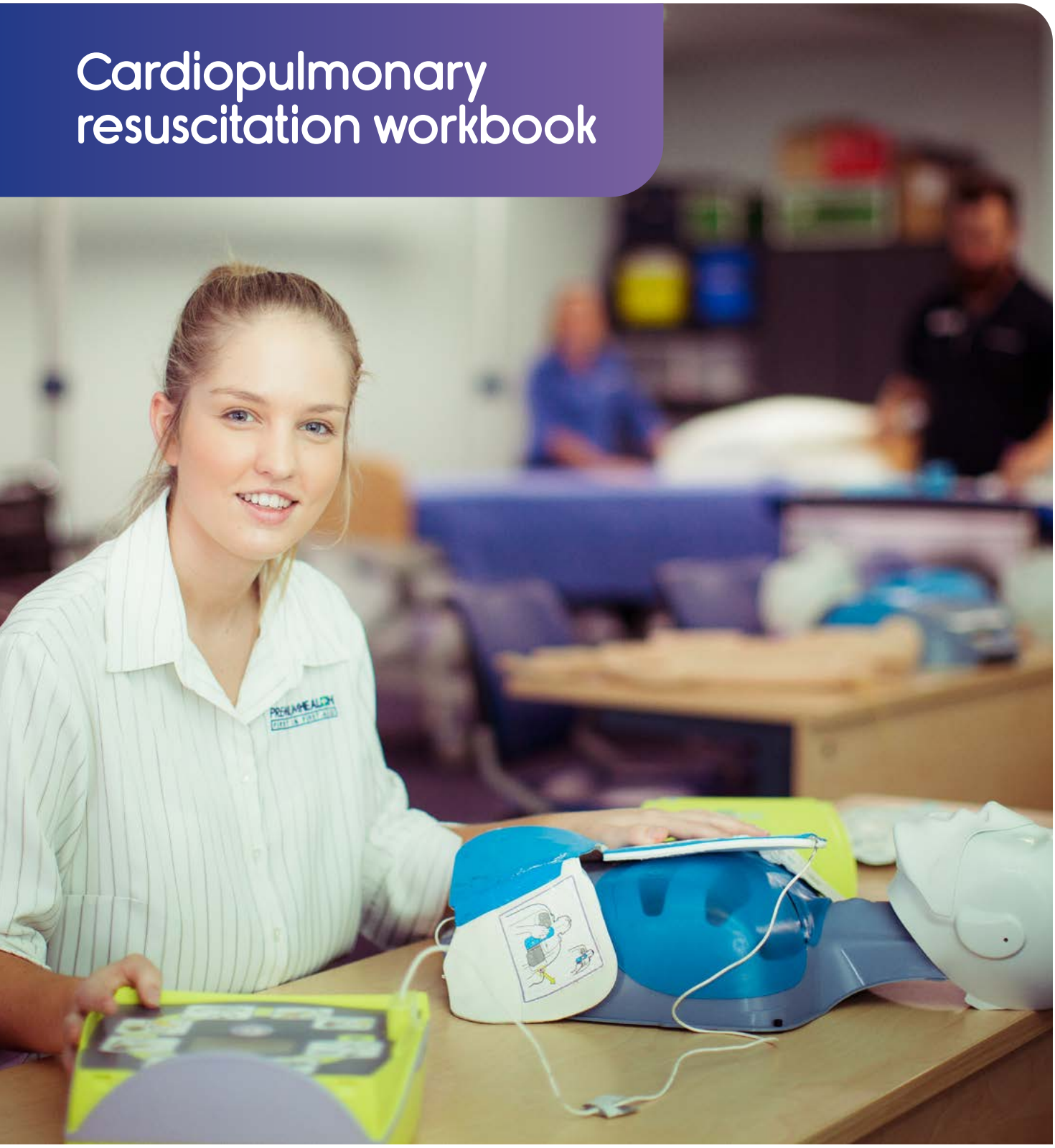
PREMIUMHealth
FIRST AID

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

Cardiopulmonary resuscitation workbook



premiumhealth.com.au

1300 721 292

Thank you for undertaking your course with Premium Health, we hope you enjoy your training.

We encourage you to practice your skills often, in your own home. Research has shown retention of CPR skills is limited, however in the "doing" or the "practicing" we remember and recall is easier should we need to undertake this lifesaving skill.

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, present and emerging 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

PUBLISHER: PREMIUM HEALTH
WRITTEN BY: PHILLIPA WILSON

The technical information and techniques used for first aid management includes the latest knowledge from research and other relevant national and international professional bodies.

Special acknowledgement is given to the Australian Resuscitation Council for the information relating to their Guidelines.

Welcome to your course and Premium Health.

The aim of this resource is to provide the essential knowledge and skills you require to provide cardiopulmonary resuscitation.

We select our Premium Health trainers and assessors carefully. All are either nurses or paramedics with appropriate training qualifications, technical expertise and experience in both education and emergency first aid care.

CARDIOPULMONARY RESUSCITATION WORKBOOK

WHEN YOU SEE THIS ICON:

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

WHAT YOU NEED TO KNOW ABOUT YOUR COURSE

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.

Where there are any difficulties with reading, writing, understanding English or a physical disability, training approaches can be varied to support learning and assessment.

In teaching CPR competencies, the Premium Health method is used. This unique and innovative training technique uses a familiar song to help you recall the rate and rhythm of CPR, thus assisting in the performance of a complex skill. If you had to give CPR, it is intended the song would be sung silently, under your breath.

Research shows that the Premium Health method enables people to retain and recall their CPR skills over a longer period of time. For any first aider, managing a cardiac arrest is stressful, so an easily remembered method to achieve compression rhythm and to count the compression/breath cycles is invaluable.

Course learning outcomes

The performance criteria for all competency elements can be found at www.premiumhealth.com.au. This is important information that will assist you to determine what you need to do to meet the assessment requirements for the course.

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 considered 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

A statement of attainment will be issued upon successful completion of your course. The Australian Resuscitation Council recommends CPR be undertaken at least annually and industry requirements have set a precedence of CPR annually.

Evaluation of the course

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.

Your trainer will provide you with the way to access the feedback survey.

Premium Health's customer service

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

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

Prerequisite work

There are there are some first aid courses that require prerequisite work to be completed prior to your face to face assessment.

You will be turned away by your trainer if this work is not presented for review on the training day. Should your course have been arranged by a training coordinator you should contact them to discuss further course management or as an individual enrolment contact our office for instruction.

FIRST AIDER RESPONSIBILITIES

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

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

Wrongs Act 1958 - Section 31B

Protection of good samaritans

(1) *A good samaritan is an individual who provides assistance, advice or care to another person in relation to an emergency or accident in circumstances in which -*

(a) *he or she expects no money or other financial reward for providing the assistance, advice or care; and*

(b) *as a result of the emergency or accident the person to whom, or in relation to whom, the assistance, advice or care is provided is at risk of death or injury, is injured, is apparently at risk of death or injury, or is apparently injured.*

(2) *A good samaritan is not liable in any civil proceeding for anything done, or not done, by him or her in good faith -*

(a) *in providing assistance, advice or care at the scene of the emergency or accident; or*

(b) *in providing advice by telephone or by another means of communication to a person at the scene of the emergency or accident(3)*

(3) *Sub-section (2) applies even if the emergency or accident was caused by an act or omission of the good samaritan(4)*

(4) *Sub-section (2) does not apply to any act or omission of a good samaritan that occurs before the assistance, advice or care is provided by the good Samaritan.*

Confidentiality

In any first aid situation, you must take steps to maintain both the casualty's confidentiality and their personal privacy. Information about a worker's health and all records relating to an employee's treatment must remain confidential in accordance with the requirements of the Privacy Act 1988.

If you have provided first aid to a casualty you are unable to talk about the incident to other people unless you have permission from the casualty involved. To assist in maintaining privacy you should aim to keep crowds away, put up a screen if necessary, and cover any exposed body parts with blankets, or sheets, if available.

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

It is suggested you access your WH&S regulatory body to review the current first aid requirements for your State or Territory.

Some of the requirements to determine a workplaces response will be:

- 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 first aid codes and regulations will give:

- 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.

CULTURAL AWARENESS

When providing first aid in any context, (in the workplace, as part of caring for people in health, education and community services or as a citizen responding in an emergency) it is essential you approach any person in a culturally aware, sensitive and respectful manner.

Cultural awareness requires recognition that all individuals are influenced by their own culture. Here 'culture' means the patterns of behaviour and beliefs that characterise a particular group at a given moment in time.

Our own cultural background influences how we interpret the world around us, perceive ourselves and interact with other people.

In a first aid situation, cultural issues may arise in relation to:

- language differences and communication of matters relating to interaction and treatment
- obtaining consent
- non-consent for treatment due to cultural beliefs
- standards relating to modesty and physical exposure
- gender differences and personal or physical contact
- the use of gestures

As a basis for increasing your cultural awareness and heightening the effectiveness of your relationships with people of differing cultural backgrounds, keeping these key considerations in mind will help you to approach a casualty in a culturally sensitive manner.

Recognise your own cultural influences

- avoid judging people's behaviour and beliefs according to your own cultural standards
- be aware of making assumptions about cultural influences and generalising them to individuals
- recognise that the behaviour and beliefs of people within each culture may vary considerably
- understand that the extent to which people adopt practices of their new country and retain those from their cultural background may vary within communities, and even within families
- appreciate that not all people identify with their cultural or religious background
- understand that culture itself is a fluid entity, undergoing transformations as a result of globalisation, migration and forced dispersion
- understand the importance of appropriate communication
- always identify individual needs and preferences wherever possible

Premium Health thanks the Centre for Cultural Diversity in Ageing (www.culturaldiversity.com.au) for allowing the use of information about cultural diversity.

STRESS MANAGEMENT

It is important to understand that a first aid response can be stressful. Those involved such as first aiders, employees and bystanders may experience changes physically and psychologically following an event. This is perfectly normal. Emergency events can trigger the human stress response and cause changes to mental health impacting the way we think, feel, and behave.

While a stress response is expected, enduring or significant changes need to be addressed early. The support of trained critical incident management professionals helps lessen the impact of stress responses following such events as well as enable people to better understand and manage their reactions.

Signs and symptoms of stress

The signs and symptoms of critical incident stress may be physical, emotional, cognitive, or behavioural. Individuals express stress in different ways and therefore manifest different reactions. The list below is not exhaustive but will help identify those who are exhibiting stress reactions.

Physical signs

- loss or change of appetite
- nausea, diarrhoea, constipation, or digestion issues, fatigue, exhaustion or sleeping problems
- chest pain, excessive sweating, increased heart rate or blood pressure
- rapid, shallow breathing, dizziness
- muscle tension, pains, and headaches

Cognitive signs

- racing thoughts, ruminating, changes in perception or thinking negatively
- memory and concentration problems
- uncertainty, confusion, or difficulty in decision making
- poor problem-solving ability
- nightmares
- flashbacks or recurring memories of event

Emotional signs

- feeling overwhelmed, or a loss of control
- excessive worrying, apprehension, or fear
- increased anger, irritability, or easily frustrated
- feelings of guilt, grief, sadness, or depression

Behavioural signs

- avoidance of tasks, situations, or places
- withdrawal or antisocial behaviour
- increased consumption of alcohol or other substances
- changes in communication
- restlessness
- losing confidence or increased self-doubt

Critical incident stress management (CISM)

CISM is an intervention procedure primarily intended for people affected by a traumatic event in their life, such as giving first aid to casualties or managing such emergencies.

Some of the CISM interventions that may be used, depending on the situation, include:

Defusing

This intervention provides small group support by a trained staff member within 12 hours after the incident. It is designed to conclude the experience of the incident and provide an immediate and more personal level of support. Generally, the defusing process allows those in the group to review the event, ask questions, discuss what happened and address concerns and organise further support and debriefing sessions.

Debriefing

This intervention is a powerful event group support generally facilitated by a trained person within 3 -7 days following the incident. Debriefing is a structured and supportive group event undertaken when workers have had enough time to take in the experience and put an irregular event into perspective. It offers workers clarity about the critical incident they have experienced and assists them in their emotional recovery.

Grief and loss counselling

This intervention may be for an individual or group and are designed to assist people to understand their grief reactions following a death or loss.

These different forms of interventions may be used for individuals, workplace groups, families and community groups. First aiders and helpers (e.g. volunteers, bystanders, work and community members) may need to access the support CISM interventions to enable them to deal with such experiences. In a workplace, the first aider should seek management support and request the initiation of a referral to professionals able to provide appropriate support.

INFECTION CONTROL

An increased risk of infection exists when providing first aid due to the likelihood of exposure to blood and body fluids.

This means when giving first aid, checking “D for DANGER” is a critical first step in any first aid emergency action plan. The actual risk of transmission in first aid is extremely low but you should take steps to minimise the transfer of infectious disease.

Successful infection control in a first aid setting is straightforward. It is based on good hygiene and a range of practices set in place to reduce the transmission of infections.

Infectious diseases

An infectious disease is passed from one person to another with the routes of transmission varying from disease to disease. A person with an infectious disease may be infectious:

- without ever becoming unwell
- before getting ill
- during the illness
- after recovery – acting as a carrier passing the infectious agent to others or shedding it into the environment

Spread of infectious diseases

Infectious diseases can be spread by:

- coughing or sneezing
- touch
- an exchange of body fluids (blood, vomit, urine or saliva)
- cuts or abrasions caused by contaminated objects, such as razor blades

Some infectious diseases include:

- influenza (the flu)
- tuberculosis
- common cold
- meningococcal
- herpes
- hepatitis
- glandular fever
- HIV/AIDS
- measles
- COVID-19
- Severe Acute Respiratory Syndrome (SARS)

STANDARD PRECAUTIONS

Standard precautions are a set of infection control practices used to prevent the spread of diseases that can be acquired by contact with blood, body fluids, non-intact skin (including rashes), and mucous membranes. These measures are to be used when providing first aid to all individuals.

To adhere to general standard precautions you should:

- use personal protective equipment (PPE). These may include: gloves, protective clothing, face mask, resuscitation protective shield, and eye protection
- maintain personal hygiene: washing hands before and after contact with a casualty or after disposing of used material/s
- use sterile or clean dressings whenever possible
- clean up any areas contaminated with blood or bodily fluids, and dispose of any contaminated items appropriately
- seek medical advice if you believe you've been exposed to any risk of infection

Planning for first aid emergencies

Appropriate PPE such as gloves, masks and resuscitation devices should be available in all workplace first aid emergency kits.

Written infection control procedures and appropriate equipment including protective clothing, sharps and contaminated waste containers, cleaning equipment and/or a disposable spills kit should be in place or introduced in workplaces where there is a high risk of blood and body fluid spills or injury.

Improvising to provide protection and control infection

First aid can continue even if gloves, and a resuscitation shield are not available. The first aider must weigh up the risks and make a personal decision to proceed in such situations.

Protection of the first aider and others, in the presence of blood, body fluids and non-intact skin or sharp objects or projections such as glass and torn metal, may be achieved by improvising from materials at hand. For example, by using:

- bottled water or 'wet ones' to clean hands
- plastic bags for gloves
- plastic bags or sheeting, rubber matting, car mats, carpet or rugs, clothing, newspaper or cardboard to create an effective barrier between the blood or glass and first aiders, others and the casualty
- plastic bags with a hole cut out for a resuscitation protective barrier
- blankets, pillows or cushions for covering sharp projections likely to cause injury
- sand, soil, saw dust or 'kitty litter' in place of disinfectant granules to cover hazardous material, so as to soak up and confine spill enabling it to be scooped up easily without risk of splashing/ spreading

Standard precautions when giving first aid

Before first aid treatment:

- Assess the situation for bleeding, secretion or excretion of body fluids.
- Wash hands with mild liquid hand wash (10-15 seconds wash) and pat dry with paper towel. In an emergency, remove visible dirt by rinsing, mechanical rubbing or using wipes such as 'wet ones' and apply a waterless hand sanitiser.
- Check hands and cover cuts and abrasions with watertight dressings.
- Wear disposable gloves if there is bleeding, secretion or excretion of body fluids or if injury is suspected. Gloves are not necessary for contact with intact skin.
- Obtain sterile or clean dressings and equipment whenever possible.

After first aid treatment:

- Dispose of contaminated dressings into a yellow biohazard plastic bag or, in an emergency, use two plastic bags one inside the other.
- Dispose of sharp objects into rigid containers. Final disposal should be according to workplace policy.
- Clean blood spots and spills by isolating area if possible and using the blood and spills procedure appropriate to the size of the spill (see following information).
- Wash hands.

HOW TO WASH HANDS

WASH HANDS WHEN VISIBLY SOILED! OTHERWISE, USE HAND SANITISER

Duration of the entire procedure: 40-60 seconds

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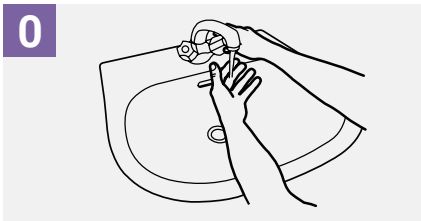
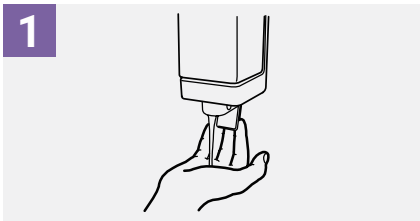


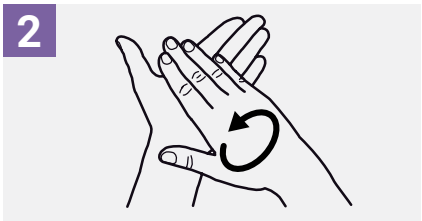
Wet hands with water;

1



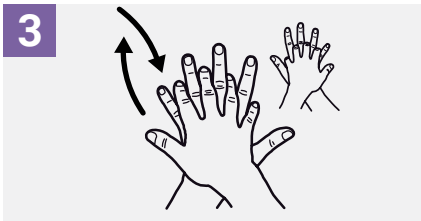
Apply enough soap to cover all hand surfaces;

2



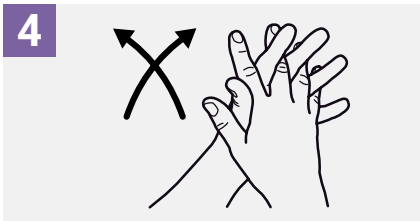
Rub hands palm to palm;

3



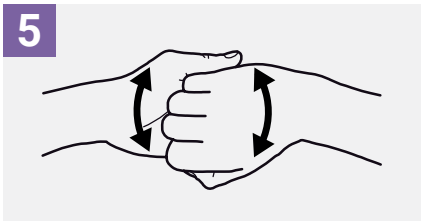
Right palm over left dorsum with interlaced fingers and vice versa;

4



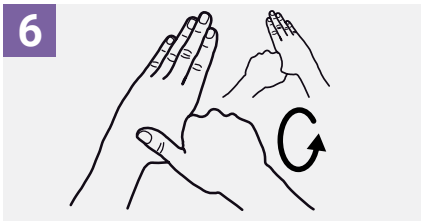
Palm to palm with fingers interlaced;

5



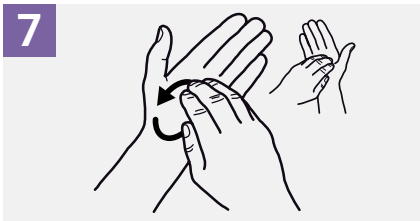
Backs of fingers to opposing palms with fingers interlocked;

6



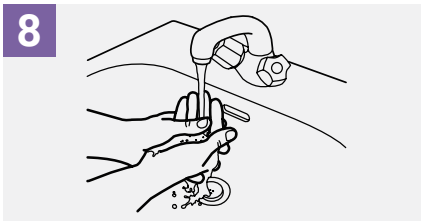
Rotational rubbing of left thumb clasped in right palm and vice versa;

7



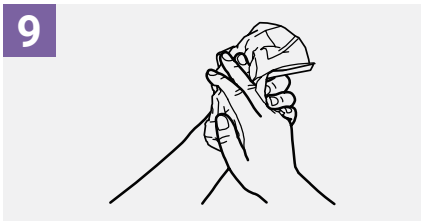
Rotational rubbing, backwards and forwards with clasped fingers of right hand in left palm and vice versa;

8



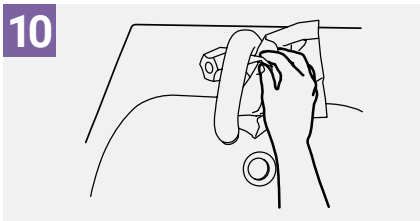
Rinse hands with water;

9



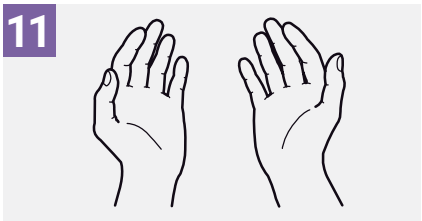
Dry hands thoroughly with a single use towel;

10



Use towel to turn off faucet;

11



Your hands are now safe.

Hand care

- take care of your hands by regularly using a protective hand cream or lotion, at least daily
- do not routinely wash hands with soap and water immediately before or after using an alcohol-based handrub
- do not use hot water to rinse your hands
- after handrubbing or handwashing, let your hands dry completely before putting on gloves

Please remember

- do not wear artificial fingernails or extenders when in direct contact with patients
- keep natural nails short

Person protective equipment (PPE)

PPE should be readily available in or near your first aid kit, to ensure protection to the first aider and casualty.

The PPE available could be:

- gloves
- face mask
- goggles
- apron or long-sleeved gown

Gloves will protect both the first aider and casualty from any contact-based transmission. They should be disposable single use gloves manufactured from nitrile material.

Face masks will offer some protection against droplet and aerosol transmission, ideally the face mask will provide a complete seal around the first aider's mouth and nose. A surgical mask will still provide some protection, but the first aider should be aware that contaminates could still enter through the gaps at the side of the mask.

Aprons and/or long-sleeved gowns provide protection against contact or droplet transmission directly on to the first aider's clothing. Aprons and long-sleeved gowns should be single use and disposed of after use.

When putting on a face mask, only touch the mask by the ear loops or ties. Once in place, pinch the bridge of the nose to create a seal, and pull the bottom edge of mask to cover chin. Once in place do not touch the outside of the mask.

The World Health Organisation recommends (as seen in the table below) that PPE should be **put on** in the order of:

1	Hand hygiene
2	Gown
3	Mask
4	Eye wear/face shield
5	Gloves

PPE should **be removed** in the order:

1	Gown and gloves
2	Hand hygiene
3	Eye wear/face shield
4	Mask
5	Hand hygiene

When removing gloves, ensure not to contaminate your hands by touching the outer surface of the gloves.

Firstly, pinch the outside of the cuff of the first glove, and roll the glove down your hand and hold the removed glove in your second hand that is still gloved.

Secondly, place your bare finger on the inside of the glove cuff and roll the glove down the hand, encasing the first glove in the second.

Dispose of in a waste bag and perform hand hygiene.

HOW TO GUIDE - PUTTING ON PPE FOR CONTACT/DROPLET PRECAUTIONS

HOW TO GUIDE - TAKING OFF PPE FOR CONTACT/DROPLET PRECAUTIONS

If wearing an apron or gown – pull to tear apron ties and peel off your gloves at the same time. You may need to perform hand hygiene between steps if you think your hands have been contaminated.

When taking off a face mask, ensure to only touch the mask by the ties or ear loops, slightly bend forward with head down when removing mask, so as not to touch the rest of your face/head when removing mask.

Once all PPE has been removed the first aider should dispose of the spent PPE only touching the inside of any PPE into a waste bag and then into the bin. Disposing this way means there is minimal contact with any of the contaminated PPE. Once this has been done, the first aider should wash their hands.

References

Department of Health and Human Services, State Government of Victoria, Australia. (2020, August 13). *Face Coverings: whole of Victoria.* Retrieved from Victoria State Government Health and Human Services: **https://www.dhhs.vic.gov.au/face-coverings-covid-19**

World Health Organisation. (2020, April 22). *Emergency preparedness, response; HOW TO PUT ON AND TAKE OFF Personal Protective Equipment (PPE).* Retrieved from World Health Organisation: **https://www.who.int/csr/resources/publications/putontakeoffPPE/en/**

MANAGEMENT OF BLOOD AND BODY FLUID SPILLS

Spot cleaning – for vomit, secretions and small spots and spills of blood up to 10cms in size

- Use PPE such as gloves, then wipe up spot or drop immediately with absorbent material (tissue, paper towel or alcohol wipe).
- Discard contaminated material (tissue, paper towel or alcohol wipe) into plastic bag as outlined for handling and disposal of sharps and other clinical wastes.
- Clean with water and finally if possible, spray or wipe down surface with alcohol.
- Wash hands.

Note: Where a spill occurs on a carpet, wash with warm water and detergent and shampoo as soon as possible. Do not use bleach.

Large spills (greater than 10 cm in diameter)

- Isolate the area.
- Collect cleaning equipment.
- Wear disposable rubber gloves, eye protection, waterproof overalls, disposable plastic apron if risk of splashing and waterproof overshoes if the size of the spill calls for it.
- Large spills that have occurred in "dry" areas (such as carpeted floors), should be contained and generation of aerosols should be avoided. Granular formulations that produce high available chlorine concentrations can contain the spilled material and are useful for preventing aerosols. A scraper and pan should be used to remove the absorbed material. The area of the spill should then be cleaned with a mop, and bucket of warm water and detergent. The bucket and mop should be thoroughly cleaned after use and stored dry.
- Use disposable (e.g. cardboard) scraper and pan to scoop up granular disinfectant and any unabsorbed blood or body substances.
- Discard contaminated material (including scraper and pan) into plastic bag as outlined in handling and disposal of sharps and other clinical wastes or into an impervious container such as plastic bucket with lid.
- Wipe area with absorbent material (tissues, paper towelling, toilet paper) to remove any remaining blood or body substances and place in plastic bag or container.
- Wash hands.
- Clean the area thoroughly with mop using warm water and detergent.
- Disinfect the mop with sodium hypochlorite 1,000 ppm of available chlorine (or suitable disinfectant solution) and allow to dry.
- Wash hands thoroughly after cleaning completed.

Suggested reading

https://www2.health.vic.gov.au/public-health/infectious-diseases/infection-control-guidelines/manage-blood-body-fluid-spills

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

HANDLING AND DISPOSAL OF SHARPS AND OTHER CLINICAL WASTES

Sharp items (such as syringes with needles and blades used to penetrate the skin of a person or for first aid treatments, or found in the workplace environment) must not be passed from person to person and no attempt should be made to bend, break, recap or otherwise manipulate the sharp.

It is safer to dispose of the sharp by holding the barrel of the syringe with a latex gloved hand. Dispose of in rigid containers (yellow/orange rigid containers designed for the purpose, labelled and bearing a biological waste hazard sign) and incinerated according to workplace arrangements by a licensed contractor.

Clinical wastes such as cotton balls, used bandages and wound dressings from first aid treatments are placed in yellow plastic bags designed to meet clinical waste disposal specifications and incinerated according to workplace arrangements by a licensed contractor.

Sharp items and clinical wastes have the potential to expose people to blood borne diseases in workplace first aid situations. Medium-sized to large workplaces should have written workplace protocols and appropriate equipment for safe sharps and clinical waste handling and disposal.

In all other first aid situations common sense should prevail when handling and disposing of sharps and wastes. The following disposal methods could be used when equipment is unavailable.

Sharps

- Obtain a rigid walled container (e.g. glass or plastic jar, soft drink bottle with lid preferably).
- Take the container to the sharp.
- Pick up the syringe with a latex gloved hand by the barrel or 'fat' end.
- Drop sharp into the container pointed end first.
- Seal the container.
- Contact can be made to the local council or health service for collection/disposal information.

Clinical waste

- Use two intact plastic bags, one inside the other.
- Take the bags to the waste.
- Use gloved hands.
- Place clinical waste (e.g. cotton wool, bandages, tissues, resuscitation protective shield) in the bag.
- Tie the bags at the neck.
- Contact the local council or health service for collection/disposal information.

Needle stick injury and splash exposure

Needle stick injury immediate actions:

- Promptly flush the wound under running water (do not squeeze).
- Wash the wound using warm water and liquid soap (except for the eyes, mouth and nose). Alcohol-based hand rinses or foams (60-90% alcohol by weight) should be used when water is not available.
- Thoroughly pat-dry the area.
- Apply a sterile waterproof dressing (such as an adhesive plaster), as necessary, and apply pressure through the dressing if bleeding is still occurring.
- Follow procedure in handling and disposal of sharps and other clinical wastes and place the syringe in a sealed container.
- Seek medical assistance.

Splash exposure immediate actions

- Remove contaminated clothing.
- Promptly flush any exposed wound (i.e. cut or broken skin) under running water.
- Wash the exposed wound using warm water and liquid soap (except for the eyes, mouth and nose).
- Rinse the affected eye (with affected eye downwards, so as chemical does not affect uncontaminated eye), mouth and nose (if affected) thoroughly with warm water (without soap) or saline.

Workplace first aid situation

- Seek advice from local hospital or local workplace medical centre. Manage the exposure as above.
- Document the incident.
- Accompany the employee to the hospital or doctor and ensure the doctor is provided with the sealed container with the syringe inside (if needle stick injury).
- Ensure that confidentiality of the incident and anonymity of the injured person is maintained.

Prevention practices

A vaccine is available for Hepatitis B Virus (HBV) but none for Hepatitis C (HCV) or HIV. Protection through vaccination is an important consideration for first aiders and where reasonable in terms of a workplace first aid risk assessment, employers should offer (HBV) vaccination to first aiders.

References

https://www.nhmrc.gov.au/about-us/publications/australian-guidelines-prevention-and-control-infection-healthcare-2019

Safe Work Australia: *National Code of Practice for the Control of Work Related Exposure to Hepatitis and HIV (blood-borne) Viruses* [NOHSC: 2010 (2003)]. https://www.safeworkaustralia.gov.au/search/site?search=Work+related+exposure+to+hepatitis+

MANUAL HANDLING

Manual handling is defined as any activity requiring the use of force exerted by a person to lift, push, pull, carry or otherwise move, hold or restrain any object (including a person).

There are three steps to take to manage a person's safety when their work involves manual handling tasks:

(1) Identify the task(s) involving hazardous manual handling.

(2) Undertake a risk assessment of the hazardous manual handling task(s).

(3) Control the risk to ensure that any likelihood of the worker suffering a musculoskeletal disorder is either eliminated or reduced.

Manual handling and first aid

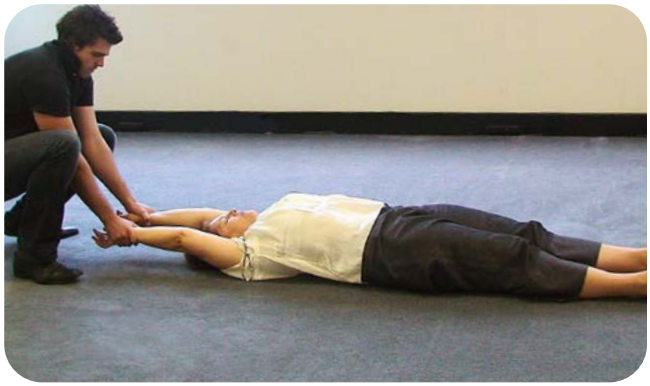
- always assess the casualty before moving them. This is a quick analysis of the best way to move them given the environment and risks involved to yourself, the casualty and to others helping you
- reduce or eliminate the amount of manual handling wherever possible
- when dealing with casualties who are conscious direct them to assist you with their movements wherever possible. Remember to think ahead - get them to position themselves where they may be easily managed if they become unconscious
- use any movement aids or emergency equipment available or improvise by using materials at hand such as plastic sheeting or smooth surface sheeting as slide/slide board
- manual handling techniques are designed to reduce the force and exertion for the handler's body. These techniques need to be practiced and remembered
- push or pull a casualty or load into the required position rather than lift. Lifting a casualty or any equipment should be avoided wherever possible as lifting is a very high risk activity. A human body is a heavy, unstable and an unpredictable load

When moving a person or load:

- Move your whole body when transferring your body weight for ideal transfer technique.
- Turn your whole trunk to avoid twisting your spine.
- Hold the load being moved close to your body and eliminate any forward or side flexion (bending) or leaning sideways.
- Your shoulders should be at the same level and facing the same direction as your hips.
- Work at waist level wherever possible, for example by moving your body down to the casualty.
- Always transfer a casualty or load to the same level or to a lower level.
- Try to exert the force on a casualty or load as close as possible to your own body.

Process of undertaking a manual handling task

- Stop and think.
- Position the feet.
- Adopt a safe working posture.
- Keep close to the load.
- Move smoothly.



FIRST AID

First aid is the first and immediate assistance of a 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 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. For example a first aider must manage a casualty who has breathing difficulty before managing their broken leg.

The initial treatment of a casualty may mean the difference between life and death, and first aiders are required to develop and maintain a wide spectrum of knowledge and skills to effectively manage a casualty's condition.

The ability to rapidly assess the scene and determine probable cause is essential in identifying time critical conditions. Application of this will result in the best outcome for casualties.

Mechanism of injury

Mechanism of injury (MOI) is the terminology used to determine the way in which the physical injury occurred (e.g. fall from a height, high-or low speed motor vehicle accident, ejection from a vehicle or vehicle rollover).

The MOI is used to estimate the forces involved in trauma and thus, the potential severity for wounds, fractures, and internal organ damage that a casualty may suffer as a result of the injury.

The MOI involves evaluation of the incident scene, questioning of the casualty and bystanders with the resulting information used to identify injury patterns and severity common to the mechanism.

The MOI can be determined through the examination of the forces involved with the trauma. It involves the principles of the energy transfer to determine the potential for serious injury. A casualty who appears to have minor injuries (blow to the head) may deteriorate rapidly or over a number of days after the initial trauma due to a serious underlying injury, however the examination of the forces involved with the initial trauma can be used to highlight this potential.

Significant mechanisms of injury that will indicate to a first aider that serious injury may be present at the workplace are:

- fall from height
- pedestrian stuck by a vehicle (e.g. forklift, tractor, pallet scissor lift)
- vehicle rollover, high speed crash, ejected from a moving vehicle
- blast injury
- struck by object falling from height
- fist fight

Note: Wherever there is any doubt on casualty's condition, particularly when the MOI indicates potential for serious injury, ensure triple zero (000) has been called and remain with the casualty until the arrival of medical assistance.

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: 0 – 1 Year

Child: 1 – 8 Years

Adult: Over 8 Years

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

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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

Moving a casualty

- the condition of a collapsed or injured casualty may be worsened by movement, increasing pain, injury, blood loss and shock. However, a casualty lying in a hazardous area such as a road/railway line etc. may need to be moved to ensure safety
- a single rescuer may need to drag the casualty: either an ankle drag or arm-shoulder drag is acceptable
- if an unconscious breathing person can be managed within the vehicle, do not remove them from the vehicle unless there is a threat to life. Clear the airway of foreign material; maintain head tilt and jaw support and continuously reassess the airway and breathing
- if the person in the vehicle is unconscious and not breathing normally despite opening the airway, remove the person from the vehicle if possible and commence CPR

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 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.

DRSABCD FOR THE BREATHING CASUALTY: FURTHER ACTION POINTS

Manage other injuries and/or conditions and document all observations when possible.

Health professionals may wish to check carotid, apical or brachial pulse for rate, regularity and volume:
Check quality for 10 seconds (remember if a casualty is breathing they are circulating).

Constantly monitor casualty condition for changes, keep warm, check for identification and continually assess ABCD.

If the condition of the casualty worsens **telephone triple zero (000)** again.

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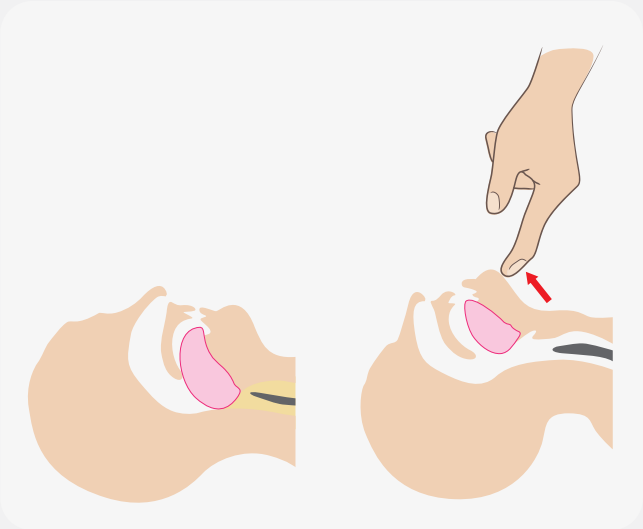


Common causes of airway obstruction

In an unconscious casualty, management of their airway takes priority over any injury, including the possibility of spinal injury.

There are two common causes for potential airway obstruction in an unconscious casualty:

1. When a casualty becomes unconscious, all of their muscles relax. If the casualty is lying on their back, the tongue (a large muscle), which is attached to the base off the jaw, can fall against the back of the throat blocking air from entering the lungs. This is the most common cause of airway obstruction in an unconscious casualty. Tilting the head backwards and lifting the chin up at the same time are actions used to overcome obstruction.

2. As an unconscious casualty is unable to cough or swallow, their airway is also at risk of becoming blocked by foreign material. Where the airway is obstructed by fluid (vomit, blood or liquid due to immersion) the casualty should be rolled onto their side to clear the airway (recovery position). The mouth should be opened and turned slightly downwards to allow gravity to assist with drainage; a first aider may use a finger sweep to remove visible foreign material.

Side (recovery) position

The side position assists in clearing foreign material such as vomit and secretions from all casualites and is the position used to manage all unconscious breathing casualties regardless of other suspected injuries. Protection of the airway always takes precedence.

STEP 1 - PREPARE THE CASUALTY

1
- Kneel beside the casualty.
- Place the casualty's far arm straight out.
- Place the casualty's near arm across the chest.
- Bend the casualty's nearest knee up.

STEP 2 - ROLL THE CASUALTY

2
- Place your hand on casualty's knee/hip.
- Place your other hand on the casualty's shoulder.
- Gently roll the casualty away from you.
- Ensure the knee of the upper leg touches the ground.

STEP 3 - STABILISE THE CASUALTY

3
- Place the casualty's upper arm across the lower arm.
- Ensure the head is tilted back and the face turned slightly downward to allow drainage of fluids from the mouth.
- Ensure that the upper shoulder is in line with upper hip.

Moving a casualty into the recovery position from a facedown position

- Kneel beside casualty.
- Place casualty arm closest to you reaching above head.
- Place your hand on closest shoulder and your other hand on the hip.
- Roll casualty towards you using your body to support.
- Position outstretched arm and upper leg to support as per normal recovery position.

Note: A casualty who is bleeding or has clear fluid leaking from the ear, should be positioned injured side down so that fluid may drain.

Note: Unconscious pregnant women should be turned onto their left side. This position helps reduce pressure on the major abdominal organs and allows better blood supply to the heart.

Note: Where possible, move the casualty into a position which creates accessibility. Do not roll them facing a wall or underneath a table.

SELF-PRACTICE ACTIVITY

Provide first aid to an unconscious casualty using the unconscious breathing casualty: first aid priority action plan (DRSABCD).

Ask a friend or partner to 'be' an unconscious casualty lying on their back.

- ask your casualty to shut their eyes and not to help or hinder you in any way
- manage the unconscious casualty using the priority action plan
- remember to deal with each priority in the correct sequence before moving on to the next

GETTING HELP IN AN EMERGENCY

TRIPLE ZERO (000)

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**

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.

POISONS INFORMATION CENTRE (13 11 26)

RESUSCITATION

Resuscitation is a general term used to encompass first aid and medical treatments intended to restore a person to life where there are no signs of life and include measures such as rescue breathing, chest compressions and defibrillation.

The Australian Resuscitation Council (ARC) is a voluntary coordinating body which produces resuscitation guidelines based on the consideration of scientific and published material. The purpose of these guidelines is to promote uniformity and simplicity in resuscitation techniques and terminology.

As a result of the efforts of the International Liaison Committee on Resuscitation (ILCOR), of which the ARC is a member, there is now relative standardisation of resuscitation techniques around the world.

CARDIAC ARREST: THE CHAIN OF SURVIVAL

Sudden cardiac arrest and death

Cardiovascular disease is the greatest cause of death in the adult Australian population.

A cardiac arrest is the complete cessation of heart action recognised by the absence of response, unconsciousness and a casualty who is not breathing or not breathing normally. A cardiac arrest may occur before the person has time to get to a hospital or seek medical assistance. Importantly, death in these casualties will occur without immediate emergency first aid.

"Chain of survival"

The "chain of survival" concept was developed by the emergency medical community as a tool to describe the critical emergency actions necessary when an unresponsive collapsed casualty is not breathing and shows no sign of circulation i.e. a cardiac arrest has occurred.

CHAIN OF SURVIVAL: CARDIAC ARREST CRITICAL ACTIONS

Early access

Early access to the emergency medical support (EMS) is necessary for prompt arrival of emergency response personnel.

- Dial triple zero (000) for ambulance.
- Take the Automated External Defibrillator (AED) when called to an emergency.

Early CPR

Early CPR is a critical link because it buys time by supplying sufficient oxygen to keep the brain and heart alive until defibrillation and other advanced care can restore normal heart action. Ideally, CPR will be initiated by bystanders, workmates or the first aider in the vicinity prior to the arrival of the AED if it is not available at the scene.

- Begin CPR immediately if signs of cardiac arrest are present (unconscious and not breathing/not breathing normally).
- Get AED machine to the location of emergency.

Early defibrillation

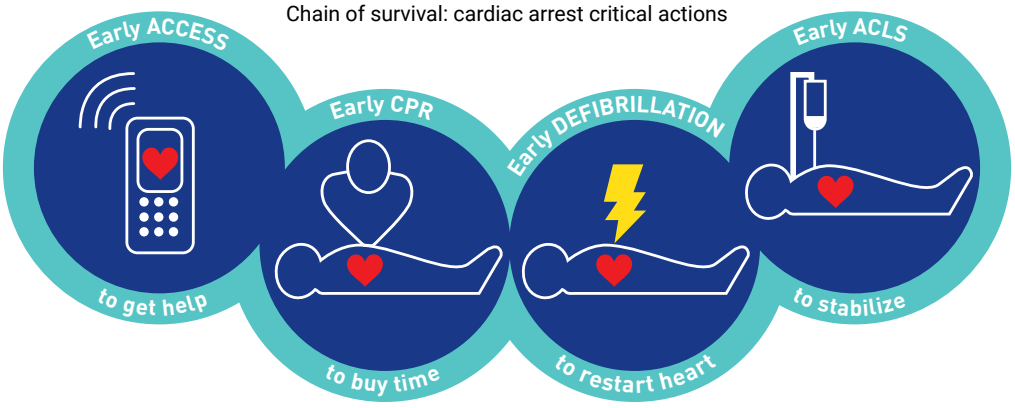
Early defibrillation is the crucial treatment in cardiac arrest as it often restores the normal heart rhythm and pumping action. If defibrillation is given within the first 5 minutes of cardiac arrest there is a 50% chance of survival, but with each subsequent minute the chance of success is reduced by a factor of 7-10%, with little chance of effective revival after 10 minutes.

- Heed any precautions, attach the AED, follow the prompts and defibrillate.
- Manage and defibrillate according to voice prompts until the emergency services arrive.

Early advanced cardiac life support

Early advanced cardiac life support is provided by highly trained emergency medical support personnel such as paramedics (ambulance officers, MICA, paramedic fire officers etc.) who are trained to provide CPR, defibrillation and more advanced care such as giving cardiac drugs and inserting endotracheal breathing tubes.

Chain of survival: cardiac arrest critical actions



CARDIOPULMONARY RESUSCITATION (CPR)

CPR is required when a person is unconscious, not breathing or not breathing normally.

NOT BREATHING NORMALLY

A person may not be breathing normally as a result of:

- direct depression of, or damage to, the breathing control centre of the brain, for example following a head injury
- airway obstruction from choking, asthma, immersion (spasm of vocal chords), tongue (incorrect positioning), allergic reactions
- paralysis or impairment of the nerves and/or muscles of breathing e.g. venom, drug overdose

Not breathing normally in the first few minutes of a casualty suffering a sudden cardiac arrest is not uncommon and is known as **agonal breathing**. It occurs because there is a lack of oxygen to the brain.

Agonal breathing is an abnormal breathing pattern characterised by shallow, slow (3-4 per minute), irregular inspirations followed by irregular pauses. Sounds of gurgling, gasping, sighing or coughing may be present, as well as movements of the chest and stomach. Sometimes chest movements are mistaken for "breaths" but these movements are not effective and the person is **not breathing normally.**

Research has demonstrated the presence of agonal breathing in cardiac arrest indicates a more favourable prognosis than in cases of cardiac arrest without agonal breathing.

THE PURPOSE OF CPR

Chest compressions combined with rescue breathing is known as cardiopulmonary resuscitation (CPR). The purpose of CPR is to temporarily maintain circulation sufficiently to preserve brain function through a reduced oxygen supply until specialised treatment is available. Effective CPR also increases the chance of successful defibrillation.

As brain cells begin to die within 3 minutes of being deprived of oxygen, it is important chest compressions and rescue breathing are commenced as soon as possible.

If chest compressions only are given, they should be continuous at a rate of approximately 100-120 per minute.

If a defibrillator becomes available activate, listen, apply pads quickly and follow the voice prompts.

TO BREATHE OR NOT TO BREATHE

Many now advocate for compression only CPR however this is an initiative for untrained rescuers or situations where rescue breaths are not possible or practical. The rate of compression only CPR (that is no breaths are given) is approximately 100-120 per minute. Compression only CPR is effective but only for a limited amount of time. Chest compressions with rescue breaths improves chance of survival and is especially important for infants and children where the cause of cardiac arrest is most commonly due to respiratory illness or injury.

Where possible, rescue breaths should **ALWAYS** be performed.

WHEN TO CEASE CPR?

CPR should be given without interruption until;

- the casualty starts responding or breathing normally,
- or the scene becomes unsafe,
- or when emergency services are ready to take over
- or until you are physically unable to continue.

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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.

CHEST COMPRESSIONS

Rescuers should start chest compressions if the casualty is unconscious and not breathing or not breathing normally.

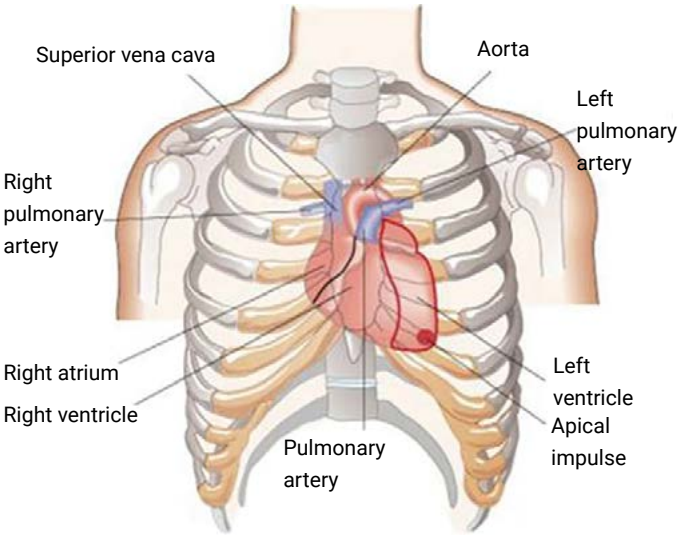
Checking the carotid pulse is an inaccurate method of confirming the presence or absence of circulation and is no longer recommended in basic life support.

If a casualty is found unconscious and not breathing in a chair, wheelchair, upright in bed etc, they should be moved and placed on their back on a firm surface, preferably the floor. Casualties requiring chest compressions should be placed supine on a firm surface (e.g. backboard or floor) before chest compressions to optimise the effectiveness of compressions.

Rate of compressions

Chest compressions should be performed at a rate of approximately 100-120 compressions per minute. This does not mean however that 100-120 compressions will be delivered every minute. Only around 75 compressions will be delivered each minute due to the interruptions required for the rescue breaths.

It is important to not go too fast as there will not be enough time for the heart to refill with blood.



Chest anatomy

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

Compression point

- Place the casualty onto a firm surface and in the case of an adult or child kneel beside the casualty with your knees on one side near the shoulder.
- Position your hands on the LOWER HALF of the sternum (breastbone).
- The lower half can be found by visualising where the 'centre of the chest' is. If you can see the sternum, locate the end and press above this point.

Compression applied too high is ineffective and too low may cause regurgitation and/or damage to internal organs.

Infants

- Having located the compression point, place only two fingers on the sternum.
- Press downwards to the correct depth (about a 1/3 of the depth of the chest) with your two fingers.
- Use smooth rhythmical compressions allowing full recoil of chest after each compression.

Infant

Children and adults

- Locate the compression point, place the heel of one hand on the sternum, with the fingers pointing away from your body.
- Keep fingers slightly raised to avoid pressure being placed on ribs.
- Place other hand on top of first.
- Interlock your fingers or lock the thumb around the wrist, keeping fingers off the chest.
- Press downwards to the correct depth (about a 1/3 of the depth of the chest) through the heel of your lower hand.
- Keep your elbows straight to allow the weight of your upper body to control the depth.
- Use smooth rhythmical compressions allowing full chest recoil after each.
- Allowing the full chest recoil as this allows the heart to refill with blood.

Note: Ribs may be broken during CPR, as a precaution if you feel or hear a rib crack, stop, recheck hand position and continue compressing to the correct depth.

Children

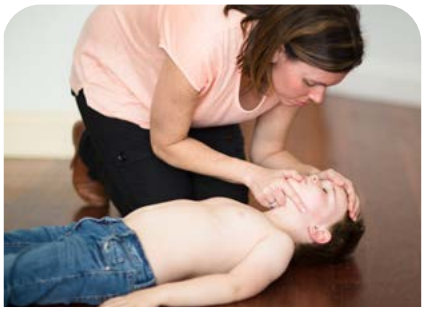
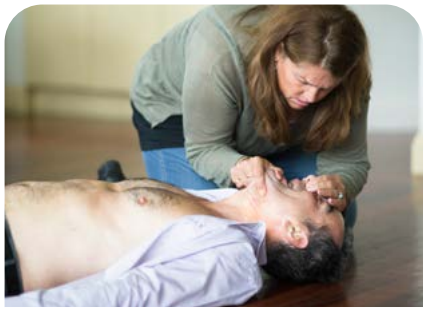
Adults

RESCUE BREATHING

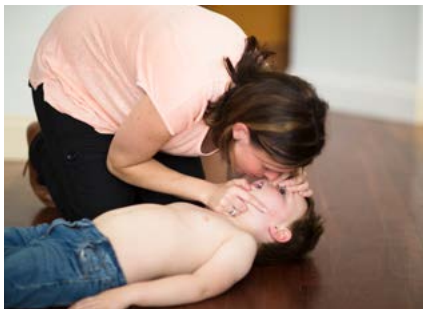
Deliver 30 compressions and then 2 rescue breaths.

Mouth to mouth rescue breathing

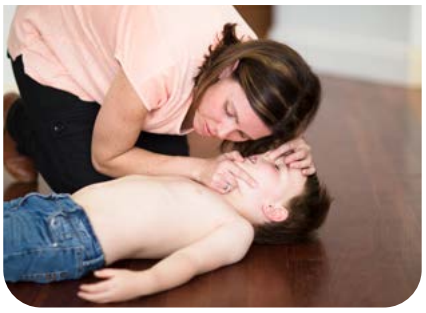
INFANT	CHILD	ADULT

- Kneel beside the casualty's head (for infant, place on table to avoid bending).
- Open the airway by tilting fully the adult and child casualty's head back, and a neutral or "sniffing" position for an infant.
- Lift the casualty's jaw upwards using a pistol grip.


- Place your mouth over the casualty's slightly open mouth (for an infant – both mouth and nose are covered) to produce an airtight seal.
- Seal the adult/child casualty's nostrils e.g. using your cheek or fingers.
- Blow enough air into the casualty to produce a gentle rise of the upper abdomen or lower chest.
- Deliver your breath over one second (approx 400-500mls for an adult, 200-400mls for a child and gentle puff for infants).
- If your breath meets resistance, reposition the airway and reattempt your rescue breath.


- After delivering the breath, lift your mouth from the casualty's mouth and turn your head towards the casualty's chest to breathe "fresh air" into your lungs then listen and feel for air being exhaled from the mouth and nose and finally look for abdomen or chest deflation.
- Deliver a second breath in the same manner as the first.

Protective devices

Using a CPR protective device which creates a barrier between the first aider and the casualty during rescue breathing is desirable but not essential. Ideally the shield should provide a sturdy, flexible, non-slip plastic barrier between rescuer and casualty with a filter allowing the delivery of expired air from the rescuer while ensuring none of the casualty's secretions pass into the rescuer's mouth.

The Australian Resuscitation Council Guidelines emphasise that contracting an infectious disease by rescue breathing is a rare event and resuscitation should not be delayed if such a device is unavailable.

Recovery checks

There is no need to undertake an airway and breathing check during CPR. Evidence has demonstrated that interruption of chest compressions is associated with lower survival rates.

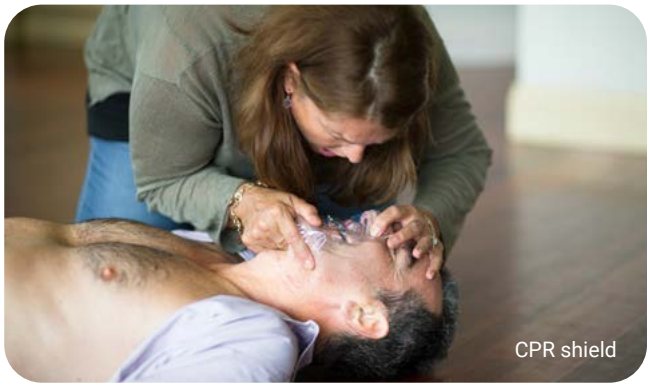
If the casualty begins to breathe normally they should be positioned on their side and managed as for the unconscious breathing casualty.

If the casualty vomits during CPR they should be turned into the side position to clear the airway and if still not breathing CPR should be continued. If a change in casualty's condition is identified, reassess response and continue first aid priority action plan.


Two operator CPR

Mouth to nose rescue breathing

This technique may be used if the casualty's jaws are clenched or there is a significant mouth injury. The technique remains the same as mouth to mouth breathing except for sealing the airway. Close the casualty's mouth with the hand supporting the jaw and push the lips together with the thumb. Take a breath then place your mouth over the casualty's nose and blow to inflate the lungs.


CPR shield

Transition between two single CPR operators

Chest compressions during CPR are strenuous, tiring, and difficult to maintain over an extended period of time. The Australian Resuscitation Council adopts research which suggests that rescuer fatigue during CPR is a likely contributor to ineffective CPR during extended resuscitation efforts and recommends rotation of operators every 2 minutes (5 cycles).

If another bystander is available and willing, it is recommended that they relieve the first rescuer from performing CPR. Whilst the first rescuer completes two rescue breaths the second rescuer positions themselves with their hands on the casualty's chest to commence compressions once the second breath is delivered. This improves the quality of chest compressions and gives the casualty the best chance for survival.

The ARC recommends where two rescuers are performing CPR, that roles of compressing and ventilating are swapped every two minutes. This change in roles reduces rescuer fatigue.

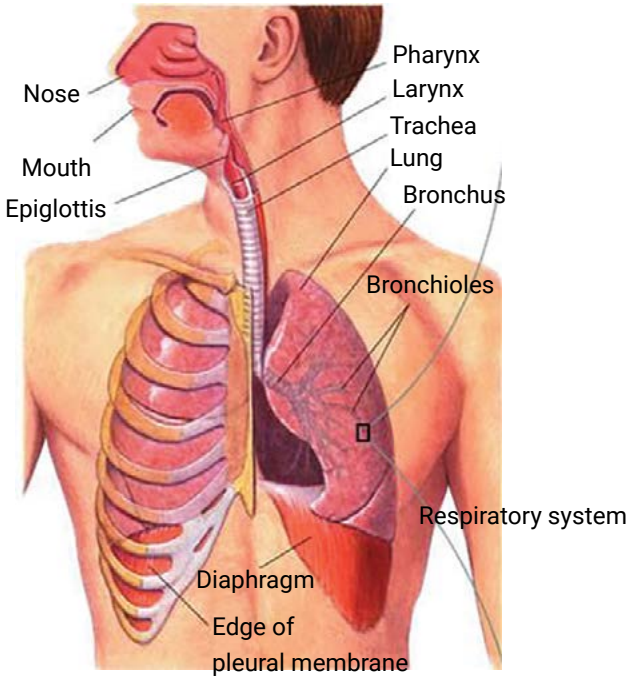
Reduced or no chest movement when delivering rescue breathing

If there is no chest movement or if marked resistance to air entry is noted during rescue breaths, lung ventilation is inadequate. Possible causes are:

- Obstruction of the airways by a foreign object /material, or the tongue due to incorrect head tilt or jaw lift.
- Inadequate air seal:
  - nostrils not blocked (adult or child)
  - mouth not sealing casualty's mouth
- Insufficient air being blown into the airway.

Distension of the casualty's stomach may occur because:

- The rescuer during rescue breathing, blows too forcefully; and/or
- There is too much air volume; and/or
- The airway is not properly opened.



Rescue breathing summary

AGE	BACKWARD HEAD TILT	STRENGTH	NUMBER OF BREATHS
Adult **8 + years**	Full	Full breaths	2
Child **1 - 8 years**	Full	Gentle breaths	2
Infant **0 - 1 year**	Neutral ("sniffing")	Puffs (mouth/nose)	2

RESUSCITATION IN LATE PREGNANCY

An obviously pregnant woman should be positioned on her back with shoulders flat. Sufficient padding needs be placed under the right buttock to provide an obvious pelvic tilt to the left. This position helps reduce pressure on the major abdominal organs and allows better blood supply to the heart.

Note: The rates below will achieve a compression rate of 100-120 per minute, although actual compressions delivered will be 75.

Cardiopulmonary resuscitation summary

AGE	BACKWARD HEAD TILT	STRENGTH
Adult	• 30 compressions and 2 breaths • approximately 5 times every two minutes	• two hands • 1/3 of depth of chest
Child	• 30 compressions and 2 breaths • approximately 5 times every two minutes	• one or two hands • 1/3 of depth of chest
Infant	• 30 compressions and 2 breaths • approximately 5 times every two minutes	• two fingers • 1/3 of depth of chest

CARDIOPULMONARY RESUSCITATION

D — **Danger**

R — **Response: No**

S — **Send/call for help (triple zero 000)**

A — **Airway**

B — **Breathing: No**

↓

C — **CARDIOPULMONARY RESUSCITATION (CPR)**

Give 30 chest compressions followed by 2 breaths x 5 times in 2 minutes and continue until qualified help arrives.

30 X → 2

D — **DEFIBRILLATION:**
If available, follow voice prompts

PREMIUM HEALTH CPR METHOD©

The Premium Health method was developed and researched to assist CPR learners to achieve the correct rate and rhythm for chest compressions as the correct rate and rhythm is essential if CPR is to be effective.

The Premium Health mnemonic method was the first in metronome style CPR in the world, and predates "Stayin Alive" by more than 10 years.

The Premium Health method uses rhythm and rhyme to assist in remembering and recalling how to do CPR and the method is particularly useful in an emergency as it helps rescuers slow the compression rate instead of allowing their adrenaline response to dictate a faster speed.

This unique and innovative training technique uses a familiar song to help you recall and perform CPR correctly. The method helps the body know what the correct rhythm (rate) is, and the rhyme is used to mark CPR's cyclical stages. The time it takes to sing the 2 verses of the nursery rhyme equals the time it should take to give 30 compressions and reaching the end of the second verse is a signal for the rescuer to deliver 2 breaths.

The song verses are repeated over and over accompanied by compressions and breaths for as long as CPR is required. If you had to give CPR, it is intended the song would be sung silently, under your breath.

Research shows that the Premium Health method enables people to retain and recall their CPR skills over a longer period of time. For any first aider, managing a cardiac arrest is stressful, so an easily remembered method to achieve compression rhythm and to count the compression/breath cycles is valuable.

Quick reference guide to the Premium Health CPR method©.

The **bolded white text below** denotes the words to be sung. The shaded boxes below indicate the actions to be performed.

VERSE ONE

BAA	BAA	BLACK	SHEEP	HAVE YOU	ANY	WOOL	"BEAT"
Compress (1)	Compress (2)	Compress (3)	Compress (4)	Compress (5)	Compress (6)	Compress (7)	Compress (8)
YES	**SIR**	**YES**	**SIR**	**ONE**	**BAG**	**FULL**	
Compress (9)	Compress (10)	Compress (11)	Compress (12)	Compress (13)	Compress (14)	Compress (15)	

VERSE TWO

BAA	BAA	BLACK	SHEEP	HAVE YOU	ANY	WOOL	"BEAT"
Compress (16)	Compress (17)	Compress (18)	Compress (19)	Compress (20)	Compress (21)	Compress (22)	Compress (23)
YES	**SIR**	**YES**	**SIR**	**TWO**	**BAGS**	**FULL**	**GIVE TWO BREATHS**
Compress (24)	Compress (25)	Compress (26)	Compress (27)	Compress (28)	Compress (29)	Compress (30)	

Continue to deliver CPR - by repeating these 2 verses over and over until emergency assistance arrives.

DEFIBRILLATION

Of the people who collapse with sudden cardiac arrest, survival is dependent on early defibrillation using an Automated External Defibrillator (AED).

An AED machine is used on casualties who are unconscious, not breathing or not breathing normally; that is, they are in, cardiac arrest. An AED will analyse the rhythm to detect if the heart is contracting normally.

If not, the AED will deliver a brief electric shock which may restore normal heart rhythm.

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

- Send for the AED.
- Continue with CPR whilst waiting.
- Turn on/activate AED.
- Expose and prepare the chest. May need to be dried if wet or shaved if excessively hairy.
- Attach the electrode pads to the chest.
- Follow voice prompts of the AED.
- No-one is to touch the casualty whilst AED is analysing the rhythm.

If a shock is indicated:

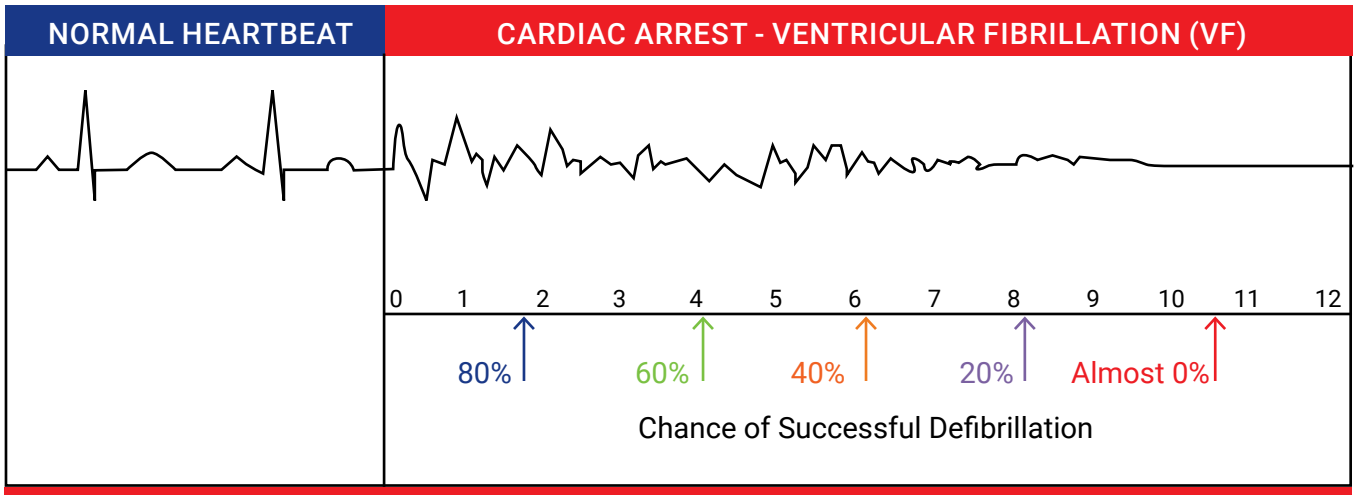
- Loudly say to bystanders "do not touch the casualty, stay clear" before shock is administered.
- Push a shock button if directed.
- Continue to follow voice prompts.
- Pads are to remain in place until the arrival of Ambulance.

If no shock is indicated resume CPR.

The time to defibrillation is critical. As each minute passes the chance of survival decreases. The Australian Resuscitation Council advocates the use of an AED by trained and untrained people. AEDs are now found in many locations such as train stations, airports, shopping centres and workplaces.

Defibrillator maintenance

- Regular maintenance (monthly) of an AED is necessary to ensure readiness for its use in an emergency.
- Most defibrillators perform routine self-testing, however it is critical to visually inspect the unit regularly.
- Status "ready" indicators on some AED's shows the unit is ready and operational.
- On others check the battery is working and not expired.
- Check the AED is free of signs of damage.
- Check pads are sealed, unused and not expired.
- Check status of other equipment such as scissors, gloves, razor, alcohol wipes and face shield.



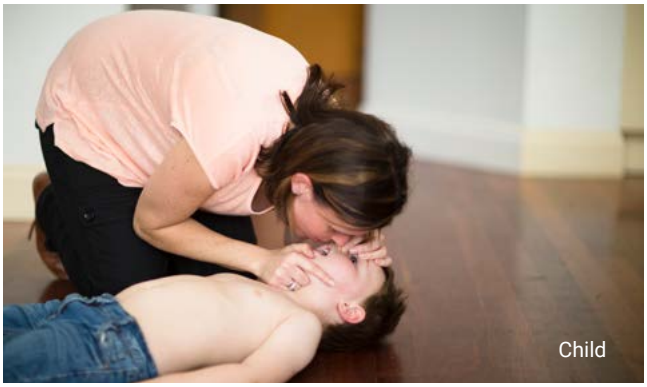
Following a cardiac arrest, every minute of delay in applying a defibrillator reduces the chance of survival by 10%

CONSIDERATIONS WHEN PROVIDING FIRST AID TO INFANTS AND CHILDREN

Anatomical differences between adults and children

- an infant is an obligatory nose breather for the first 6 months of it's life, which means that a blocked nose can greatly affect their ability to breathe
- a child's airway is obviously much smaller than an adults
- infants have short and soft tracheas. This means that overextension during airway management may result in airway collapse (not too dissimilar to kinking a narrow garden hose)
- infants have proportionately large heads, short necks and large tongues, which again, makes airway obstruction more likely
- airway management in children should primarily include the head tilt-chin lift technique and avoid overextension of the neck


Infant


Child


Adult

The following are important differences between an adult and a child's breathing

- a child has much smaller upper and lower airways which results in a greater chance of respiratory difficulties and failure
- infants are abdominal breathers who rely primarily on the muscles of the diaphragm. This means abdominal distension can lead to respiratory problems
- the muscles associated with breathing, such as the diaphragm, the small muscles between the ribs (intercostal) and the neck and chest muscles are small and likely to fatigue


AED training

Using an AED on children

A cardiac arrest in infants under one year, outside of the hospital setting is rare. Of those cardiac arrests that occur in children, 90% are due to a cause other than a primary cardiac arrhythmia. This results in around 10% of paediatric cardiac arrests requiring defibrillation. Predominantly the use of an AED will result in a 'no shock' recommendation and prompt the continuation of CPR.

For children older than 8 years, standard adult AEDs and pads are suitable for use. Ideally, for children between 1 and 8 years an AED with paediatric capability and pads should be utilised. Pad placement should be the same as for an adult where possible and the pads come with a diagram indicating where on the chest they should be placed.

If the AED does not have a paediatric mode or paediatric pads then the standard adult AED and pads may be used. Apply the pads firmly to the bare chest as for an adult in the anterior-lateral (top right-bottom left) position taking care to ensure pads do not touch each other on the child's chest. If the pads are too large and there is a danger of pad to pad arcing, the pads should be placed in the front-back position (antero-posterior): one pad placed on the upper back (between the shoulder blades) and the pad on the front of the chest, if possible slightly to the left.

An adult AED delivers a biphasic electrical wave to the patient at either 150 joules or 200 joules depending on the brand of defibrillator. Whereas an AED with paediatric capability delivers 50 joules, which provides sufficient energy to ensure that children up to 8 years (or 55 kg) receive at least 2 j/kg.

PREMIUMHealth

Premium Health has a range of health care, first aid and mental health 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.

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- Bowel management – elimination
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- Epilepsy training and midazolam administration via intranasal and buccal routes
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- Manual handling
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- Ostomy and stoma care for support workers
- Pressure injury – prevention and care for support workers
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- Tube feeding management
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- Cardiopulmonary resuscitation (CPR)
- Provide first aid
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- Mental health awareness

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