
Names of witnesses (if any):								
Incident / Injury / Trauma / Illness details								
Location:								
Describe step by step what led up to the injury (continue on another page if necessary):								
First aid treatment given, please give a detailed response of your first aid management:								
Danger:	No ☐	Yes ☐	Action taken:					
Response:	No ☐	Yes ☐	Verbal ☐	Pain ☐				
Send for help:	No ☐	Yes ☐	Ambulance ☐	First aid kit ☐	AED ☐	Oxygen ☐		
Airway clear:	No ☐	Yes ☐	Action taken:					
Breathing:	No ☐	Yes ☐	Not effective ☐					
CPR:	No ☐	Yes ☐	Time started:					
Defibrillator:	No ☐	Yes ☐	Shocked ☐	Number of shocks:				
Further treatment:								
Referred to:	Hospital ☐	Occupational Health Nurse ☐	Doctor ☐	No Further Action ☐				
Areas affected: (shade all that apply)				Nature of injury: (most serious one)				
				☐ Abrasion, scrapes ☐ Amputation ☐ Broken bone ☐ Bruise ☐ Burn (heat) ☐ Burn (chemical) ☐ Concussion (to the head) ☐ Crushing injury ☐ Cut, laceration, puncture ☐ Eye injury ☐ Illness ☐ Sprain, strain ☐ Other _____			
Name of person completing form:				Contact number:				
Signature:				Date:				

Reporting and referring

Report formats vary from workplace to workplace because each presents a different context.

Incident notification systems

Incident notification systems require an employer to notify the WH&S authorities immediately after the employer becomes aware of an incident at the workplace which results in:

- the death of any person
- a person requiring medical treatment within 48 hours of exposure to a substance
- a person requiring immediate treatment as an in-patient in hospital
- a person requiring immediate medical treatment for:
  - major bleeding
  - amputation
  - spinal injury
  - head injury
  - serious eye injury
  - degloving or scalping
  - electric shock
  - serious burns
  - serious lacerations

SAFETY DATA SHEETS (SDS)

A Safety Data Sheet (SDS), previously called a Material Safety Data Sheet (MSDS), is a document that provides information on the properties of hazardous chemicals and how they affect health and safety in the workplace. For example an SDS includes information on:

- the identity of the chemical
- health and physicochemical hazards
- safe handling and storage procedures
- emergency procedures
- disposal considerations

The SDS should always be referred to when assessing risks in the workplace.

First aid

First Aid is the assessments and interventions that can be performed by a person (or by the casualty) with minimal or no medical equipment. The aims of first aid are to:

- preserve life
- protect the unconscious
- prevent further injury
- promote recovery

First aiders must be able to prioritise in an emergency. First aiders must be able to quickly assess an emergency situation and identify and minimise risks and hazards to themselves and the casualty. A first aider also needs to be able to assess the casualty for injury or illness and respond using appropriate first aid procedures and available resources. In some life threatening situations, prompt first aid could be the difference between life and death. With this in mind, a first aider should be able to recognise and respond to the most life threatening injuries or conditions immediately before moving on to the less serious injuries.

Communicating in an emergency

The attitude of the first aider has enormous influence on the casualty/casualties and others at the scene. When assisting a casualty, the first aider should deliver clear instructions and appear:

- calm and controlled
- knowledgeable
- compassionate
- reassuring
- assertive

Age groups

In providing first aid, the age of the casualty is important in deciding the appropriate actions to take. The following age categories are recognised by the Australian Resuscitation Council.

Infant:	**Child:**	**Adult:**
0 – 1 Year	1 – 8 Years	Over 8 Years

The size of a child, rather than their age, should be the guiding factor.

History of the emergency incident

Collecting information about what happened in an emergency helps to decide what needs to be done. Information about the emergency may be gained from:

- the casualty/casualties
- witnesses
- your observations may include medical alert bracelet/ necklace

Asking questions is the best way to find out what happened. Identify who could be the ideal person to tell you what is going on and ask them:

- what has happened here?
- how many people are involved?
- what time did this happen?
- tell me what you saw?
- have they said anything to you?
- how long have they been this way?
- have you moved the person?
- has anyone called the ambulance?

A picture needs to be built up about a casualty's condition. Information gained about the casualty from their signs and symptoms assists the first aider to make appropriate decisions as to the first aid required.

Signs

Any information gained by the first aider through their senses of sight, smell, hearing and touch, such as:

- **sight** - bleeding, colour of the person's skin, deformity of a body part
- **smell** - smell of urine, vomit
- **hearing** - the sound of breathing, wheezing or gasping breaths
- **touch** - the feel of pulse, the heat of the skin, body temperature

Symptoms

Something the casualty feels, experiences, complains of or reports, such as:

- pain
- loss of sensation
- cold/heat
- thirst
- dizziness
- nausea
- loss of memory

TRIPLE ZERO (000)

Getting help in an emergency

Calling triple zero (000) contacts the emergency services and is the primary emergency number in Australia and can be accessed from fixed and mobile networks. Dialling 112 directs you to the same call service and does not give priority over 000. Upon dialling you will be asked which service you require:

- Ambulance
- Fire Brigade
- Police

POISONS INFORMATION CENTRE (13 11 26)

If you are calling from a mobile phone, you may also be asked which state you are calling from.

The service will ask you:

- what is the exact location of the emergency?
- what is the phone number you are calling from?
- what is the problem/what exactly happened?
- how many people are hurt?
- what is the age of the casualty?
- is the casualty conscious?
- is the casualty breathing?

Do not hang up until told to as you may be required to provide further information. Have someone meet the ambulance and provide directions to the scene.

The call taker will provide instruction where appropriate in what steps the caller should take until the arrival of an ambulance.

WORKING SAFELY WITH ELECTRICITY

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Persons performing work on, near, or in the vicinity of electrical apparatus must use the following approved PPE:

- safety headwear
- safety footwear
- ankle to wrist natural fibre or arc flash protective clothing
- insulated gloves for live work
- face/eye protection for live work

For all works by ESI workers in the vicinity of electrical apparatus, either specific written work instructions must be used or alternatively, organisational procedures will apply in conjunction with the use of Instructed or Authorised Persons. Organisational procedures include risk assessment processes which document and record control measures. The control measures implemented will minimise the risks involved and may include:

- defining the work area
- isolating and earthing the electrical apparatus
- de-energising live electrical apparatus adjacent to the work area
- the use of barriers and signs
- the use of approved covering
- the use of Safety Observers
- the issue of the appropriate Authority to Work in the Vicinity of Electrical Apparatus
- defining access routes

SAFE APPROACH DISTANCE (SAD)

When objects are being handled manually or by mechanical equipment, care must be exercised to prevent the objects or the mechanical equipment infringing Safe Approach Distance (SAD).

Safe Approach Distance (SAD) is based on an Exclusion Zone principle. This principle defines an area around a conductor, into which no part of the person, mobile plant or object (other than approved insulated objects) may encroach. Work practices must be established to ensure persons, mobile plant and unapproved objects do not encroach on the SAD.

See table below (sourced from The Code of Practice on electrical safety for work on or near high voltage electrical apparatus. The Blue Book, Victoria 2012) for safe approach distances.

Table 1: Safe approach distance for persons to exposed conductors

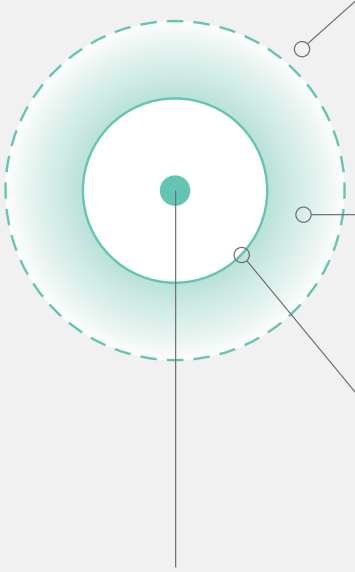
Nominal phase to phase AC voltage (kV)	Ordinary persons (millimetres) (Note 1)	Instructed persons or authorised persons (millimetres) (Notes 2 and 3)
LV aerial lines	1500	Instructed persons—no contact authorised persons—insulated contact only
6.6	2000	700
11	2000	700
22	2000	700
33	2000	700
50	2000	750
66	2000	900
110	3000	1000
132	3000	1200
220	4000	1700
275	5000	2300
330	6000	2700
400	6000	3300
500	6000	3600

Nominal pole to earth DC Voltage (kV)		
LV DC aerial line (equal to or less than 1.5 kV	1500	Instructed persons—no contact authorised persons—insulated contact only
± 25	2000	700
± 85	3000	1000
± 150	3000	1200
± 270	4500	1800
± 350	5000	2500
± 400	6000	2900

Notes:

1. See definition for ordinary person. Persons not under control of the asset owner (network operator or HV customer) shall refer to the WorkSafe/ESV No Go Zone Rules and Section 12 of the Code.
2. Deliberately avoid movements that could result in distances being infringed.
3. These distances specified are based on work from a stable surface. Appropriate allowance shall be made for conductor sag and sway.

Figure 6.3: Illustration of differences between safe approach distance, near and vicinity



Vicinity means a situation where it is unlikely that a person will, either directly or through any conducting medium (e.g. via mobile plant), come within the relevant safe approach distances.

Near means a situation where there is a reasonable possibility of a person, either directly or through any conducting medium (e.g. via mobile plant) coming within the relevant safe approach distances.

Safe approach distance means the minimum distance in air from exposed conductors that shall be maintained by a person, vehicle or mobile plant (including its load, controlling ropes and any other accessories) when approaching electrical apparatus other than for work in accordance with an access authority.

Conductor means a wire, cable or form of metal designed for carrying electrical current.

Is it safe to approach?

- do not rush into any situation without first ensuring your safety
- do not approach to closer than 6 metres if power lines are involved and may be live
- be aware of step and touch potential
- if power lines are in contact with the Elevate Work Platform (EWP) step potential will radiate from the stabiliser legs and tyres
- use your sense of hearing and smell, check for unusual sounds, be alert for flammable gases and fumes
- do not approach if you suspect escaping gas
- in confined spaces, do not enter if you are not trained in confined space rescue

FIRST AID IN AN ESI ENVIRONMENT

Electrical risks are risks of death, electric shock or other injury caused directly or indirectly by electricity. The most common electrical risks and causes of injury are:

- electric shock causing injury or death. The electric shock may be received by direct or indirect contact, tracking through or across a medium, or by arcing. For example, electric shock may result from indirect contact where a conductive part that is not normally energised becomes energised due to a fault (e.g. metal toaster/body, fence)
- arcing, explosion or fire causing burns. The injuries are often suffered because arcing or explosion or both occur when high fault currents are present
- electric shock from 'step-and-touch' potentials
- toxic gases causing illness or death. Burning and arcing associated with electrical equipment may release various gases and contaminants
- fire resulting from an electrical fault

Electric shocks from faulty electrical equipment may also lead to related injuries, including falls from ladders, scaffolds or other elevated work platforms. Other injuries or illnesses may include muscle spasms, palpitations, nausea, vomiting, collapse and unconsciousness.

ELECTRICAL CONTACT

When direct contact with an electrical source occurs the results can vary. With high voltage contact, the person will be thrown off the conductor, and could have flash burns over the body and may lose body tissue. With low voltage contact, the person could remain in contact with the conductor and be severely burnt. Low voltage contact can cause tetanic muscle contractions, causing the fingers to close around the conductor. The safest method of release is to turn off the power. This is not always possible and you may be required to release the injured person from the live conductor.

EFFECTS OF ELECTRICAL CONTACT

AC		DC	
1-2 milliamps	Tingling sensation of the skin	**Less than 2 milliamps**	Hard to notice
5-10 milliamps	Painful sensation	**Greater than 2 milliamps**	Sensation is noticeable
10-20 milliamps	Tetanic muscle contractions	**About 10 milliamps**	Pain may be severe with possible muscle spasms
30-90 milliamps	Respiratory arrest due to contraction of the diaphragm and intercostal muscles	**10-20 milliamps**	Uncontrolled muscle contractions
100 milliamps	Ventricular fibrillation	**20-50 milliamps**	Possible breathing failure
2-5 amps	Cutaneous burns	**50-100 milliamps**	Ventricular fibrillation
5-10 amps	Asystole	**100-200 milliamps**	Cardiac arrest

MANAGEMENT OF THE CONSCIOUS AND UNCONSCIOUS BREATHING CASUALTY
FIRST AID PRIORITY ACTION PLAN

A first aid priority action plan is a quick reference tool to guide the first aider in what to do and the order in which actions are taken when managing an emergency situation. Each letter represents a major step in the care of a casualty and the actions in each step are completed before moving on.

D — DANGER

- Check for dangers to yourself, bystanders and the casualty.
- Make the scene safe by removing the danger from the casualty or the casualty from the danger. Only continue when it is safe to do so. If unsafe, remain clear and call triple zero (000).

R — RESPONSE

Is the casualty conscious? A person who fails to respond or shows only a minor response, such as groaning without eye opening, manage as if unconscious.

Assess for response to voice and touch:

- Give simple commands e.g. “Open your eyes, squeeze my hand”. With an adult casualty, grasp the shoulders firmly to determine a response; for children and infants, assess their response by talking or clapping and tapping the ends of their feet. **Never shake an infant.**
- If the casualty is **conscious**, check **ABCD** and position appropriately and send/call for help (triple zero 000) as necessary.
- If the casualty is **unconscious**, continue with the letter "S" below.

S — SEND

- Send/call for help (triple zero 000).
- Send for AED and first aid kit where available.

A — AIRWAY (air passages)

- Open the mouth and check for foreign material or obstructions. In an infant make sure the nose is also clear.
- If airway is not clear from food, vomit, blood or fluids (e.g. immersion incident) turn casualty into the recovery position, open mouth and drain matter downwards, remove loose dentures and remove visible material with rescuer’s fingers then position on back.
- Lift chin upwards (towards the ceiling) by placing fingers under chin or use a pistol grip; this lifts the tongue from the back wall of the throat and opens the airway.
- With upper hand on forehead, tilt an adult and child’s head fully back to further open the airway. Place an infant’s head in a neutral position, sometimes known as a "sniffing position" (as tilting an infant’s head backwards or forwards may cause airway obstruction).

B — BREATHING (lungs)

Adults breathe approximately 12-15 breaths per minute; infants/children approximately 20 breaths.

- Look for the even movement of the rising and falling of the lower chest for 10 seconds.
- Listen for the sound of regular normal breathing.
- Feel air escaping from the mouth/nose with your cheek.

Note: A casualty who is breathing normally is now turned on to their side (recovery position) with neck stability if possible.

If a casualty is not breathing or not breathing normally, commence resuscitation as per the management of a NON-BREATHING casualty action plan.

C — CIRCULATION (heart)

- Check for circulation by checking for warmth (eg check body temperature with back of hand on patients forehead or back of neck) and skin colour (if lining inside the mouth is pink this is a positive sign).

D — DEADLY BLEEDING

- Check for external bleeding – pooling or spurting blood loss, control with a pad and bandage or improvised material which may be replaced when first aid equipment is made available. Elevate and rest area where possible.
- Check for internal bleeding – bleeding from ears, tenseness or swelling of abdomen/thighs.

MANAGEMENT OF THE UNCONSCIOUS NON BREATHING CASUALTY
FIRST AID PRIORITY ACTION PLAN

D — DANGER
- Check for dangers to yourself, bystanders and the casualty.
- Make the scene safe by removing the danger from the casualty or the casualty from the danger. Only continue when it is safe to do so.

R — RESPONSE
Is the casualty conscious? A person who fails to respond or shows only a minor response, such as groaning without eye opening, manage as if unconscious.

Assess for response to voice and touch:

- Give simple commands e.g. "Open your eyes, squeeze my hand". With an adult casualty, grasp the shoulders firmly to determine a response; for children and infants, assess their response by talking and tapping the ends of their feet. **Never shake an infant.**
- If the casualty is **conscious**, check **ABCD** position appropriately and send/call for help (triple zero 000) as necessary.
- If the casualty is **unconscious**, position the casualty on their back for further assessment.

S — SEND
- Send/call for help (triple zero 000).
- Send for AED and first aid kit where available.

A — AIRWAY (air passages)
- Open the mouth and check for foreign material or obstructions. In an infant make sure the nose is also clear.
- If airway is not clear from food, vomit, blood or fluids (e.g. immersion incident) turn casualty into the recovery position, open mouth and drain matter downwards, remove loose dentures and remove visible material with rescuer's fingers then position on back.
- Lift chin upwards (towards the ceiling) by placing fingers under chin or use a pistol grip; this lifts the tongue from the back wall of the throat and opens the airway.
- With upper hand on forehead, tilt an adult and child's head fully back to further open the airway. Place an infant's head in a neutral position (as tilting an infant's head backwards or forwards may cause airway obstruction).

B — BREATHING (lungs)
Adults breathe approximately 12-15 breaths per minute; infants/children approximately 20 breaths.

- Look for the even movement of the rising and falling of the lower chest for 10 seconds.
- Listen for the sound of regular breathing.
- Feel air escaping from the mouth/nose with your cheek.

If a casualty is not breathing or not breathing normally commence CPR.

C — CARDIOPULMONARY RESUSCITATION (CPR)
- Deliver 30 compressions and 2 rescue breaths (rescuer takes about 1 second to deliver 1 breath) x 5 times in two minutes and repeat until ambulance arrives.
- Compressions only, can be given if the first aider is unable or unwilling to perform rescue breathing at approximately 100-120 compressions per minute.

D — DEFIBRILLATION
- Open/turn on the defibrillator and follow voice prompts.

SHOCK

Shock is a serious, life threatening condition where insufficient blood flow reaches the body tissues. When vital organs do not receive enough oxygen rich blood they fail to function properly. Shock may accompany any injury/illness to some degree. Shock may be delayed.

Causes

- loss of a large volume of blood or body fluid (external or internal bleeding, burns, diarrhoea, vomiting, severe dehydration/heat stroke)
- heart conditions (heart attack)
- abnormal dilation of blood vessels (severe infection, allergic reactions, severe brain/spinal injuries)
- blockage of blood flow in or out of the heart

Signs and symptoms

The signs and symptoms and rate of onset will vary widely depending on the underlying cause of the shock.

- weakness
- pale (change of normal skin colour), cool, clammy skin
- rapid breathing
- rapid pulse which may become weak or slow
- thirst and nausea
- vomiting
- inability to think clearly, anxious, disorientated, agitated
- may lose consciousness

Management

Initiate the first aid priority action plan (DRSABCD) and include the following actions:

- Follow the first aid priorities DRSABCD action plan.
- Position casualty lying on their back. If casualty is unconscious, position on their side in the recovery position.
- Control any bleeding with direct pressure.
- Keep warm.
- Provide reassurance and observe for change in condition.
- Call for medical assistance - Triple zero (000).

BLEEDING AND SHOCK

BLEEDING

The circulation of blood to all parts of the human body is essential for life. 4-6 litres of blood flows within the circulatory system through varying sized tubes known as arteries, veins and capillaries. The heart is the pump which moves blood with each beat through these tubes around the body to tissue and organs.

External bleeding

Obvious bleeding can be seen from a wound on the body surface and may be:

- **minor:** minimal blood loss e.g. abrasion, small cut. Blood oozes due to injury to small surface blood vessels (capillaries, small veins)
- **major/deadly bleeding:** loss of, or potential to lose, a large volume of blood e.g. spurting blood from a cut artery

Bleeding may lead to shock or fainting. As a first aider our main aim is to reduce blood loss from the casualty.

Management of external bleeding

Minor bleeding

Initiate the first aid priority action plan (DRSABCD) and include the following actions:

- Apply hand pressure (about 30 seconds).
- Clean wound if necessary.
- Cover with sterile/clean dressing.

Major/deadly bleeding

Initiate the first aid priority action plan (DRSABCD) and include the following actions:

- Examine wound for embedded object.
- Put on gloves
- Using hands or fingers, apply, firm, direct and continuous pressure (if there is no obvious foreign body, The casualty or bystander could also apply pressure).
- When a pad and bandage becomes available, firmly apply the pad and bandage over the wound, and in the case of a foreign object, around the wound, until the bleeding stops
- Restrict movement and ideally immobilise the part.
- Rest the casualty.
- Treat for shock.

Note: Consider the risk of cross infection in your management: Use gloves if available or some other physical barrier. Where possible, instruct casualty to apply direct pressure to their wound.

Minor bleeding

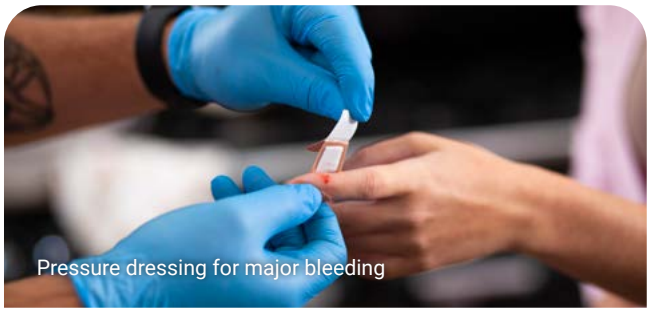

Minor bleeding


Major bleeding

Pressure dressing

- Place pad on the wound.
- Place bandage tail on pad and apply one or two turns reasonably firmly until the pad is completely covered by the bandage.
- Work downwards off the pad (towards the fingers/ toes) for one or two turns until the pad is completely covered by the bandage.
- Apply pressure as you now bandage up the limb (towards armpit/groin), covering two thirds of the bandage (of the prior turn) till pad is totally covered.

- Check for:
  - tension of bandage (there should be no 'lift off' of pad and bandage from the skin)
  - changes in sensation
  - changes in circulation (changes in colour/warmth)
- Modify tension of bandage if too loose or too tight by reapplying. This is achieved by undoing half the bandage then reapplying it with more or less tension as required.
- Secure end by tucking into previous wraps or taping.
- Assess for circulation change. There should be a mild change in limb circulation. The hand/foot should look slightly pinker and feel slightly cooler than the unaffected limb. There should however not be any lessening of sensation, that is numbness or tingling in the limb as this may indicate nerve compression.
- Where changes in sensation (numbness or tingling), decreased temperature and colour becomes pale/blue, loosen the bandage.


Pressure dressing for major bleeding


Pressure dressing for major bleeding


Pressure dressing for major bleeding

Note: If bleeding occurs through the initial pad and bandage, place a second pad over the first pad and bandage and secure with another bandage. If major bleeding continues it may be necessary to remove the pad(s) to ensure that a specific bleeding point has not been missed. The aim is to press over a small area and thus achieve greater pressure over the bleeding point. For this reason an unsuccessful pressure dressing may need to be removed to allow a more direct pressure pad on the bleeding location.

Arterial tourniquet

A tourniquet is a constricting device applied firmly to a limb to control life-threatening bleeding that cannot be controlled by direct pressure e.g. limb amputation, shark attack, severe multiple trauma.

Commercially manufactured windlass tourniquets are more effective than improvised tourniquets and optimal when first aiders are trained in correct application. The ARC recommends all arterial tourniquets should be applied in accordance with the manufacturer's instructions (or 5 cm above the bleeding point if no instructions) and tightened until the bleeding stops. If the bleeding continues, check the position and application of the tourniquet. However if bleeding does continue and is not controlled apply a second tourniquet preferably above the first.

The time of tourniquet application on the limb must be noted and passed onto emergency personnel. Once applied, the casualty requires urgent transfer to hospital and the tourniquet should not be removed until the victim receives specialist care.

If a correctly applied tourniquet(s) has failed to control the bleeding consider using a haemostatic dressing in conjunction with the tourniquet.

Applying a tourniquet and haemostatic dressing requires additional training.

Haemostatic dressing

Arterial tourniquet

Examples of external bleeding

Embedded foreign object

Some examples of foreign objects which may become embedded in a wound are:

- knives
- sticks and stakes
- nails
- metal tools

The risk with a deeply embedded foreign object is that it may damage vital tissues including major blood vessels causing severe bleeding and shock.

ELECTRICAL BURNS

Typically, electrical burn injuries are more severe than is apparent from external appearance. Electrical burns are associated with high or low voltage. High current flow may be associated with an entry and exit wound but most of the damage is to the deep unseen tissues.

Electrical burn severity is determined by the voltage, current and type of current, duration of contact and resistance at contact points. In general, low voltage injuries are associated with localised areas of tissue destruction. High voltage injuries tend to be characterised by deep and extensive tissue damage, and 3 general patterns of injury:

- 'True' electrical injury caused by current flow
- electrical arc injury caused by arc of current from source to object
- flame injury from ignition of clothes etc.

High voltage injuries are frequently associated with other injuries. Cardiac arrest may also result from current flow through the heart.

Management of the electrical danger

The priority is safety. The first aider needs to ensure that the power is disconnected before approaching the casualty.

Domestic voltage electricity:

- Turn off switch and remove plug from socket or turn off mains.
- If this is not possible, remove casualty from the current using dry, non-conducting material such as a wooden stick.

High voltage electricity:

- Contact the appropriate authority to disconnect the electricity or call triple zero (000).
- Wait until you are advised by the electricity authority before entering scene.
- Ensure the safety of yourself and bystanders. Organise a safety perimeter, cordon off a minimum of 18 metres around the scene.

Note: Electrical current arcing through the air between two points of contact could reach up to 20,000 degrees Celsius and will cause arc burns. Any person standing in the pathway of, or near, the electrical arc, may receive severe burns from the high temperatures, even without being in direct contact with the electrical source.

Management of the casualty

- DRSABCD.
- Manage burns making sure that burns are cooled with running water for 20 minutes well away from live wires.
- Seek medical assistance.
- Commence CPR if required.

ELECTRIC SHOCK

Electric shock can cause injuries including burns and disturbances to heart rhythm (heart failure) that could be fatal.

Actual contact with overhead electric lines is not necessary to result in electric shock. A close approach to the line conductors may allow a 'flashover' or arc to take place. The risk of flashover increases as the line voltage increases.

The human body conducts electricity. If any part of the body receives an electric shock, the electricity will flow through the tissues with little obstruction.

Depending on the length and severity of the shock, injuries can include:

- Burns to the skin.
- Burns to internal tissues.
- Electrical interference or damage (or both) to the heart, which could cause the heart to stop or beat erratically.

The typical symptoms of an electric shock include:

- Unconsciousness.
- Difficulties in breathing or no breathing at all.
- A weak, erratic pulse or no pulse at all.
- Burns, particularly entrance and exit burns (where the electricity entered and left the body).
- Sudden onset of cardiac arrest.
- Sometimes victims of electric shock may appear to be unhurt, but they should still be treated as a victim of electric shock. Some injuries and further complications may not yet be obvious. An examination in hospital is important after any electric shock.

Management of electric shock

- Initiate the first aid priority action plan (DRSABCD)

If breathing is absent or the casualty is not breathing normally:

- Commence CPR.
- Continue CPR until the ambulance arrives.
- Turn on/open AED and follow voice prompts.

Important: Always disconnect the power supply before trying to help a victim of electric shock!!

ENVENOMATION

Australia is home to some of the most venomous creatures in the world. The bites and stings of some animals are potentially dangerous due to the venom injected or because the casualty is allergic to the sting/venom. The purpose of first aid for bites and stings is to stop the venom spreading away from the bitten area and attacking vital organs of the body or to respond effectively in response to an allergic reaction to a bite or sting. Those bites and stings which require the pressure immobilisation technique require rapid intervention as life threatening effects can occur within 10 minutes.

With prompt effective first aid management the casualty may require less antitoxin or other treatment/s upon arrival at the hospital.

Capturing a photo on a phone may help in identification but should not delay sending for an ambulance and commencing treatment.

For advice concerning any envenomation call the Australian Venom Research Unit 24 hour advisory line 1300 760 451 or for online information visit www.avru.org

Signs and symptoms

- bite/sting marks
- pain
- itchy rash
- skin redness
- sweating
- nausea/vomiting
- headache
- respiratory weakness
- muscle spasm
- collapse
- copious amounts of saliva
- tingling around mouth

Management

Initiate the first aid priority action plan (DRSABCD) and include the following actions:

- Establish the history:
  - What time was the casualty bitten or stung?
  - Was the casualty able to identify the creature involved?
  - Does the casualty have a known allergy to the creature?
- Manage the casualty according to the type of bite or sting.
- Lie the casualty down and reassure.
- Observe for and manage allergic reactions.
- Seek medical assistance.

Scan **QR Code** using your mobile phone camera to access video content.

TYPES OF MANAGEMENT

1. Pressure immobilisation technique

Pressure immobilisation was originally introduced for the treatment of Australian snake bites. This method is also recommended for various bites/stings from other Australian animals such as funnel web spiders, blue ringed octopus and cone shell.

Pressure immobilisation acts to slow the rate at which the venom reaches the bloodstream via the lymphatic system, perhaps for several hours. The toxic effects of the venom are then delayed. In some cases the venom may also be inactivated when trapped in the bandaged tissue.

- Apply a broad firm bandage over the site of the bite as soon as possible.
- Elastic compression bandages are ideal to achieve adequate compression. There are also snake bite bandages with a unique indicator to show the correct tension required for applying compression using the Pressure Immobilisation Technique (PIT).
- The bandage should be as firm as you would apply to a sprained ankle but not as tight as a pressure bandage to control bleeding.
- Then begin a new bandage from the extremity (toes or fingers of the bitten limb) upwards to cover as much of the limb as possible.
- Splint the limb including joints on either side of the bite to restrict limb movement.
- Keep the casualty and the limb completely at rest.
- Bring transport to the casualty if possible. Transport the casualty to medical care, preferably by ambulance.
- If alone, the casualty should apply the pressure immobilisation technique if possible and seek help.
- Do not remove the bandages or splints.
- If the bite is not on the limb, firm direct pressure on the bite site may be useful.

Indications for use of the pressure immobilisation technique

Snakes including sea snakes

Funnel web spiders

Blue-ringed octopus

Cone shell

Note:

- do not try to catch the snake
- do not "cut and suck"
- do not wash the area
- do not apply a tourniquet
- do not move the casualty

2. Ice management

The application of ice packs is aimed at reducing both pain and swelling.

Indications for use of ice management

Bee

Remove bee sting before using an ice pack, by scraping the sting sideways with a fingernail.

Red back spider

Wash the bite area with soap and water prior to applying ice pack. Anti-venom is available for Red Back spider envenomation.

White-tailed spider

Wash the bite area with soap and water prior to applying ice pack.

Minor non tropical jellyfish (Pelegia)

Minor non tropical jellyfish stings also use the ice only management after rinsing in sea water (not fresh). If more than 50% of the skin of one limb is affected seek urgent medical assistance.

Mosquito

European wasp

Scorpion

Centipede

Nettle

Ant

3. Hot water immersion or hot pack

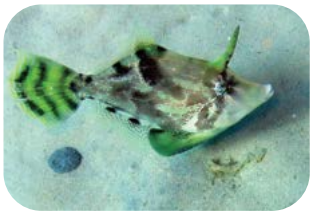
Place the casualty's stung area in hot water (not hotter than the rescuer can comfortably tolerate).

Indications for use of hot water immersion or hot pack

Catfish

Stingray

Stone fish



Leather jacket

Gurnard

Flathead

Remove any tentacles sticking to the skin by flooding area with sea water (do not wash with freshwater). Remove remaining tentacles with forceps or a gloved hand. If local pain is unrelieved by heat, or hot water is not available, the application of ice may be effective. Vinegar is not recommended.

4. Vinegar

Vinegar is used to inactivate the discharge of nematocysts (stinging capsules) of all known box jellyfish and therefore prevent further injection of venom. Vinegar may cause nematocyst discharge in some other jellyfish stings and therefore should be used only in tropical areas where potentially fatal jellyfish stings may occur.

Vinegar cannot relieve the pain already present, other agents are promoted for pain relief in jellyfish stings. Any water applied to a jellyfish sting, once the skin has dried, will cause the undischarged nematocysts present to fire, yet the extreme temperatures of the water (hot or ice) can, paradoxically, give relief from the pain.

Liberally pour vinegar over the site of box jellyfish welts, tropical jellyfish stings and Irukandji stings.

Indications for use of vinegar

Box jellyfish

Irukandji jellyfish

Management techniques & indications summary

Pressure immobilisation technique used for:

- all snakes and sea snakes
- funnel web spider
- blue-ringed octopus
- cone shell

Ice management technique used for:

- bee
- centipede
- wasp
- ant
- mosquito
- flies
- nettle
- scorpion
- red back spider
- white-tailed spider
- minor non-tropical jellyfish stings

Hot water immersion or hot pack technique used for:

- stingray
- stone fish
- blue bottle or Portugese man of war
- stinging fish:
  - flathead
  - gurnard
  - catfish
  - leather jacket

Vinegar technique used for:

- box jellyfish
- irukandji jellyfish
- tropical jellyfish

REFERENCES

Energy Safe Victoria

Your responsibilities.
https://esv.vic.gov.au/licensing-coes/electrical-licences/your-responsibilities/#a-grade-electrician-responsibilities

Energy Safe Victoria

The Blue Book.
https://www.esv.vic.gov.au/industry-guidance/electrical/electrical-network-infrastructure/blue-book

Victorian Electricity Supply Industry (VESI)

The Green Book
http://www.vesi.com.au/index.php/the-green-book

NOTES

PREMIUMHealth

Premium Health has a range of first aid, health care, mental health and high intensity support skills training programs conducted by our nurses, paramedics or mental health practitioners.

Call us to discuss our onsite face-to-face and live virtual classroom options, delivered anywhere in Australia.

HEALTH CARE

- Assisting clients with medication
- Assisting clients with medication (part 2)
- Advanced medication - eye and ear drops, topical creams, oral liquids and patches
- Autism spectrum disorder
- Blood pressure – using a digital blood pressure machine
- Complex bowel care training - enema and suppository administration
- Complex bowel care training - ostomy and stoma care
- Complex wound care support training
- Coronavirus and infection control
- Dementia training for support workers
- Diabetes training for support workers
- Dysphagia support training
- End of life care
- Enteral feeding support training (tube feeding via PEG and PEJ)
- Epilepsy training for support workers
- Epilepsy and seizure support training and midazolam administration via intranasal and buccal routes
- Food safety awareness for support workers
- Infection control
- Managing behaviours with positive support
- Manual handling
- Nebuliser training for asthma
- Positive behaviour support
- Pressure injury – prevention and care for support workers
- Providing personal care with dignity and respect
- Shallow suctioning
- Urinary catheter support training (IDC and SPC)

FIRST AID TRAINING

- Cardiopulmonary resuscitation (CPR)
- Provide first aid
- Asthma and anaphylaxis
- Advanced first aid

MENTAL HEALTH

- Mental health first aid
- Leadership and resilience training
- Mental health awareness

And many others...

1300 721 292
premiumhealth.com.au
info@premiumhealth.com.au

ABN 24 692 649 946