Allens Training Pty Ltd

First Aid

Pre-course Study Workbook

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The information in this book contains, at the time of printing, the most current guidelines of the Australian Resuscitation Council.

This book is designed to be an information resource and is in no way a substitute for attending a First Aid course conducted by an approved provider.

Many organisations and resources have been consulted in the compilation of this book to ensure its accuracy. However, it is impossible to cover all potential aspects in an emergency situation and the authors of this book accept no responsibility for any injury or damage that may occur as a result of any of these procedures.

If you have any problems or queries regarding information contained in this book, please refer to the Australian Resuscitation Council: resus.org.au

Allens Training Pty Ltd would like to thank the following organisations for their support, advice and contributions to the contents of this manual:

- The Australian Resuscitation Council
- Our network of trainers and assessors

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TRAINING AND ASSESSMENT DELIVERED ON BEHALF OF

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IMPORTANT: Please read before you start your workbook

Training packages are written with a strong emphasis on:

1. **Knowledge evidence** required during the training and for the assessment
2. The ability to demonstrate the **performance evidence**

This workbook provides evidence that the student/candidate meets the knowledge requirements of the training package. There is no set time frame for completion of this workbook.

The time taken will be dependent on your background and prior skills and knowledge. Those who are refreshing their skills may be able to complete the quiz questions for the pre-course study with limited need to reference the workbook content. Those who are new to the subject or have not been involved with first aid for some time should thoroughly read through all of the workbook before attempting the quiz.

Things to note before you start:

1. This workbook is used for a number of courses. Ensure you know exactly which course you are enrolled in, e.g. are you just doing a CPR course, or, are you doing a first aid course? If you are unsure, seek clarification from your trainer.

   Course types:

   - CPR
   - Basic Emergency Life Support
   - Provide First Aid
   - Other Advanced Courses

2. **Read the workbook.** There are several ways the pre-course study workbook can be completed. For example, you may use the EBook on your computer or device, or, use a printed hardcopy workbook.

3. **Complete the assessment section.** Either PRINT the assessment section from the EBook, or fill out the assessment in the back of the printed workbook, as required. All answers to the quizzes can be found in the relevant sections of the workbook. You will not require any other manuals.

4. **IMPORTANT: Take the completed assessment (printed or whole workbook) to your practical session.** If you attend the practical session without your pre-course study assessment pages, you may be required to complete the questions again on the day at the end of the practical training.

5. You will need to **show one valid Australian form of proof of identity** (ID) at the course. This can be in the form of photo ID such as an Australian Driver's Licence, or Passport. Other forms of ID can be your Birth Certificate, Medicare Card, or Citizenship Certificate. You will have used (or need to use) one of these to obtain your USI.

6. **It is a government requirement to have a USI number for courses and training.** Each time you enrol to study, your USI will be used to store your training records and results. You will then be able to access your training records online from your computer, tablet or smart phone whenever you need to. For example, for a new employer, or when you enrol for further study.

   After January 2015, you cannot be issued a certificate without a USI number.
   To obtain one, go to: www.usi.gov.au

7. The course has some **physical requirements.** For example, each student has to complete CPR on the floor for a set time. We suggest comfortable appropriate clothing for the practical session.

8. You will need to understand your **rights and obligations** for this course.

FIRST AID ROLES AND RESPONSIBILITIES

About first aid

First aid is the initial care provided to someone who has suddenly fallen ill, or who has been injured, until more advanced care is provided or the person recovers. Immediate and effective first aid may reduce the severity of the injury or illness and promote recovery. Knowledge of first aid is important for everyday life at home, work, or in the community. Not every incident requiring first aid will be life threatening, however the more people with basic first aid knowledge, the better the chances are of saving a life!

A *first aid provider* is defined as someone trained in first aid who should a) Recognise, assess, and prioritise the need for first aid; b) Provide care by using appropriate competencies; c) Recognise limitations and seek additional care when needed.

Australian Resuscitation Council (ARC)

The Australian Resuscitation Council is a voluntary coordinating body creating uniformity and standardisation for resuscitation techniques and for the provision of first aid. They develop guidelines for the provision of CPR and first aid. The guidelines can be viewed on their website: resus.org.au

Ethics and first aid

First aid training

If you are trained in first aid, it is imperative to maintain currency of skills and knowledge. Routinely attend refresher courses and be aware of changes to legislation, policy and procedures and ARC guidelines in relation to first aid.

Duty of care

If a first aider decides to provide assistance to a person in need, they must provide a standard of care appropriate to their training (or lack of training) and never go beyond their own skills and limitations. They must act in 'good faith', without recklessness and with reasonable care and skill. First aid must be provided in accordance with first aid principles, making the casualty as comfortable as possible using available resources and equipment. First aid equipment used must be operated according to manufacturer's instructions. The first aider should stay with the casualty unless it is necessary to leave to call for medical assistance, a rescuer of equal or higher ability takes over, or continuing to give aid becomes unsafe.

The Good Samaritan Law

A *Good Samaritan* is defined in legislation as a person acting without expecting financial or other reward for providing assistance. First aiders need not fear litigation if they come to the aid of a fellow human in need as long as they do not act recklessly and try to avoid further harm. Most Australian states and territories have some form of *Good Samaritan* protection. In general these offer protection if care is made in good faith.

Respect and ethics

Ethical issues are dependent on law, cultural beliefs and principles, and on moral grounds. Simple ethics include always displaying respectful behaviour towards the casualty, maintaining respect for his/her beliefs, privacy and dignity, and paying careful attention to consent and confidentiality.

Privacy and confidentiality

Personal information about the health of a casualty must be kept confidential and should only be accessed by authorised people. Information includes details of medical conditions, treatment provided and the results of tests. Disclosure of personal information, without that person's written consent, is unethical and in some cases may be illegal. Confidentiality of records and information must be maintained in line with statutory and/or organisational policies.

Consent and refusal of treatment

The consent of an injured or ill person must be obtained before assistance is rendered, regardless of age, ability, health or mental status (unless the casualty is unconscious). If the casualty is a minor, consent must come from a parent or guardian if available. Legal action and damages may be taken against you if you act without obtaining consent.

Adults are entitled to refuse treatment, even if it is life-sustaining. Substitute decision-makers such as parents or legal guardians of minors, or those with a disability, can likewise refuse treatment but only if in the *best interests* of their charge.

Making the casualty comfortable

The casualty should be made as comfortable as possible by using available resources and equipment. This might mean placing pillows under broken limbs or behind a head or back, covering them to keep warm or providing pain relief using hot or cold packs etc. Use resources that are available at the scene or close by. They could be commercially made items from a first aid kit such as bandages, slings, gauze or an emergency blanket, or, you could use *make do* items such as rolled up jumpers for a pillow, towels or large coat for a blanket, a t-shirt torn into strips for a bandage etc.

Monitoring and reassuring

The casualty will feel better knowing that you are going to stay with them and care for them until further help arrives. A first aider should monitor the casualty and respond to changes to their condition in accordance with first aid principles.

First aid in the workplace

First aid requirements vary from one workplace to the next, depending on the nature of the work, the type of hazards, the workplace size, location and number of workers. These factors are taken into account when deciding what first aid arrangements and facilities need to be provided, along with adhering to the Australian Resuscitation Council guidelines and the relevant state and territory legislation.

Policies and procedures

When they are developed, policies and procedures for first aid in the workplace take into account the relevant legislation, such as Acts, Regulations and Codes of Practice. They provide information on how to provide first aid, report incidents, and follow emergency plans. A workplace first aider must be able to locate, understand and adhere to their organisations policies and procedures for the provision of first aid. For example, workplaces will have procedures for dealing with major and minor accidents/incidents in the workplace.

Minor incident - Where a casualty requires minor first aid treatment on site, but is able to immediately return to work.

Serious notifiable accident - Is an injury to a worker where transportation to hospital is required for medical treatment.

First aid Code of Practice

Codes of Practice are practical guides under the *Work Health and Safety Act* and Regulations for safety in the workplace. The FIRST AID IN THE WORKPLACE Code of Practice provides information using a risk management approach for first aid i.e. take into account the size and type of workplace, identify potential hazards and assess the risk to determine first aid requirements such as training for first aiders, the requirements for first aid facilities and the appropriate content and number of first aid kits.

First aid kits

Legislation requires all workplaces to have a first aid kit that is stored in an accessible location clearly marked with a first aid sign. The number of kits, the contents and size will vary depending on the number of workers and the type of industry.

First aid kits should be checked regularly to ensure that there are sufficient supplies in the kit when it is required in a first aid situation.

First aid equipment

All first aid equipment must be operated according to the manufacturer's instructions and never used for anything other than what it is intended for.

Communication and reporting

A first aider will be required to communicate in many different ways. It may be directly with the casualty, their relatives, parents or carers. It may be to direct bystanders, ask for assistance, consult witnesses, call emergency services or provide a verbal handover to paramedics or ambulance officers. No matter what the situation effective communication is of utmost importance.

Effective communication

The aim is to gain trust, provide reassurance and get others to assist you. Those assisting will need clear direction and coordination. To communicate effectively is to speak clearly, be precise, direct and get straight to the point. Use a confident firm tone of voice, don't yell or order abruptly. Consider culture and ethics. Show leadership. Check that directions are understood and followed, for example making sure the person you asked to call the ambulance has actually done so. Effective listening is also an essential part of communication.

Communication and cultural awareness

Attentiveness and using culturally appropriate ways of communicating which are courteous and clear, assists with gaining the trust of the casualty. First aiders may be called upon to treat casualties from diverse backgrounds. The values of different cultural groups should be respected and everyone should be treated with sensitivity. For example, it may be necessary to communicate through non-verbal means (body language, hand signals etc.) due to language or hearing barriers. A first aider should have the ability to identify issues that may cause conflict or misunderstanding and approach them accordingly.

Communicating and providing first aid for children, the aged or infirmed

Be mindful of the age of the person being treated and act accordingly. There are differences in the way you should communicate for moral reasons and also to gain acceptance and trust.

Children and babies - Approach with care and compassion. They may be frightened, especially if they don't know you and they are away from their parent/caregiver Reassure, use a soft kind voice and give them a distraction to take their mind off the situation e.g. give them something to hold, like a band aid. The details of an incident involving children or babies when the parent/caregiver is not present, must be reported to the parent/caregiver. Also, children may react differently to adults after a first aid situation. Whether injured or sick themselves or concerned about a friend, they will feel affected by the incident. Someone should talk to children about their feelings, emotions and responses and provide assistance to help recovery.

Aged or infirm - Respect and dignity are very important. Remember with older people they may have reduced ability, such as trouble walking or moving, be hearing impaired, be fragile e.g. brittle bones, thin skin which damages or tears easily, etc. Be patient, gentle and provide support and assistance with movement, positioning and making comfortable.

Sending for help

When calling for help, the "*phone first*" concept is recommended by the Australian Resuscitation Council, especially for cardiac arrest situations. The first aider should arrange for the ambulance to be called, but always ensure that the person who rings for the ambulance confirms with you that the call was made and the exact location has been given. They should also send someone to obtain resources such as masks, gloves and a defibrillator etc.

If no-one is close by, try calling out for help or assistance. If there is no-one available to assist, the first aider should call the ambulance themselves.

Phone the ambulance

Stay calm. Call from a safe place. Select the service required. Provide your location. Follow instructions.

Triple Zero (000) is the Australian primary emergency number for all telephones (landline, mobile phones and payphones). *Please note: you must have reception to make the call from a mobile phone.

Note: 112 is an international standard emergency number automatically translated to the emergency number of the country the caller is in, and 106 is a text-based emergency call service for people who are deaf or have a hearing or speech impairment.

Verbal reporting or handovers

All first aiders should have sufficient oral communication skills to be able to make an accurate verbal report about an incident. This should be a quick and efficient handover/verbal report to personnel taking over the casualty, so they can provide the appropriate further treatment as soon as possible. Incident details must be conveyed clearly and concisely, stating only facts, such as the time of the incident, exactly what happened, what first aid was provided and the casualty's response to the treatment. Do not embellish or add thoughts and comments about the incident unless asked.

Parents/caregivers must be provided with details of incidents involving babies and children. They will be worried or concerned, therefore tact and an authoritative but caring tone will be required. It is important to provide facts only, not judgments on what treatment is needed after first aid, or how the parent/caregiver should look after their charge.

A workplace first aid officer must also verbally report the details of an incident to the relevant person in the organisation or worksite (e.g. supervisor) and will most likely have to fill out a workplace incident report form.

Written reports

First aiders in general

Although a report is initially done verbally, it is useful to also do a written report. First aiders should try to make notes where possible, during first aid provision, or fill out official report forms soon after. Recording treatment and events will assist with recalling what happened if ever required to do so. Keep in mind however, all written information about a casualty must be kept private and confidential, unless the casualty agrees to share the information, or authorities require it for legal purposes.

First aid providers in the workplace

Official incident report forms need to be filled out and kept on record for all incidents that occur in the workplace, regardless of whether there is an injury or not. Forms must be accurately filled out in accordance with the workplace policy and procedures, legislation and privacy and confidentiality requirements, stating only facts, not comments you are not qualified to make judgement on, or example "*the casualty is an alcoholic*". The workplace will store or file documentation and forms. Storage will differ according to the workplace procedures, for example, hard copies may be kept in a filing cabinet in the office, or with the supervisor , or electronic versions may be kept in a computer filing system, on back up disks in a safe, etc.

Serious and notifiable incidents

Serious incidents, or *notifiable incidents* in a workplace must be immediately reported to the relevant regulatory authority according to workplace and legislative requirements.

Examples of official written forms:

Allens Training — **FIRST AID REPORT FORM** *sample*

INCIDENT LOCATION: TIME: DATE:

CASUALTY SURNAME: GIVEN NAMES: TITLE: D.O.B.: SEX: M / F

CASUALTY ADDRESS: P/CODE:

PATIENT ASSESSMENT & OBSERVATIONS

KEY
A – ABRASIONS
B – BURN
C – CONTUSION
D – DISCOLOURATION
F – FRACTURE
H – HAEMORRHAGE
L – LACERATION
P – PAIN
R – RIGIDITY
S – SWELLING
T – TENDERNESS

LEVEL OF CONSCIOUSNESS			
TIME	FULLY CONSC.	CONFUSED DROWSY	UNCONS.

VITAL SIGNS				
TIME	PULSE	RESPS.	PUPILS L	R

CHIEF COMPLAINT / SYMPTOMS / SIGNS	FIRST AID GIVEN
	❑ OXYGEN GIVEN
	❑ DEFIBRILLATION GIVEN

GENERAL OBSERVATIONS	REFERRAL FOR CARE
	❑ HOSPITAL (BY AMBULANCE)
	❑ HOSPITAL (BY CAR)
	❑ OWN DOCTOR
	❑ CASUALTY REFUSED / DECLINED TO RECEIVE ANY FIRST AID WHEN OFFERED

ATTENDING FIRST AIDER DETAILS — REPORT DATE:

TITLE: NAME: SIGNATURE:

General first aid report form example

INCIDENT REPORT FORM - *sample for training purposes*

Section 1: Employer Details

Legal name:			
Trading name:			
Type of workplace:			
Street address:			
Suburb/Town:		Postcode:	
Phone:		Fax:	
Email:			

Section 2: Details of Injured Person

Surname:		Sex: Male ❑ Female ❑	
Given names:			
Occupation:			
Date of birth: / /	Age:	Days unable to work:	

Section 3: Details of Injury

Date of injury:	/ /	Time of injury:	❑ am ❑ pm
WorkCover number:			
Nature of injury:			
Injury code			
Brief description of how injury occurred:			
Address of the workplace where the injury occurred:	Street address:		
	Suburb/Town:		
	Postcode:		
Area of workplace the injury occurred:			
Person removed to:			
Person reporting injury:	First name:	Surname:	
	Position:	Phone:	
Person for liaison:	First name:	Surname:	
	Position:	Phone:	

Body Location	
Skull	A
Chest	B
Arm	C
Leg	D
Digit (finger/toe)	E
Pelvis	F
Spine	G
Eye	H
Ankle/Foot	I
Injury Type	
Amputation	1
Fracture	2
Laceration	3
Loss of sight	4
Other 10 days +	5
Fatality	6

Examples:
1. Head fracture would be an A2
2. Arm amputation would be a C1
3. Toe amputation would be an E1

Workplace incident report form example

Evaluations after first aid

Own performance

You must be aware of your own skills and limitations whilst providing care for a casualty. Evaluating your own performance after an incident can provide you with an opportunity for self-improvement. It may be beneficial to speak with the paramedics who attended the incident to ask for advice.

Psychological impacts

It is extremely important to recognise the possible psychological impacts on yourself, other rescuers and children (if you work with children), especially when involved in critical incidents.

Each person will react differently to a traumatic incident and in some cases a situation may evoke strong emotions which may affect health, well-being and work performance. Symptoms can appear immediately or later, days, months or even years after the original event. There is no right or wrong way to feel. What a person experiences is valid for that person.

Debriefing

Debriefing should be conducted to address individual needs and children should be provided with someone to talk with about their emotions and responses to incidents. All first aiders should talk about the event and how they feel and seek professional help if they recognise the signs and symptoms of stress.

Evaluate incident management

In a workplace, evaluation of an incident should be done with a supervisor and all involved, so that the incident can be discussed, evaluated and recorded for future improvement. This consultation can lead to improved action plans or contingency plans being developed and will also ensure first aiders are not suffering emotionally after attending an incident. Support services for personnel involved in any incident should be arranged.

Safety when providing first aid

Before providing first aid, a first aider must evaluate the scene of an emergency on approach using hazard identification. If hazards have been identified, it is important to assess the risk they pose. This is called risk assessment. The next step is to decide what to do to remove the risks posed by the hazard or make them safer. Personal safety is of the utmost importance. This process must be done very quickly and effectively in an emergency situation. In all cases, do not proceed if unsafe.

SAFETY IS A PRIORITY:
For the casualty, the first aider, others assisting and bystanders.

A HAZARD
Anything likely to cause an injury or illness.

A RISK
The likelihood and consequences of an injury or illness occurring from exposure to the hazard.

Hazards at a car accident such as broken glass and traffic.

Look for anything that may cause harm to self, casualty or others at the scene.

There may be more than one risk factor per hazard.

How dangerous are the hazards? How can I make them safe?

Make sure actions don't cause more danger.

Remove or minimise dangers. Provide information. Direct others.

Check the area again.

Check safety.

Still too dangerous, go back to Step 1 – IDENTIFY HAZARDS.

IDENTIFY HAZARDS

IDENTIFY RISKS

ASSESS DANGERS

MANAGE SAFETY

REVIEW SAFETY

IF SAFE PROCEED.
IF STILL UNSAFE WAIT FOR EMERGENCY SERVICES

Hazards and risks

A first aider should be aware of the dangers and hazards that may cause harm to the casualty, as well as themselves. Always ensure your own safety in these situations and then protect the casualty.

Airway obstruction due to the position of the casualty's body is a hazard to the casualty. The biggest danger of this occurring is whilst they are unconscious however; in a conscious person, obstruction of breathing can occur in a person who is pinned down, or restricted whilst on their back, possibly causing suffocation. Vomiting is another danger which may cause suffocation or choking, therefore always assist the casualty in to a position that allows for drainage. Exposure to the weather or being in a dangerous situation such as on a road or unstable surface are other common hazards.

Hazard and risk management

Hazards	Risk the hazard may pose	Ways to make safer
Body fluids (e.g. blood)	Being infected.	Gloves, masks, eye wear, aprons etc.
Casualty body position (e.g. on back and unconscious)	**To the casualty:** Airway obstruction, choking, further injury. **To the first aider:** manual handling injury.	Using correct handling techniques - roll the unconscious on his/her side, do not pin down or restrain on his/her back, position for drainage if vomiting.
Aggressive behaviour	Being attacked, intimidation.	Be calm, reassure, get assistance, don't continue if they remain aggressive.
Needle stick injuries	Being stuck by the needle and becoming contaminated.	Look for, move away from found needles, advise others, don't pick up.
Manual tasks (lifting or moving heavy objects or casualties, overexertion)	Back and neck injuries, injury to the body, dropping a casualty.	Use safe techniques, get assistance, know your limitations, use devices i.e. back boards.
Machinery and equipment	Being struck, hit or cut by moving equipment. Equipment failure.	Shut down or shield dangerous moving parts.
Chemical fumes/biological	Being poisoned, burns, irritation, infection, allergic reaction.	Wait for professionals to declare safe, use PPE, shut down power, consult Safety Data Sheets.
Radiation	Welding arc flashes to eyes, burns from ionizing radiation and lasers.	Use PPE, use barriers to prevent others from entering, turn equipment off for first aid.
Animals	Bites, kicks, scratches.	Move the animals away, contain them, wait for authorities or professionals.
Traffic	Being hit by a vehicle.	Move to a safer location, put up warning signs, position vehicles, and direct traffic.
Electricity or fallen power lines	Electrocution, shock, burns, cardiac arrest, fire.	Wait until power is shut down, use non-conductive materials to remove casualty.
Fire	Being burnt, risk of explosion, building collapse, being trapped, smoke hazard.	Extinguish fire if trained, remove fire sources, move to a safer area, call 000, do not proceed if too unsafe.
Environment (e.g. storms, snow, wind, rain, extreme temperatures)	Slipping, being struck by objects, burns, heat stress, fatigue, cold injury.	Protect with cover, move to a safer area, find shelter.
Location (e.g. rough terrain, heights, confined spaces)	Falling, tripping, slipping, being trapped, unsafe atmosphere.	Move to a safer area, follow safety procedures, call 000, do not enter confined spaces unless trained.

Manual handling

You must be aware of possible injuries you could receive whilst providing first aid. People move and have characteristics which must be taken into account when moving, lifting or assisting them (manual handling). Unpredictable behaviour such as sudden movements and the need to adopt awkward or static working postures can put you at risk. Most common injuries are to the back as a result of poor manual handling. The shape of our spinal column, which curves forward in the neck and lumbar region means this area receives the greatest stress when moving or lifting. The majority of back injuries occur in the lower lumbar area. Avoid using back muscles to lift a casualty and most importantly never lift a casualty while you are bent over them. Never attempt to manually lift the person from the floor, or attempt to lift a person alone.

1. Mental preparation:	**What** Weight and size of casualty	**Where** is the casualty to be moved to	**How** Lifting technique Number of helpers Use resources to assist	**Know** your limitations	**Ask** for help if required, or ask the person to assist where possible
2. Position:	**Arms and casualty** close to your body	**Feet** shoulder width apart	**Hips** Flex at hips, not waist, Bend at the knees	**Back** Keep in alignment with shoulders and pelvis	**Head** Hold straight
3. Lifting:	**Grip** load securely	**Use** thigh and leg muscles	**Avoid** twisting, rotating or jerking	**Communicate** Take charge Provide good instruction	**Team work** Co-ordinate Work together

Infection control & standard precautions

In every first aid situation you should try to minimise the risk of transmission of infection to yourself, the casualty and to any bystanders. Follow standard precaution procedures to ensure a basic level of infection control, especially when handling blood or body substances. Standard precautions are practices applied regardless of a casualty's infectious status. This includes hand hygiene, use of personal protective equipment (PPE), appropriately handling and disposing of sharps and waste, cleaning techniques and managing spills of blood and body substances.

Reduce exposure.

How can diseases be transmitted?

- Droplet transmission – e.g. Sneezing or coughing.
- Airborne transmission – e.g. Ventilation systems and air conditioning units.
- Contact – e.g. Blood or body fluids coming into direct contact with skin, eyes etc.
- Contaminated objects – e.g. Skin contact with needles, mosquitoes etc.

Wash your hands.

Providing first aid safely - Always assume there is a risk of being exposed to infection.

Before first aid:

- Wash your hands with soap and water or apply alcohol-based hand rub.
- If you have cuts or wounds on your hands, cover with a waterproof dressing
- Check gloves are in good condition.

Disposable gloves.

During first aid:

- Wear gloves and ensure that they don't get torn.
- Use a plastic apron and eye protection if available and splashes of blood or body substances are likely to occur.
- Use a resuscitation mask if available for rescue breaths.*
- If you come into contact with body fluids, wash the area immediately with running water and seek medical advice.

Resuscitation mask.

After first aid:

- Safely dispose of used dressings, bandages and infectious waste, e.g. in to plastic bags marked infectious waste.
- Carefully remove disposable gloves, dispose of them in to an appropriate bin or container, then wash your hands thoroughly with soap and water or apply alcohol-based hand rub.

* There are several types of resuscitation masks available, even ones that can be carried on your key ring. If a resuscitation mask is unavailable, you could ask the partner of the casualty to do the rescue breathing, or do compression only CPR, especially if there are signs of blood or vomit, or you do not want to do the rescue breaths for fear of infection.

First aid emergencies

Recognising an emergency

An emergency can happen anywhere, on the road, at home, work or play. The sound of someone in distress, a spilled chemical container, unusual behaviour (e.g. panic) and/or symptoms and signs of the casualty such as severe bleeding may be indicators of an emergency. You will not know if first aid is needed until you approach the scene or the individual. For example, you may see a person slip, they may not be in need of any help at all, or the person may be unconscious and need immediate medical assistance.

A medical emergency is a sudden illness such as heart attack which requires immediate medical attention.

An injury is damage to the body, such as broken arm which results from a violent force. Some injuries can be serious enough to be considered emergencies.

What to do when you recognise an emergency - Always call Triple Zero (000). If you are not sure, call 000 anyway. Calling an ambulance can be the difference between life and death.

Capabilities of emergency services - Emergency services personnel have specialised training to manage casualties. They carry advanced equipment and have access to additional resources/technical experts. They also have the ability to readily communicate and coordinate with other emergency services if required.

Emergency action plan

An emergency action plan is a guideline a first aider can follow to assist them to remain calm, but respond quickly and provide effective treatment. Following an emergency action plan also ensures safety.

First actions are based on the DRSABCD protocol

1. ASSESS THE SCENE

Danger – Identify, assess and manage immediate hazards. If this is not possible, call for assistance from emergency response services. Do not make an attempt to respond if it is dangerous. Evacuate casualties to a safer area if required and you can do so without putting yourself in danger. For multiple casualty incidents, conduct a basic triage.

2. ASSESS THE CASUALTY

Response – If conscious, obtain consent. Assess the casualty. Recognise the need for first aid. Check their response, vital signs, injuries and signs and symptoms. Recognise the need for assistance.

3. ASSESS WHAT TO DO NEXT

Send for help – If further assistance required, coordinate others to call for help and get resources, or do it yourself. Provide first aid following procedures and principles.
Treat the unconscious: **AB – Airway, Breathing** **CD – CPR, Defibrillation**
Treat the conscious: Manage injuries or illnesses. Monitor and reassure the casualty until help arrives.
Handover the casualty.

Consciousness

A casualty may experience different levels of consciousness:

- **Conscious** - A person is walking, talking, doing normal things, is said to be 'conscious'.
- **Unconscious** - A person is said to be 'unconscious' when they cannot be woken from what looks like a sleep but they are still breathing and they have a pulse. You cannot gain a purposeful response.
- **Cardiac arrest** - A collapsed casualty who is unconscious and not breathing normally or at all.

History

A history is the complete story concerning the accident or illness. What happened prior to the illness or accident can be vital when working out what is wrong with the casualty, especially if they are unconscious. It is a short story that leads up to and includes the incident. It includes any previous or current health conditions and medications. The casualty, bystanders or relatives can be invaluable in these cases.

Ask questions such as:

- "Do they suffer from any allergies?"
- "Are there any previous relevant illnesses?"
- "Are they on any medications?"
- "Has this happened before?"
- "What were they doing at the time?"
- "What signs or symptoms were they showing?"

One way to remember what to find out is using **SAMPLE:**

S	Signs and symptoms
A	Allergies they have
M	Medications they take
P	Previous medical/surgical history
L	Last meal (Time)
E	Events /Environment surrounding the injury i.e. exactly what happened.

Medic alert

A Medic alert is a bracelet or necklet, providing instant access to primary medical conditions/allergies or "*special needs*". They have an internationally recognised emblem, a 24hr telephone hotline number and information relevant to the person engraved on them.

Casualty assessment

Signs and symptoms

Signs are observations about the casualty's condition. Look for visible signs of injury or illness. For example, is the casualty pale? Is the casualty sweaty? Is the casualty bleeding?

Symptoms are how the casualty feels. You can ask them to tell you what they are feeling. For example, are you suffering from a headache? Are you in pain? Do you feel sick, dizzy or unwell?

For casualty assessment there are 2 stages:

1. Primary survey (response) and 2. Secondary survey (verbal and visual).

1. Primary survey (response)

This first stage follows the DRSABCD action plan. After danger, you check the response of the casualty to see if they are responsive or unconscious, or unconscious and not breathing normally.

Response

Are they alive? You must try to get a response from the casualty. If they appear unconscious, gently shake their shoulders, firmly ask questions (but don't shout), like *"can you hear me?"* Ask them to try to squeeze your hand. If the casualty responds and can talk, assess his/her state of consciousness (slurred speech, dizzy etc.) and move onto the verbal secondary survey. If they are not responding, treat them as unconscious send for help and call the ambulance immediately.

Unconscious casualty assessment

Airway and Breathing

Are they breathing? If a person is unconscious you must open their airway and check their breathing. To check whether or not the casualty is breathing normally use the *'Look, Feel, Listen'* technique. That is, **LOOK & FEEL** for movement (rise and fall) of the upper abdomen or lower chest. **LISTEN** for the escape of air from the nose and mouth. If the casualty's chest does not rise and fall with each breath, their chest does not rise at all and no air is escaping from the nose or mouth, then they are not breathing normally. If they are not breathing normally and are unresponsive, even if they are occasionally gasping, they require immediate resuscitation.

Unconscious BREATHING casualty

When a person is breathing but they cannot be woken from what looks like a sleep, they are unaware of their surroundings and no purposeful response can be obtained, they are said to be unconscious. It should also be noted that a casualty showing only a minor response, such as groaning without opening their eyes, should be treated as unconscious.

Causes - Combinations of different causes may be present e.g. a head injury and under the influence of alcohol.

The acronym - **AEIOU TIPS** will help evaluate the reasons why the casualty is unconscious.

- **A** **Alcohol** (e.g. too much);
- **E** **Epilepsy** (e.g. a seizure);
- **I** **Insulin** (e.g. too much or too little insulin in the body);
- **O** **Overdoses** (e.g. heroin/sleeping tablets);
- **U** **Uraemia** (renal failure can be difficult to diagnose for a first aider);
- **T** **Trauma** (e.g. accidents, falls, hangings, severe blood loss);
- **I** **Infections** (e.g. to the brain);
- **P** **Pretending** (e.g. pretending to be unconscious to get medical attention to avoid a situation);
- **S** **Stroke** (a rupture or blockage to an area in the brain).

Priority - **Care of the airway takes precedence over any injury, including the possibility of a spinal injury.**

Dangers due to body position - The greatest danger to an unconscious breathing casualty exists whilst they are lying on their back. When a casualty is unconscious their muscles become relaxed, including the muscles that assist in swallowing and the tongue falls to the back of the throat blocking air. Stomach contents can enter his/her lungs or they could choke due to not being able to swallow or cough out foreign material.

Position on to the casualty's side - Positioning an unconscious casualty on his/her side maintains a clear airway and facilitates free drainage of fluids and reduces the risk of inhaling foreign material. It also allows for good observation of, and access to the airway. Gently clear any obstructions (vomit, food etc.). Tilt his/her head back and using correct manual handling skills, roll on to his/her side using their arm and their bent leg. Where possible, an assistant should support the head when an injured casualty is being turned over but no time should be wasted.

Once on his/her side, you can try to obtain information about what happened from family or witnesses (history) and look for visible clues such as injuries and evidence in the surrounding area (e.g. a ladder and spilt paint may indicate the casualty has fallen from the ladder and struck his/her head).

Unconscious NON-BREATHING casualty

An unconscious casualty who is not responding, not breathing at all or has minimal response and is not breathing normally, needs urgent treatment. Even if the casualty takes occasional breaths or gasps, first aiders should suspect that cardiac arrest has occurred and should start CPR.

First aid - With an unconscious non breathing casualty, do not roll onto his/her side, **immediately follow the steps for the chain of survival** and the **DRSABCD** emergency action plan.

Calling for help is an urgent priority.

Conscious casualties

2. Secondary survey (verbal and visual)

This second stage is carried out using the '*no touch technique*' and involves a systematic visual and verbal examination of a casualty's injuries without touching them. Gain consent to assess them. Explain what you are going to do. Listen carefully to the casualty's responses to the questions you ask, observing and noting the answers given.

If injuries are found during these examinations then further evaluate what treatment is required. Where there is more than one casualty THE CARE OF THE UNCONSCIOUS CASUALTY HAS PRIORITY (Triage).

How to examine a CONSCIOUS casualty

After the primary survey - Follow an examination routine to identify any injuries that the casualty may have.

More about the verbal/visual survey - A systematic routine starts from the top of the body, starting at the neck, to the head, the chest, then the stomach, followed by the limbs and finally, if injuries allow, rolling the casualty to examine the back. The entire survey should be continued, even if they provide an answer that leads you to suspect something, such as a limb fracture. Not completing a thorough examination or simply asking the casualty to describe the painful area, may prevent you from discovering something serious, such as a spinal injury.

Verbal Survey

For each step, DON'T TOUCH, ASK about pain, and LOOK for visible signs

1. NECK

Tell the casualty not to move his/her neck or head:

"Do you have pins and needles in the hands or feet?"
"Can you move your arms and legs?"
"Do any of your limbs feel weak?"

2. TOP OF HEAD

Tell the casualty not to move his/her head:

Look over the head, face and nose for swelling, deformity, bleeding or fluid coming out of the ears.
Look for loose teeth or the inability to open the mouth or talk.

3. CHEST

Is there an injury to the chest area?

Look for the rise and fall of the chest (both sides).
Look for deformity of the ribcage or rapid breathing.
Listen for noisy breathing (obstructed breathing).
Ask - "Do you have pain when you move or breathe?"

4. STOMACH

Any pain in the stomach area?

Ask - "Do you feel pain in the abdomen, if so, where is the pain?"
Look for bruising or swelling.

5. LIMBS

Look over each limb:

Look for loss of movement.
Look for swelling, deformity or bruising.
Look for equal strength in both arms.
Look for equal strength in both legs.
Ask - "Do you feel any unusual sensations such as numbness, coldness or tingling?"

6. BACK

Ask how the back feels, any pain, tingling, numbness?

If you are completely sure that there is no injury to the spinal cord and there are no other injuries to the casualty that need your attention, then you can roll them over to visually check for signs of injury.

With assistance, gently log roll the casualty onto his/her side.

Be careful - maintain casualty in straight position without twisting the neck or back.

Whilst still supporting the head and neck, look for deformity, swelling, bleeding or bruising.

Ask - "Where do you feel pain?"

Multiple casualty incidents

Triage

Triage generally applies to large numbers of casualties. It is a tagging system often used by paramedics; however, the principle can be applied in any situation with 2 or more casualties.

Basic triage is the sorting of casualties in a multiple casualty incident by the severity of injury or illness. This ranges from those most in need of assistance, to those who have only minor injuries. For example, those needing immediate life-saving interventions such as obstructed airway, excessive bleeding or shock, will be treated first, then those who are stable but need monitoring and medical attention, to those that will require care but not urgently. The goal is to identify casualties who have — obstructed airway or excessive bleeding or shock — and to treat them immediately.

Conducting a triage evaluation:

1. **Check airway/breathing;**
2. **Check bleeding/circulation.**

A casualty who has suffered a cardiac arrest should only be given CPR if there are no other seriously injured casualties who would benefit from your life-saving treatment.

Move casualties to safety - You may be required to assist casualties to evacuate to a safer environment, for example, from an unsafe building, from a car with leaking fuel etc. Using the triage principle, you would move those who need most assistance first and see who of the injured can assist with moving those more injured, or at least help themselves. Get help to move the unconscious or drag them to safety if staying is more dangerous than moving.

Remember - A first aider must always be concerned with their own safety, if you don't protect yourself, you can make the situation worse.

Understanding the body

Anatomy and physiology

A first aider must have a basic understanding of anatomy, physiology and certain body systems in relation to injury, illness and body positioning.

Anatomy: The study, classification and description of structures and organs of the body. *For example:* **Anatomy of the external chest** - The exterior of all humans' chests are basically the same. However, the size, shape and function of breasts vary between the sexes and age groups.

Physiology: The study and process of the function of the human being. *For example:* **Physiology relating to response or consciousness** - Without circulating blood and oxygen to the brain and the body pumped from the heart and by breathing, a person will become unconscious and the brain will stop functioning.

All bodies are different - It is important to remember that there are obvious differences in physiology and anatomy between infant, children and adults. Thus, certain first aid treatments and body positioning will be different, for example as discussed in the *Resuscitation* section. The most significant are the differences in size, respiratory systems and clinical values such as pulse and respirations.

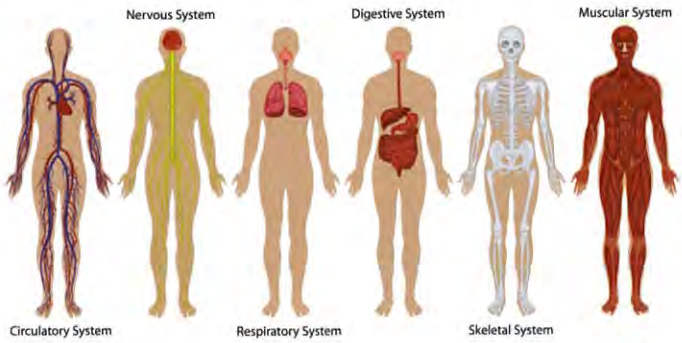
In infants and children - The airways are narrower, the larynx is higher and the tracheal cartilage is softer and smaller in length and diameter. The jaw is proportionally small and the tongue proportionally larger. Care needs to be taken not to injure or damage the airways when providing CPR.

Body system:

Cells combine to form tissues, tissues combine and form organs, a group of organs combine to form a body system, a body system is a group of organs working together to accomplish a bodily function. When a person is injured or becomes ill it affects one or more of the body systems.

There are 11 main systems of the body:

1. Integumentary;
2. Skeletal;
3. Muscular;
4. Nervous;
5. Endocrine;
6. Circulatory;
7. Lymphatic;
8. Respiratory;
9. Digestive;
10. Urinary;
11. Reproductive.



6 examples of the human body systems

Brief description of systems involved with first aid

The cardiovascular or circulatory system:

- **Comprised of** - The heart muscle and a closed system of vessels called arteries, veins and capillaries. The heart has two types of valves that keep the blood flowing in the correct direction.
- **Responsible for** - Pumping blood around a circuit of vessels. Blood passes again and again to the lungs through pulmonary circulation and through the body via systemic circulation. This is done by the cardiac/heart muscle contracting and relaxing. The blood transports: oxygen, nourishment, hormones, disease fighting substances, waste.
  - The heart muscle needs oxygen-rich blood to function. Heart rate is the number of heart beats per minute (bpm). This varies as the body's need to absorb oxygen and excrete carbon dioxide changes.

The respiratory system:

- **Comprised of** - Mouth. Upper respiratory tract – nose, pharynx (throat) and larynx (voice box). Lower respiratory tract - windpipe or trachea, bronchial tree, 2 lungs and a breathing muscle called the diaphragm.
- **Responsible for** - Works with the circulatory system to provide oxygen and remove waste products. Regulating the pH of the blood. Breathing.
  - *Inspiration* (inhalation) - The process of taking air into the lungs.
  - *Expiration* (exhalation) - The process of letting air out of the lungs.

The muscular system:

- **Comprised of** - Specialised cells called muscle fibres or tissue. The body is made up of 3 types of muscle tissue:
  1. *Skeletal* - help the body move;
  2. *Smooth* - located inside organs such as the stomach and intestines. Involuntary motion;
  3. *Cardiac* - found only in the heart. Its motion is involuntary.
- **Responsible for** - Allowing the body to move and function (muscle tissue contracts and expands). Posture. Joint stability. Movement (using bones as levers). Heat production. Protection (controlling size of blood vessels and bronchioles). Peristalsis (the "milking" action of gastrointestinal organs).

The skeletal system:

- **Comprised of** - 206 named bones, cartilage, ligaments, tendons.
- **Responsible for** - Supporting the body to stand up. Bones work together with muscles to produce movement. Protection for soft body parts (the fused bones of the cranium (head/skull) surround the brain; vertebrae (spinal bones) surround and protect the spinal cord; The rib cage protects the heart and lungs.

Vital Signs

Vital signs are used to measure the body's basic functions. The normal ranges for a person's vital signs vary with age, weight, gender, and overall health. There are 4 primary vital signs: 1. Pulse (heart rate); 2. Breathing rate (respiratory rate); 3. Blood pressure and 4. Body temperature (shown in a separate table below).

VITAL SIGNS AT REST	AGE	PULSE (per minute)		RESPIRATIONS (breathing rate per minute)		BLOOD PRESSURE (MM HG)
		Range	Average	Range	Average	Average
	1 month -1 year	90 - 140	120	25 - 40	30	80 / 60
	1 year – 5 years	80 - 120	100	20 - 30	25	95 / 65
	5 - 13 years	70 - 110	90	15 - 25	20	100 / 65
	13 - 18 years	60 - 105	80	12 - 20	16	115 / 75
	Adult	60 - 100	70	12 - 15	14	110 / 60

Blood pressure (BP), skin colour, blood loss and shock:

Although taking a blood pressure is not part of first aid, there are several indicators or signs to help assess a casualty's blood pressure. A simple test is to press and release pressure on a fingernail or skin:

- **Normal or adequate blood pressure** - The colour immediately returns after press and release
- **Low or inadequate blood pressure** - The area is still pale after 2 seconds

Inadequate blood pressure could indicate **blood loss**. When a person loses blood, the blood pressure falls and the casualty will have pale, cold, clammy skin. The pulse is usually faster than normal and they may become thirsty. Another indicator of blood loss is the colour of the tongue. If the tongue is pale, it means blood loss. These are also signs and symptoms of **shock.**

- **Pale skin colour** - A person who has suffered significant blood loss will be pale (so will their tongue).
- **Blue skin colour** - If the oxygen levels are reduced, they could have a blue colour to the ear lobes, lips and fingers.

Body temperature:

- **Normal human body temperature** is 36.2 – 37.6 °C, with **37°C** being stated as the **average normal temperature**.
- **Fever** - The body attempts to maintain a normal temperature. When that set-point is raised, the result is a fever. Fevers are not to be confused with heat stroke. Note: The difference between fever and hyperthermia is the underlying mechanism. A fever is usually a response to infection and can be lowered with medications.

	Average body temperatures		Common signs and symptoms
COLD	Medical emergency	<32°C	Hallucinations, delirium, complete confusion, extreme sleepiness, progressively becoming comatose. Shivering is absent (may even think they are hot). Reflex absent or very slight.
	Hypothermia	<35°C	Intense shivering, numbness, bluish/grey skin. *Seek medical help.*
	Normal Average	**37 °C**	**Varies, depending on time of day, activity and mode of measurement.**
	Fever	>37°C	Feeling hot, sweating, feeling thirsty, chills. *Seek medical help.*
	Hyperthermia	>38°C	Severe sweating, may be flushed and red or pallor with dry skin. Fast heart rate, breathlessness. Possible convulsions. *Seek medical help.*
HOT	Medical emergency	>41°C	Fainting, vomiting, severe headache, dizziness, confusion, hallucinations, delirium, drowsiness. May become comatose, convulsions, brain damage, cardiac arrest.

Using resources

All first aid equipment, such as a defibrillator, must be used and operated according to the manufacturer's instructions and never used for anything other than what it is intended for.

Bandages and slings

There are essentially 2 main types of bandages; one is called a roller bandage, because it rolls onto a limb, and the other is called a triangular bandage. However, bandages can often be improvised as the situation demands, using clothing, blankets or other material.

Roller bandages - A long narrow strip of sterile fabric (of variable width) rolled into a cylinder to facilitate application. They can be conforming bandages, which are elastic or crepe.

Roller bandages are used for:

- Holding dressings in place;
- Helping to control bleeding;
- Helping to reduce swelling;
- Providing some support;
- Creating pressure for strains, sprains;
- Pressure immobilisation technique (pit) for snake and spider bites.

Triangular bandages - After being bandaged, an injured forearm or wrist may require a sling to lift the arm and keep it from moving. The usual slings are commercially made bandages called triangular bandages, but there are many alternatives if you do not have a commercially made sling. For example, using a head scarf or piece of material, or turning a person's clothing up over their arm is a quick method, especially useful in sporting accidents.

Triangular bandages may be folded to create an uppe sling, lower arm sling and a collar and cuff sling. They may also be used to create a broad bandage for splinting fractures of the upper legs and a narrow fold bandage for lower leg fractures.

RESUSCITATION

Breathing in a casualty may be absent or not effective as a result of:

- Cardiac arrest;
- Upper airway obstruction;
- Problems affecting the lungs;
- Drowning;
- Suffocation;
- Paralysis or impairment of the nerves and/or muscles of breathing.

Cardiac arrest

Cardiac arrest is the largest cause of death. Starting treatment as soon as possible is vital for survival. The casualty needs an ambulance, urgent cardiopulmonary resuscitation, defibrillation and transport to hospital.

Defibrillation is used to treat cardiac arrest caused by Ventricular Fibrillation (VF, an abnormal, irregular heart rhythm with rapid, uncoordinated contractions) using an electronic device called an automated external defibrillator (AED). An AED helps re-establish normal contraction rhythms in a heart that is not beating properly by providing a brief, effective shock through the person's chest to their heart, interrupting the abnormal rhythm and hopefully allowing the heart's natural rhythm to regain control. The time to defibrillation is a key factor that influences survival. For every minute defibrillation is delayed, there is approximately 10% reduction in survival. An AED can safely be used on pregnant casualties.

The best way to increase the chance of saving sudden cardiac arrest casualties outside of a hospital setting is to follow every link in the chain of survival.

Signs & Symptoms

Collapsed and not moving, unresponsive, unconscious and not breathing normally or at all, or gasping with no response.

Hazards

NO CIRCULATING OXYGEN TO THE BRAIN. TIME - QUICK TIMING IS VITAL.

Risks

BRAIN DAMAGE. DEATH

Chain of survival

Early Access to the Ambulance

Quickly get medical help
Recognise the cardiac arrest. Dial 000. Send for a defibrillator.

Early CPR

To maintain sufficient oxygen circulation
to preserve brain function until an AED is available.

Early Defibrillation

To regain the normal heart beat.
For every minute delayed, there is approximately 10% reduction in survival.

Early Advanced Care

To keep alive.
Paramedics provide drug administration, advanced airway procedures, other interventions and protocols.

Early advanced care relates to the response of highly trained paramedics who can assist the casualty, provide for the administration of drugs, advanced airway procedures and other interventions and protocols.

When to stop CPR - Continue cardiopulmonary resuscitation until:

- The casualty responds or begins breathing normally;
- It is impossible to continue (e.g. exhaustion);
- Someone else can take over CPR;
- A health care professional directs CPR to be ceased.

Having a defibrillator in a workplace or shared between a number of workplaces is vital in giving a cardiac arrest casualty every chance of survival.

Cardiopulmonary resuscitation (CPR)

First aiders should start CPR as soon as they assess the casualty as not responding. The indicators would be that the casualty is unconscious, unresponsive, not moving and not breathing normally. Even if the casualty takes occasional breaths, or gasps, first aiders should suspect that cardiac arrest has occurred and should start CPR.

1. Manage airway - Roll the casualty on to his/her back to open the airway. Failure to maintain an open airway is the most common cause of obstruction during resuscitation.

Open airway

ADULTS - Use backward head tilt / chin lift. Place one hand on their forehead. The other hand provides chin lift. Hold the chin up using your thumb and fingers (pistol grip). Tilt the head backwards (NOT the neck). The jaw is held open slightly and pulled away from the chest. Avoid excessive force.

INFANTS - Do not use backward head tilt / chin lift for children under 1 year old, keep the head in a neutral position by gently supporting the lower jaw at the point of the chin maintaining an open mouth.

Check breathing

2. Breathing - After an unconscious casualty's airway is cleared, the next step is to check whether or not the casualty is breathing normally using the 'Look, Feel, Listen' technique. Casualties who are only occasionally gasping or breathing abnormally and are unresponsive require immediate resuscitation.

LOOK & FEEL for movement (rise and fall) of the upper abdomen or lower chest.

LISTEN for the escape of air from the nose and mouth.

30 Compressions

3. CPR - **30 chest compressions, 2 rescue breaths, alternately** and continuously until recovery, defibrillator arrives, someone else takes over or you are directed to stop by a medical professional. Resuscitation can be done with a **single operator**; however, it is more beneficial to complete CPR with **two first aiders** i.e. one person completing the rescue breaths and one person doing compressions.

2 Rescue breaths

Regurgitation or airway obstruction - If airway becomes obstructed during CPR, promptly roll the casualty on to his/her side and clear. Reassess response and breathing, then recommence CPR as required.

Chest compressions - Help oxygen circulate around the body. Compressions should only be paused when doing rescue breaths and for defibrillation (if required). If there is more than one first aider present, rotate approximately every 2 minutes to reduce fatigue. Casualties should be placed on their back on a firm surface*. Compressions are done on the centre of the chest, about half way along the sternum (breastbone)**, rhythmically at 100 to 120 compressions per minute and around one third of the depth of the chest.

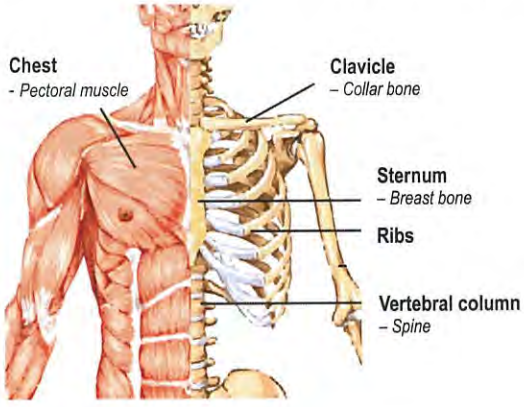
- **ADULT** use two interlocked hands.
- **INFANT** use two fingers.

Defibrillate

***Resuscitation in late pregnancy** - In the obviously pregnant woman the uterus causes pressure on the major abdominal vessels when she lies flat on her back, reducing the venous return of blood to the heart. Position her on her back with her shoulders flat and use padding under her right buttock to give pelvic tilt to the left side.

****Anatomy of the chest** - A first aider will need to understand the basic anatomy of the chest when performing CPR so that they can correctly identify where to place their hands for compressions, watch for chest rise during rescue breaths and position the pads of a defibrillator.

Compressions only CPR - If the first aider is unwilling or unable to do the rescue breaths, CPR can be performed by doing the chest compressions only. Follow all requirements for compressions continuously, only pausing if response or breathing returns, for defibrillation or handover.



Rescue breaths or ventilations - Mouth to mask (preferable), mouth to mouth, mouth to nose (infants and small children) or rarely, mouth to stoma (hole in the front of the neck). Kneel beside their head. Maintain an open airway. If using a mask, position it and hold in place. Blow into the mask and inflate the lungs. Look for chest rise. Remove your mouth from the mask to allow exhalation.

Turn your head to listen and feel for the release of air.

If the chest does not rise, re-check head tilt, chin lift and mask seal.

Do this 2 times then go back to compressions. Do the same if not using a mask, only create a seal with your mouth over theirs.

- **ADULTS** use a full breath.
- **INFANTS** only use puffs.

A resuscitation mask - A protective device which prevents direct contact between the first aider and the casualty. Why? - to avoid unpleasant, intimate contact with vomit, blood and saliva and to overcome the associated fear of transmission of an infectious disease. Risk of disease transmission during rescue breaths is very low; using a resuscitation mask reduces the risk even further. Remember though, rescue breathing is a life-saving manoeuvre and whilst masks should be used if available, they are not mandatory. Do not delay rescue breaths if protection is unavailable.

**If the first aider is unwilling or unable to do rescue breaths they can do 'compressions only' CPR.

Bag-valve-mask (BVM) resuscitator - Used to manually provide mechanical ventilation instead of mouth-to-mouth resuscitation. The BVM consists of a flexible air chamber about the size of a rugby ball attached to a face mask via a shutter valve. When the air chamber or "bag" is squeezed, the device forces air into the casualty's lungs. When the bag is released it self-inflates, drawing in air or a low pressure oxygen flow supplied from a regulated cylinder, while the casualty's lungs deflate through the one way valve.

CPR mask

4. Defibrillation with an AED

- An automated external defibrillator (AED) can identify the cardiac rhythm as *shockable* or *non-shockable*. Anyone can use a defibrillator, however, formal training assists with speed of use, correct pad placement and confidence. There are many different types of AEDs, however they all follow the same principle. Only use equipment as per the manufacturer's instructions.

BVM
- 2 person resuscitation.

Use as soon as possible. Continue CPR until the AED is turned on and pads are attached. Quickly check the equipment, turn on the AED and follow the AED treatment plan (below). Do not touch the casualty during shock delivery.

Pads are placed on the exposed chest. There is a diagram on the cover showing where to place the pads. Avoid placing pads over implantable devices. Standard adult AEDs and pads are suitable for use in adults and children older than 8 years. Ideally, for children between 1 and 8 years paediatric pads should be used. If not available, then the standard adult pads can be used in the front and back position. Follow instructions.

Continue CPR and defibrillation until responsiveness and normal breathing returns, health professionals arrive and take over, you can no longer continue due to fatigue, a health care professional directs you to stop or the situation becomes too dangerous to continue.

An AED in a case.

IMMEDIATELY ON ARRIVAL

Continue CPR until AED set up is ready.
Check still unresponsive and not breathing normally.

Turn on AED. Check equipment quickly.
Attach pads to bare chest.
Attach leads to AED.

Respond to verbal/visual cues.
Allow AED to analyse.
(This may take up to 20 seconds)

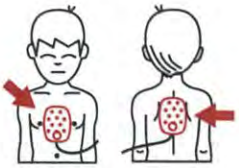
SHOCK ADVISED

FOLLOW AED PROMPTS
Do not touch the casualty during shock delivery.
STAND CLEAR

PRESS BUTTON TO SHOCK
Follow prompts as advised.

STILL NO RESPONSE
Perform CPR for 2 minutes.
CONTINUE TO FOLLOW AED PROMPTS

Anterior-lateral pad positioning, under right collar bone – under left armpit



Anterior-posterior pad positioning, front and back.

Please note: An AED will not recognise if a person is breathing. The first aider must assess breathing and only use the AED on a casualty who is not conscious and ***not breathing normally****.*

MEDICAL - ILLNESSES AND ISSUES

Allergic reactions

Mild to moderate allergic reactions are not generally life-threatening. Small singular welts, an itch, or a small localised rash, is relatively harmless. However, some mild to moderate reactions may develop further into anaphylaxis and so careful monitoring is needed.

Signs and symptoms - May include mild swelling of face, eyes and lips. Hives/welts on the skin. Tingling mouth. Stomach pain and vomiting (if this occurs after insect bite, then consider as signs of anaphylaxis or envenomation).

First aid - Consider antihistamines for relief. The person should be moved away from the source of the reaction and monitored. Remove any visible hazards e.g. for insect allergy, flick out the sting.

Anaphylaxis - Severe allergic reaction

Anaphylaxis is a severe form of allergic reaction which can develop rapidly and is potentially life-threatening. It must be treated as a medical emergency requiring immediate treatment. More than one body system may be involved, however the most dangerous allergic reactions involve the respiratory system and/or cardiovascular system. Symptoms can appear mild or moderate. Onset can range from within minutes to hours after exposure to a trigger; however, rapid onset and development of potentially life-threatening symptoms are usual for anaphylaxis. A severe allergic reaction usually occurs within 20 minutes of exposure to the trigger.

Causes or common triggers:

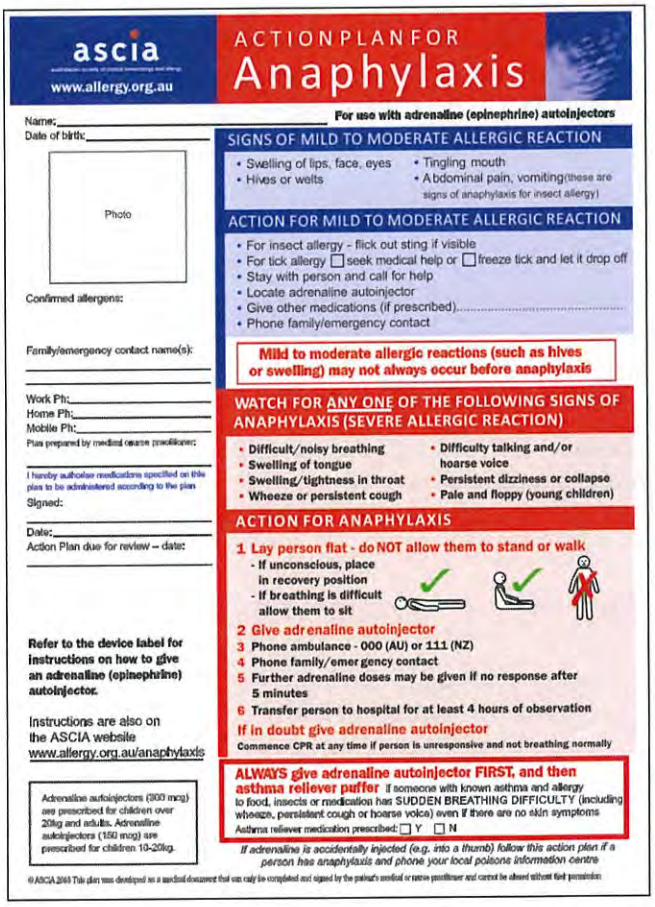
- **Food** - peanuts, tree nuts (e.g. hazelnuts, cashews, almonds), eggs, cow's milk, wheat, soybean, fish and shellfish etc. Even trace amounts can cause anaphylaxis. Extremely sensitive individuals may even react to a food smell.
- **Insect venom** - most commonly bee, wasp and jack jumper ant stings. Sometimes, ticks, green ants and fire ants.
- **Medication & drugs** - over-the-counter and prescribed, e.g. Penicillin, herbal or alternative medicines.
- **Other triggers** - less common, latex or exercise.

Signs and symptoms - May include: difficult/noisy breathing, swelling tongue, tightness in the throat, difficulty talking and/or hoarse voice, a wheeze or persistent cough, paleness and floppiness in young children, persistent dizziness, loss of consciousness and/or collapse, abdominal pain, vomiting, signs of envenomation.

First aid - Management of anaphylaxis should be started straight after the onset of symptoms. Prevent further exposure (e.g. remove food items, flick out stings, however do not remove ticks, kill them where they are using appropriate creams or sprays from a pharmacy); Consult the action plan if available; Lay the casualty down and administer injectable adrenaline via a pre-loaded autoinjecting pen containing an exact dose of adrenaline (e.g. EpiPen®).

Further adrenaline should be given if no response is seen after 5 minutes. An ambulance should be called as soon as possible after developing an anaphylactic reaction. Medical attention must be sought even after recovery from adrenaline.

EpiPen ®



ascia
www.allergy.org.au

ACTION PLAN FOR
Anaphylaxis

For use with adrenaline (epinephrine) autoinjectors

Name:
Date of birth:

Photo

Confirmed allergens:

Family/emergency contact name(s):

Work Ph:
Home Ph:
Mobile Ph:
Plan prepared by medical course practitioner:

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

Date:
Action Plan due for review – date:

Refer to the device label for instructions on how to give an adrenaline (epinephrine) autoinjector.

Instructions are also on the ASCIA website www.allergy.org.au/anaphylaxis

Adrenaline autoinjectors (300 mcg) are prescribed for children over 20kg and adults. Adrenaline autoinjectors (150 mcg) are prescribed for children 10-20kg.

SIGNS OF MILD TO MODERATE ALLERGIC REACTION
- Swelling of lips, face, eyes
- Hives or welts
- Tingling mouth
- Abdominal pain, vomiting (these are signs of anaphylaxis for insect allergy)

ACTION FOR MILD TO MODERATE ALLERGIC REACTION
- For insect allergy - flick out sting if visible
- For tick allergy ☐ seek medical help or ☐ freeze tick and let it drop off
- Stay with person and call for help
- Locate adrenaline autoinjector
- Give other medications (if prescribed).....
- Phone family/emergency contact

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

WATCH FOR ANY ONE OF THE FOLLOWING SIGNS OF ANAPHYLAXIS (SEVERE ALLERGIC REACTION)
- Difficult/noisy breathing
- Swelling of tongue
- Swelling/tightness in throat
- Wheeze or persistent cough
- Difficulty talking and/or hoarse voice
- Persistent dizziness or collapse
- Pale and floppy (young children)

ACTION FOR ANAPHYLAXIS
1. Lay person flat - do NOT allow them to stand or walk
   - If unconscious, place in recovery position
   - If breathing is difficult allow them to sit
2. Give adrenaline autoinjector
3. Phone ambulance - 000 (AU) or 111 (NZ)
4. Phone family/emergency contact
5. Further adrenaline doses may be given if no response after 5 minutes
6. Transfer person to hospital for at least 4 hours of observation

If in doubt give adrenaline autoinjector
Commence CPR at any time if person is unresponsive and not breathing normally

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

If adrenaline is accidentally injected (e.g. into a thumb) follow this action plan if a person has anaphylaxis and phone your local poisons information centre

© ASCIA 2003 This plan was developed as a medical document that can only be completed and signed by the patient's medical or nurse practitioner and cannot be altered without their permission

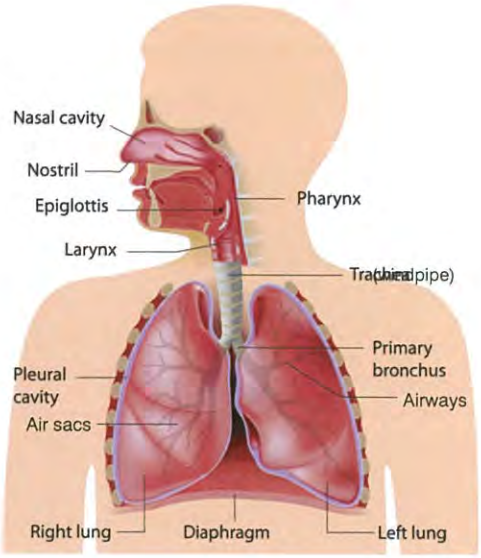
Adrenaline must only be used for life-threatening anaphylaxis. This works rapidly to reverse the signs and symptoms. In most cases, the helpful effects of adrenaline will be felt within seconds. The heart speeds up and a feeling of anxiousness or nervousness may be felt. These are the normal effects of adrenaline, which is a stress hormone produced naturally in the body by the adrenal glands.

Asthma

Asthma is a disorder affecting the airways, (the tubes that carry air in and out of the lungs). In people with asthma, the airways are particularly sensitive and they can have difficulty getting air into and out of their lungs. If exposed to certain triggers their airways will narrow, making it hard for them to breathe.

The nose - When breathing normally, we breathe in through our nose and out through our mouth. The nose acts to warm, humidify and filter the air, thereby transporting clean, moist and warm air to the airways. With Asthma, breathing is through the mouth. When breathing through the mouth, the air inhaled tends to be cooler, dryer and less filtered. This is irritating to sensitive airways.

Airways - Asthma affects the very small airways located at the base of the lungs. The lining of the airway becomes red, swollen and sensitive and may produce extra mucus and the muscle around the airways tighten.



3 main factors cause the airways to narrow:

1. **Inflammation** - the inside lining of the airways become swollen;
2. **Extra mucus** - sticky fluid may be produced;
3. **Bronchoconstriction** - the muscle around the airways tighten.

When asthma well managed or a normal airway is pink, open, and muscles are relaxed.

Asthma action plan

Doctors provide a written asthma action plan for people with asthma, which includes the most effective asthma medications to treat individual symptoms and what medications to take and how. This should be followed when providing first aid.

An asthma action plan:

- Is a record of a person's asthma;
- Lists the signs and symptoms of worsening asthma and the person's normal medications;
- Documents whether the person requires blue reliever prior to exercise;
- Outlines the '4 step' asthma first aid plan;
- Lists any special features of the person's asthma;
- Describes management, including prevention medications when well;
- Provides name and contact details of next of kin, doctor and carer.

Blue/grey puffer

What is an asthma attack?

An asthma attack is when symptoms start up or get worse compared to usual, enough to cause the person distress. Asthma attack symptoms can come on gradually or quite quickly and they won't go away by themselves. An asthma attack can become life-threatening if not treated properly, even in someone whose asthma is usually mild or well controlled. Quick action may help prevent an asthma attack from becoming an asthma emergency.

When is it an asthma emergency?

- Symptoms get worse very quickly;
- Severe shortness of breath, can't speak comfortably, or lips look blue;
- Little or no relief from using a reliever inhaler.

→

CALL AN AMBULANCE IMMEDIATELY, DIAL 000 and SAY: "THIS IS AN ASTHMA EMERGENCY"

Also, call an ambulance immediately if:

- Their condition worsens or does not get better during 4 step plan;
- Or the person is not known to have asthma and this is their first attack.

Asthma triggers - Asthma symptoms can be made worse by 'triggers'. Triggers can range from a cold, flu or respiratory infection, to animal fur or dander. Exercise is a common factor. Cigarette smoke and environmental factors such as changes in temperature and weather, pollution, wood smoke, bush fires, pollens, mould cause problems, as can work related triggers such as dust, chemicals, metal salts and pollution.

Signs and symptoms – May vary. A person may not show all signs during an asthma attack. Young children may appear restless, be unable to settle, become drowsy and have severe coughing and vomiting. A child may have problems eating or drinking due to shortness of breath.

	Mild attack	Moderate attack	Severe attack
Symptoms	• No problem with speaking normally. Can speak sentences before stopping to take a breath • May have a wheeze • Minor trouble breathing • Small cough that won't settle	• Can only speak in short sentences or phrases before needing to take a breath • May have a wheeze • Clearly having trouble breathing • Persistent cough	• Can only say a few words before stopping to take a breath • May be no wheeze • Gasping for breath, anxious, pale, sweaty, stressed • May or may not be a cough, lips might be blue, skin sucking in between ribs & base of the throat
Treatment	Implement the '4 step asthma first aid plan'	Implement the '4 step asthma first aid plan' as soon as possible	Call the ambulance immediately, then urgently implement the '4 step asthma first aid plan'

Medication

Asthma medications can be inhaled (breathed in) using an inhaler, aerosol or puffer, which delivers a bronchodilator, or taken orally (swallowed). The date of expiry for medications must be monitored. Inhaled medication goes directly to the lungs meaning smaller doses can be given causing fewer side effects. Depending on how severe the asthma is, the doctor may prescribe one or more types of asthma medicine. They will be either **Reliever medication**, or **Preventer medication**.

Reliever medications (bronchodilator) - Ventolin, Airomir, Asmol, Bricanyl, Symbicort etc. Taken using a blue/grey puffer or inhaler. It relieves symptoms within 4 minutes by relaxing the airway muscles making it easier to breathe. A reliever has no anti-inflammatory properties and it is safe and non-addictive. It is used on-demand rather than regularly, however, if used more often than 3 times a week, a doctor should be consulted. The blue/grey puffer is used in asthma first aid and should always be stored below 30 degrees Celsius. Side effects include jittery, shaky hands and racing heart, which are a normal responses.

Preventer medication - Alvesco (rust colour), Flixotide (orange), Intal Forte (white), Qvar (brown), Tilade (yellow), Pulmicort. Help to reduce inflammation in the airways. Taken daily, even when there are no symptoms present to prevent an asthma attack. These are not used for first aid, but a first aider should be aware they exist as some people may have them at work, sport etc. They are used to keep asthma under control, NOT to be used during an asthma attack, they DO NOT relax the airways.

Preventer medications

Spacers

A spacer is used with a puffer to transfer Asthma medication from the puffer to the casualty. medications are sprayed into the spacer and the person breathes the medication out of the spacer. It might be a clear plastic tube, a double sided plastic cone or cardboard.

Why use a spacer instead of a puffer alone? - It is 4 times more effective; reduces side effects of medications; more medication is deposited directly into the lungs; easier to use.

Treating a plastic spacer - Before using for the first time, a spacer should be washed in soapy water and allowed to air dry; do not rinse it or wipe dry. In an untreated spacer, the medication clings to the inside walls and is not as freely available to be breathed into the lungs, however, an untreated spacer is still more effective than a puffer alone.

For infection control - A standard plastic spacer can only be used by one person and not shared. A cardboard spacer must be discarded after use.

Storing a spacer in your first aid kit - The spacer must be immediately replaced after use so that the first aid kit has a new, clean spacer at all times. It should be used with a disposable face-mask for young children.

Standard plastic spacer without a mask

Disposable cardboard spacer

First Aid - 4 Step Plan - for mild, moderate and severe asthma

Step 1	**Sit the person comfortably upright** Remain calm, provide reassurance, and do not leave the person alone
Step 2	**Give 4 puffs of a blue/grey reliever** Shake puffer before each puff and use a spacer if available
Step 3	**Wait 4 minutes** If the person still cannot breathe normally, give 4 more puffs
Step 4	**Still cannot breathe normally, call an ambulance immediately, say - *asthma emergency*** Continue to give 4 puffs every 4 minutes until the ambulance arrives

Standard plastic spacer with a face-mask

Obtain resources: the person's own puffer, spacer and personal action plan, or the workplace asthma first aid kit. Follow action plan instructions, or the first aid for asthma 4 step plan. If no immediate improvement after administration of medication, call an ambulance.

Childbirth

It is important that the first responder be familiar with the complications of pregnancy and the process of childbirth.

Preparing for childbirth (call Triple Zero (000) immediately)

Delivering a baby in an unplanned for situation can be very difficult, so where possible, get to a hospital. If you are called upon to help with an emergency birth, your role will be to support the mother, ensure that the ambulance is on the way and to care for the mother and baby after the birth. **The first step - prepare a suitably clean surface.**

If available for the mother:

- A large sheet of plastic to place under the mother;
- A clean sheet over the plastic;
- A blanket and sheet folded into three (top to bottom) to cover the top half of the mother's body;
- Tissues or toilet roll to clean any soiling;
- Sanitary pads (or disposable nappy if none available);
- A suitable container (e.g. bucket);

If available for the baby:

- A towel or second sheet ready to place the baby on sterile cord ties e.g. string or linen tape (25 cm long) that has been boiled for 10 minutes, if possible;
- Sterile scissors to cut the cord if required;
- Cotton wool swabs or a clean soft cloth to wipe the baby's face;
- Spare blankets to wrap around the baby;
- Extra towels

Infection control - Infection is a serious danger to both the mother and the baby. It is essential that you take the following precautions when assisting, to minimise the risk of infection:

- Scrub your hands and nails thoroughly with warm water and soap and allow to dry in air;
- If you have an infectious disease (such as a cold) wear a mask - improvise with a clean handkerchief if necessary;
- Always wear gloves, eye protection and gowns (if available).

Labour

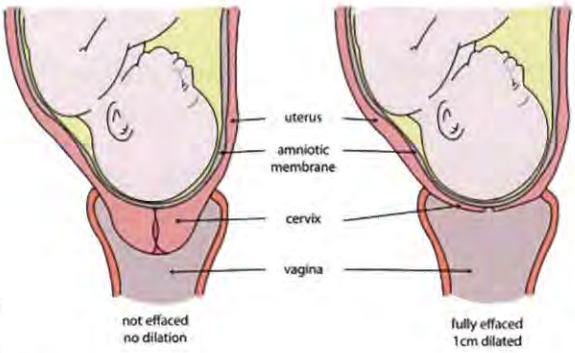
First stage - ONSET - Will usually last from 6 to 24 hours, allowing ample time to seek medical aid or get to a hospital, however, be aware that this could progress very rapidly, especially for a woman who has previously had a baby.

- Reassure the prospective mother, ask her where she wants to be and make arrangements for transport;
- If severe bleeding or shock occurs, seek urgent medical aid, immediately call Triple Zero (000);

If waiting for an ambulance:

- Begin to collect the required equipment;
- Wash and air dry your hands thoroughly;
- Support the mother in her most comfortable position - usually standing or squatting (gravity helps the delivery process);
- Ask how you can help with the pain (back rub, heat pack, support etc). Encourage her to breathe out, holding the breath makes pain worse by increasing muscle tension.

Second stage – BIRTH

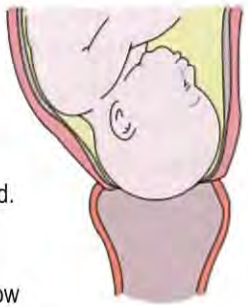


This stage begins when the birth canal is fully dilated and ends with the birth of the baby:

- Seek medical aid urgently - if the ambulance is on the way, the ambulance control or midwife may be able to give you instructions over the phone;
- Where possible wear gloves, eye protection and a gown;
- Ensure privacy, then remove the clothes from the woman's lower body;
- Help her into a position she finds comfortable and support her while she pushes out the baby;
- Encourage her not to hold her breath and push, but to keep her mouth open and pant.

Normal delivery - head presenting first:

- The head will appear with the face towards the mother's anus, but will then rotate to face one side. Control the baby's head with gentle, but firm pressure to prevent it from being born too quickly. Do not pull the baby;
- If the cord is around the neck, there should be enough slack to free it by sliding two fingers underneath it and easing it carefully over the baby's head. If not, as a last resort, apply two ties to the cord, using string (or bootlaces) and then cut between the two ties;
- Support the baby's head in the palms of your hands and wait. The next contraction delivers the baby's shoulders;
- After delivery of the shoulders, wait one minute, then elevate the baby and control the delivery;
- During the next contraction, hold the baby under the armpits and lift up towards the mother's abdomen. Don't cut the cord.



Immediate care of the baby - The baby will be wet and slippery. Take care not to drop it or pull on the cord. Dry the baby quickly but thoroughly, being careful not to pull the cord, which will still be attached to the placenta. Use a fresh, warm cloth to wrap the baby and keep it warm. Place the baby on its side to allow fluid to drain from its mouth and nose - on the mother's stomach is ideal. The baby will probably let you know that it is breathing (e.g. it will cry). Let it remain on its mother's abdomen and keep both mother and baby warm. If the baby does not cry or show signs of response or breathing after 1 minute, follow the DRSABCD action plan. Clear the airway and begin resuscitation immediately. Inflation is nearly always the primary need of a newborn baby.

Dealing with the umbilical cord - Leave the cord intact to lessen the risk of bleeding and infection. Only cut the cord if the baby needs to be resuscitated and must be moved away from the mother or if in a remote area isolated from medical aid. Wait 2-3 minutes after the birth of the baby; tie the cord very firmly in 3 places - 10 cm, 15 cm and 20 cm from the baby's navel. Securely tie to prevent bleeding after it is cut. If the cord is cut, leave 2 ties on the baby's side.

Third stage - AFTERCARE - The placenta (afterbirth) will be expelled around 10 minutes or more after the birth:

Expel the placenta:

- No food or drink for the mother until after the placenta is delivered;
- If the cord is long enough, encourage the mother to put the baby to her breast, this helps the uterus to contract, expel the placenta and control bleeding;
- Help the mother into a comfortable position, as for the birth;
- Do not pull on the cord, this may cause excessive bleeding;
- After delivery of the placenta, there will normally be blood flow that fill a sanitary pad every 5 minutes. If the blood is gushing out or fails to slow down or if it increases suddenly, seek urgent medical attention;
- Retain the placenta for medical inspection;
- Gently massaging the mother's abdomen below the navel until it becomes firm will help to reduce excessive bleeding.

After care of the mother:

- Wash the mother and help her change any stained clothing;
- Position a sanitary pad or disposable nappy;
- Give her hot drinks;
- Encourage rest while waiting for medical aid;
- Monitor and regularly check for excessive blood loss;
- Place all bloodstained material in a sealed plastic bag including used sanitary pads for medical inspection;
- Clean all surfaces.

Diabetes

For more information visit: www.diabetesaustralia.com.au

Diabetics don't produce insulin properly, which makes their blood glucose (sugar) levels higher. They need to regulate the amount of glucose in their body by medication or diet. Many have a medical alert bracelet, necklet or warning card and carry sugar, lollies, glucose or a ready-made 'Hypo' pack in case of an emergency.

Causes - Problems are caused when the sugar levels are too low. Usually from too little food, too much exercise, alcohol, or too much insulin.

Symptoms - Common feelings are confusion, light headedness, dizziness, and weakness, trembling or shaking. They may experience sweating, headache, lack of concentration, irritability, hunger, numbness around the lips and fingers. If *hypoglycaemia (low blood sugar)* is not treated quickly, symptoms may progress to loss of coordination, slurred speech, confusion, loss of consciousness, fitting.

First aid:

Conscious casualty - Make them comfortable. If safe to do so, and they can swallow, give high-energy foods, sugar, honey or a glucose tablet. The casualty will respond quickly if low blood sugar levels are the cause. They may be a little confused on recovery. Make sure they eat a normal meal immediately.

Unconscious, drowsy or unable to swallow - For a person who has diabetes, THIS IS AN EMERGENCY. Place them on their side, clear their airway and call an ambulance immediately (dial 000) stating a 'diabetic emergency'. Do not give them any food or drink. Monitor them until the ambulance arrives.

Heart problems

Pulmonary oedema - The heart and lungs are unable to pump the blood out around the body, causing a backup of fluid in the lungs. This is often referred to as fluid around the heart.

Congestive cardiac failure - The heart can no longer pump effectively and the casualty becomes seriously ill.

Angina - Insufficient blood flow and oxygen to the heart muscle due to narrowed arteries.

Symptoms - Pain, pressure, tightness or discomfort in the middle of the chest. Shortness of breath and sweating. Possible radiating pain to the neck, jaw, left arm or both arms. Sometimes, pain in the upper back and shoulders.

First aid - Depends on the severity of the condition. Casualties must rest to reduce the workload of the heart. They may also be prescribed a drug called Anginine to ease the pain.

Heart attack

A sudden blockage of one of the coronary arteries that supplies blood to the heart muscle resulting in an immediate life-threatening risk. If not corrected quickly there is a risk of serious permanent heart muscle damage or death. Urgent medical care is required so the casualty can receive clot-dissolving medications that clear the blocked artery, restore blood supply to the heart muscle and limit damage to the heart – "every minute counts".

Signs and symptoms - A heart attack is different from, but may lead to, cardiac arrest. Not all heart attacks are accompanied by pain, some casualty's simply look and feel unwell, and some may dismiss their symptoms as 'indigestion'.

More commonly though, they will feel a constant dull heavy pain or discomfort in the centre of the chest, described as tightness, heaviness, fullness or squeezing. The pain may radiate into jaw, neck, throat, shoulders, arms, wrists and hands. They may feel nausea, dizziness and/or shortness of breath and their skin may be very pale and sweaty and they do not look well.

Warning signs - **Remember, if the warning signs are severe, get worse quickly or last longer than 10 minutes, an ambulance must be called immediately.**

First aid - Call an ambulance immediately. If possible, stay with the person and call for assistance to get medications:

- Keep the casualty still, discourage any physical activity, make comfortable;
- Stay with them until the ambulance arrives;
- If prescribed medication such as a tablet or oral spray to treat chest pain or angina, assist them to take as directed;
- Give Aspirin (300 mg). The Australian Resuscitation Council suggests this is a reasonable approach if the casualty does not have a history of anaphylaxis or bleeding disorder.

Seizure

Causes - Head injury, stroke, meningitis, brain tumour, lack of oxygen, low blood sugar or pressure, poisons, drugs, epilepsy. In young children seizures may occur with a sudden rise in body temperature (febrile convulsions).

There are several types of seizure and they vary greatly. Not all seizures are considered Epilepsy. A seizure may occur when normal brain activity is disrupted which can cause changes in sensation, awareness, behaviour and level of consciousness. **All or part of the body may be affected.**

Non-convulsive seizure (Complex partial seizure or focal seizure) - The casualty remains conscious and may be frightened, confused and vague; may display repetitive behaviour; fiddling with clothes; lips smacking or chewing; wandering aimlessly; jerking of a limb, facial twitching. Usually lasts up to 3 minutes.

First aid - Seizures that do not result in loss of consciousness will require little first aid other than monitoring, reassurance and protection from injury.

Convulsive seizure (Tonic clonic) - The casualty may have: muscle stiffness; if standing will fall to ground; jerking movements of the head, arms and legs; shallow or intermittent breathing; a change of colour in lips or complexion; dribbling; faeces or urinary incontinence; a change in or loss of consciousness. Usually lasts up to 2 minutes followed by a period of confusion.

First aid - Provide safety; protect the head; note the time; maintain a clear airway; treat as for an unconscious casualty, as soon as possible roll on to his/her side; reassure and comfort. Do not restrain or put anything in their mouth. Stay with them and monitor. Call an ambulance if a seizure lasts more than 5 minutes, an injury occurs, another seizure occurs before the casualty has fully recovered from the first, or if they remain unconscious.

Febrile seizures (or febrile convulsions) - Occur in 3% of children between approximately 6 months and 6 years of age. They are associated with fevers that cause a rapid rise in body temperature.

First aid - Will usually resolve without treatment. Protect, reassure and comfort. Do not place in a bath, you can remove clothing to cool the child. Monitor. Call an ambulance if concerned.

Shock

In first aid the term 'shock' refers to a ***loss of effective circulating blood volume***. This can be from severe bleeding, burns, diarrhoea and vomiting, sweating and dehydration (heat-stroke), severe infection, allergic reactions, or major or multiple fractures, spinal injury, heart disorder including a heart attack, abnormal dilation of blood vessels.

Signs and symptoms - Rapid pulse/heart rate, low blood pressure, skin will be paler than usual and cold and clammy. Thirst, dizziness and feeling cold. The tongue of the casualty will look paler than usual . In severe cases, the ear lobes and lips can have a tinge of blue. They may also experience muscle weakness, anxiety, restlessness, nausea, and shortness of breath.

First aid - The ambulance must be called immediately:

- Keep them warm and still;
- Control any bleeding;
- Manage the airway and unconsciousness;
- If they vomit, place on his/her side;
- Provide reassurance, monitor until the ambulance arrives.

Stroke

FAST is a simple way for remembering the signs of stroke.

A stroke is a **life-threatening** medical emergency. The longer untreated, the greater the degree of brain damage. When an artery to the brain blocks or ruptures, brain cells in the area die from lack of oxygen. Sometimes this can result in death.

Face	Can the person smile? Has his/her mouth or eye drooped?
Arms	Arm weakness. Can the person raise both arms?
Speech	Is his/her speech slurred? Can they understand what you say?
Time	Is critical. If you see any of these signs call 000 straight away.

Signs and symptoms - May last a few seconds or hours and may or may not disappear. May feel weak, numbness or paralysis on one side of the body (face, arm or leg), or have difficulty swallowing, dizziness, loss of vision, headache, tired.

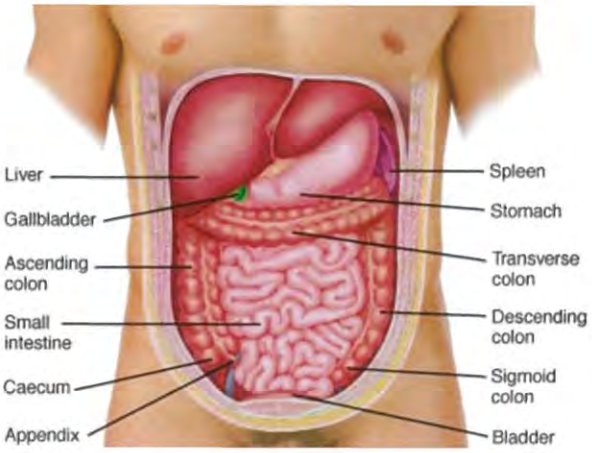
First aid - Call an ambulance immediately, even if the symptoms don't last for long:

- Do not give anything to eat or drink; measure blood glucose if possible;
- **If conscious** – Make comfortable e.g. a pillow behind the head, place on side if vomiting, or fluid comes from the mouth;
- **If unconscious** – Place on side with the facial droop facing down, follow DRSABCD;
- Monitor until ambulance arrives.

For more information go to: - strokefoundation.com.au

Abdominal injuries

The abdominal cavity contains solid organs like the liver and the spleen and hollow organs. Different organs react in different ways when subjected to trauma, thus presenting different symptoms.



Causes:

- **Blunt trauma** e.g. from the steering wheel in motor vehicle accidents or from the handle bars in motorcycle and bicycle accidents, falls and assaults (especially a gun);
- **Penetrating injury** such as a knife injury or impalement;
- **Illness and infection** - Abdominal pain could be a sign of illness such as appendicitis, infection or internal bleeding and requires prompt evaluation and medical aid.

Signs and symptoms - A person with an abdominal injury may also have internal injuries. They may feel sick and could possibly go into shock. Abdominal problems due to illness will cause site specific pain and possibly a fever. Assessment of a casualty with abdominal injuries is difficult. As a consequence, the diagnoses tend to be missed. Internal rupture or bleeding can be missed. Severe blood loss can be a complication of the abdominal injury.

First aid:

- Check responses, assess for shock;
- Call an ambulance and monitor until the ambulance arrives for the following:
  - *For shock* - Lay him/her down and keep still and warm;
  - *For severe pain* - Assist casualty into a comfortable position, flexed knees may help reduce pain, do not allow to eat or drink, even though they may feel extreme hunger or thirst,
  - *No wound* - If the abdominal injury does not cause an open wound, lay them flat with knees bent and treat as for shock until medical help arrives;
  - *Bleeding* - Control bleeding using direct pressure or bandages;
  - *Embedded object* - Leave it in place, pad around the object;
  - *Protruding organs* - If a trauma injury has caused the internal organs to protrude outside the abdominal wall, they must not be pushed back in, doing so will only cause greater complications. They are to be covered with a moist, sterile dressing that will not stick, or plastic wrap.

Bleeding

The human body requires the correct amount of blood and fluid to be transported around the body in order to function properly. The blood transports oxygen to every cell in the body and then transports the waste products away from the cell. Bleeding is the loss of blood from the circulatory system. The loss can be from external or internal bleeding, ranging from minor through to severe or massive. First aid for any type of severe bleeding is critical. The aim is to limit the loss of blood until emergency medical aid arrives. Always call Triple Zero (000).

Internal bleeding

May be difficult to recognise, but should always be suspected where there are symptoms and signs of shock.

Causes - Internal bleeding can result from trauma or occur spontaneously resulting from disease. If a casualty is suffering from internal bleeding, you may not be able to see actual evidence of the blood loss, as the blood loss may be contained within one of the body cavities. However, signs of shock will be obvious (pale, cold and clammy skin).

Types of internal bleeding:

1. Visible - The most common type of visible internal bleed is a bruise, when blood from damaged blood vessels leaks into the surrounding skin. Some types of internal injury can cause visible bleeding from a body opening.

For example:

- *Bowel injury* – Bleeding from the anus;
- *Head injury* – Bleeding from the ears or nose;
- *Lung injury* – Coughing up frothy bloodied spit;
- *Urinary tract injury* – Blood in the urine.

2. Not visible - It is important to remember that an injured person may be bleeding internally even if you can't see any blood. An internal injury can sometimes cause bleeding that remains contained within the body; for example, within the skull or abdominal cavity.

First aid - Prompt medical help is vital:

- Check response, conduct a verbal survey and listen carefully to what the person tells you about their injury;
- Lay them down and keep them still;
- Look for signs of shock;
- Cover with a blanket or something to keep them warm;
- Casualty's knees may be flexed, which may help reduce the pain;
- Don't give the person anything to eat or drink;
- Offer reassurance and manage any other injuries;
- If the casualty vomits blood, place on their side to help eliminate;
- If they become unconscious, place them on their side;
- Monitor until the ambulance arrives.

External bleeding

Types of wounds:

- **Abrasion** - The surface layers of the skin has been broken. Thin-skinned bony areas such as knees, ankles and elbows are more prone to abrasions. The scraped skin of an abrasion can contain particles of dirt. These wounds should be cleaned, but not scrubbed, and antiseptic applied.
- **Laceration or incised wounds** - Caused by sharp objects, such as knives or shards of glass, slicing into the skin. Depending on the injury, underlying blood vessels can be punctured, leading to significant blood loss. A severed artery is a medical emergency because the muscular action of this blood vessel will pump the entire blood supply out of the wound in just a few minutes.

Types of external bleeding:

1. **Capillary bleeding** - Caused by small lacerations or abrasions, usually oozes, can easily be controlled.
2. **Venous bleeding** - Usually caused by lacerations, bleed freely, but can be adequately controlled.
3. **Arterial bleeding** - Usually caused by a severe laceration which spurts vigorously because the artery has been sliced, causing the heart to pump out the blood with each contraction. Immediate action is required, as the casualty can lose a large amount of blood quickly.

Infection control - Open wounds are prone to infection. Always wash your hands and use gloves and follow standard precautions. Avoid breathing or coughing over the wound. Clean in accordance with the type and severity of the wound, including the severity of bleeding. Do not clean a wound that is severely bleeding, stop the blood flow and get medical help.

First aid - Basic wound care

Minor bleeding:

- Clean with a non-fibre shedding material or sterile gauze soaked in normal saline or clean water (do not use cotton wool or material that will fray or leave fluff);
- Don't scrub embedded dirt, this can traumatise the site even more, see a doctor if dirt cannot be removed;
- Apply an antiseptic;
- Cover with a non-stick sterile dressing such as a band aid or a non-adhesive dressing held in place with a non-allergenic tape, (try not to touch the dressing's surface before applying it);
- Change the dressing according to the manufacturer's instruction.

Nose bleeding - Bleeding from the nose is usually not severe:

- Sit the casualty upright;
- Ask them to tilt their head forward to avoid blood flowing down throat;
- Using the thumb and forefinger, ask the casualty to squeeze the nostrils shut, applying direct pressure over soft part of nostrils below bridge of nose;
- Remain seated and hold for at least 10 minutes;
- On hot days or after exercise, it might be necessary to maintain pressure for at least 20 minutes;
- Release the hold gently and check for bleeding. If the bleeding has stopped, avoid blowing your nose or picking at it for the rest of the day;
- If bleeding does not stop after 20 minutes, seek medical assistance.

First aid - Major wound care:

Severe external bleeding - DIRECT PRESSURE METHOD:

- Lay the casualty down, restrict movement and reassure;
- Instruct the casualty to place pressure directly on their wound, if they are able, so you can get the padding, dressings and bandages ready;
- If the casualty is unable to assist, apply pressure yourself using gloved hands or padding;
- Pull edges of the wound together if required, then apply a dressing or pad;
- Secure it firmly with a bandage.

If blood saturates the initial dressing, do not remove it. Pad over the top and secure with a bandage. If bleeding continues through the second pad, replace the second pad and bandage. If major bleeding continues remove initial pad(s) to ensure that a specific bleeding point that can be controlled by direct pressure has not been missed. If the direct pressure method does not stop life-threatening bleeding, for a limb - follow tourniquet* procedures and instructions, for the body, if available consider applying haemostatic dressings, which promote blood clotting/stem blood flow.

Embedded objects: (For example, a knife or a stingray barb):

- Do not remove the object, it may be plugging the wound and stopping the bleeding;
- Place padding around, or above and below the object;
- Apply pressure over the pads.

Amputation:

- Apply a pad over the wound and secure it firmly with a bandage;
- Place the amputated body part into a clean plastic bag and seal it completely, ensure that it is waterproof;
- Place that plastic bag into another plastic bag and seal it again;
- Place the plastic bag/s into a container of cool water, make sure no water touches the amputated part.

If normal bleeding control, such as direct pressure method, does not stop severe life-threatening bleeding:

- If wound is on a limb, follow procedures and instructions for a tourniquet*
- If wound is not on a limb, or tourniquet does not work, apply haemostatic dressings if available.

***Tourniquet** - As a last resort for life-threatening bleeding only, where other methods of controlling bleeding have failed, for example, traumatic amputation of a limb or major injuries with massive blood loss (e.g. shark attack);

- Apply a tourniquet (commercially made, 5cm bandage or improvised);
- Apply the tourniquet high above the bleeding point. Tight enough to stop all circulation/bleeding;
- Note the time of application and provide this information to the paramedics;
- Do not apply over a joint or wound, and do not cover (hide) with bandages or clothing;
- Once applied a tourniquet should not be removed until the casualty receives specialist care.

Burns

A burn causes the partial or complete destruction of skin. There are two layers of the skin. Once the skin is burnt, the extent of damage can be minimised by effective immediate first aid treatment.

Symptoms - Around the burnt area - pain, localised blistering, red to black marks. Evidence of inhalation burns e.g. burns to face, nasal hairs eyebrows or blackness around nose and mouth, coughing, hoarse voice and breathing difficulty. Reduced responsiveness, reduced circulation, shock and poor vital signs. Airway obstruction as a result of upper airway swelling, or breathing difficulties due to lack of oxygen (e.g. fire consumes oxygen).

Sunburn

Blister

SIGNIFICANT or SEVERE burns include burns that are:

- Greater than 10% of total body surface area;
- Of special areas such as the face, hands, feet, genitalia;
- Deep and greater than 5% of total body surface area;
- From electrical or chemical sources;
- Associated with inhalation injury;
- All the way around a body part, such as the limbs or chest.

Severe burn

Types of burns

Thermal – Exposure to heat sufficient enough to cause damage to the skin and possibly deeper tissue. Thermal burns are caused from, flames, hot liquids, hot objects, flash injuries and sunburn. ***If still on fire: stop, drop, cover and roll,*** smother flames with a blanket.

Inhalation – Damaged airways may occur from inhaling flames or heated air. Suspect an inhalation burn when an individual is trapped in an enclosed space for some time with hot or toxic gas or fumes produced by a fire, a leak, chemicals etc. Severe damage to the airways may result in swelling and possible airway obstruction. Some agents may produce delayed pulmonary inflammation, which may develop up to 24 hours later. ***Always seek medical treatment.***

Scald – Hot liquids, grease, or steam. Liquid scalds can be further divided into spill and immersion scalds. ***Carefully remove wet clothing***, but keep the rest of the casualty warm by covering unburnt areas whilst providing first aid.

Electrical – High or low voltage. High current electrocution may cause an entry and exit wound, but most of the damage is to the deep unseen tissues. They are typically more severe than is apparent from external appearance. Cardiac arrest may also result from current flow through the heart. ***Be sure to turn off the power*** before going near or touching the casualty. Electrical burns include lightning strike.

Chemical – Acids and alkalis react with body tissue and cause a burn. Alkali burns are more serious than acid burns, as they penetrate more deeply. No attempts should be made to neutralise either acid or alkali burns, this will increase heat generation and may cause even more damage. Any contact with the chemical must be avoided. ***Refer to a Safety Data Sheet (SDS) for specific treatment. Call the poisons information centre on 131 126.*** Chemicals may be flushed from the eyes. Do not remove clothing contaminated by chemicals over the head or face, cut them off. Seek medical aid.

Phosphorus – Flares, fireworks and weapons contain phosphorus. When exposed to air it may ignite spontaneously. ***Cover with saline soaked dressings*** to prevent ignition of the phosphorus by contact with the air.

Hydrofluoric acid – Used as a cleaning agent by jewellers, in glass etching and in other industries. One of the most dangerous and corrosive acids, which cause a full thickness skin burn and excruciating pain. ***Urgent medical attention*** is required, may be life-threatening.

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

Radiation – May be sunburn, burns from welder's arc, lasers, industrial microwave equipment and nuclear radiation. ***Seek medical advice.***

Friction – Burns occur from friction against a surface such as bitumen. Bike or skateboard accidents are the most common causes. These burns hold heat, ***irrigate for 30 minutes at least***; do not remove particles from the skin.

First aid:

Important - During initial or emergent care, wound care is of secondary importance. Airway, breathing, circulation, take precedence over caring for the burn. An ambulance must be called if the casualty is a child or for significant or severe burns.

- Ensure safety – i.e. do not enter a burning building or toxic atmosphere. If still on fire – stop, drop, cover and roll, smother flames with a blanket;
- Assess responsiveness, shock and vital signs, check for other injuries, prioritise and treat;
- Watch for cardiac arrest. Be prepared for CPR.

For all burns - the aim is to stop the burning process, cool the burn and cover the burn:

- Cool with lots of tap water for at least 20 minutes (do not use ice or ice cold water);
- If water is not available hydrogel products may be used;
- If possible remove all rings and tight clothing before swelling occurs;
- DO NOT peel off clothing which has stuck to burnt area;
- DO NOT break blisters or apply lotions, ointments, creams or powders;
- Elevate the injured part to reduce swelling (if associated injuries permit);
- Cover the burnt area with a loose and light non-stick dressing, preferably a sterile or clean, dry and lint-free material, such as plastic cling wrap, handkerchief, sheet or pillowcase;
- If waiting for an ambulance, keep the casualty at rest, warm and monitor.

Choking

Foreign body airway obstruction (choking) may be partial or complete . The casualty may be conscious or unconscious The signs and symptoms will depend on the cause and the severity of the obstruction. Airway obstruction is a life threatening emergency.

Signs and symptoms - May have extreme anxiety and agitation. Make gasping sounds. They may be coughing or cannot speak. If the foreign body is not expelled, it may progress to a complete obstruction, where the casualty will be struggling and cannot speak or breathe. They will usually be holding their hands up to the throat which is recognised as the universal choking sign.

HOW TO ASSESS SEVERITY

EFFECTIVE COUGH

Mild obstruction (partial)
- Breathing is laboured
- Breathing may be noisy
- Some escape of air can be felt

REASSURE
ENCOURAGE COUGHING
CLOSELY MONITOR

IF THE OBJECT CANNOT BE DISLODGED BY COUGHING - CALL 000
Then do the back blow/chest thrust sequence.

Choking is serious. Complete obstruction may occur which is life threatening.

INEFFECTIVE COUGH

Severe obstruction (complete)
- Trying to breathe
- Gasping, coughing
- Cannot speak or breathe
- No escape of air can be felt
- Hands held to throat
- Extreme anxiety, agitation

IF UNCONSCIOUS
Airway obstruction may not be apparent until assessing the airway and breathing.
Finger sweep if solid material is visible.
Commence CPR for cardiac arrest.

IF CONSCIOUS
Back blow/chest thrust sequence watching for dislodgment with each blow.

First aid - Back blow/chest thrust sequence - Casualty can sit or stand. Give 5 back blows with the heel of your hand in the middle of the back. (Place a baby over your lap or arm with the head down). The aim is to remove the object causing the obstruction with each blow. Then give 5 chest thrusts, (Turn a baby over and across your thigh). Repeat the sequence until the object is dislodged. Call an ambulance immediately for complete obstruction. If possible ask others to do this so that you can commence treatment straight away.

Crush injury

Causes - A variety of situations such as vehicle entrapment, falling debris, industrial accident, mining accidents and cave-ins or by prolonged pressure to a part of the body due to their own body weight in an immobile casualty.

Possible injuries - Lacerations, fractures, bleeding, bruising, spinal injury and in severe cases where a large portion of the body is crushed, *crush syndrome* may develop. The casualty may have no pain and there may be no external signs of injury. They may go into shock or become unconscious. An ambulance should be called immediately. All casualties who have been subjected to crush injuries should be taken to hospital for immediate investigation.

Note - A crushing force to the head, neck, chest or abdomen can cause death from breathing failure or heart failure so it must be removed promptly.

First aid:

- *For small injuries* e.g. crushing a finger in a car door, run under cold water and/or apply an ice pack to reduce swelling and bruising. Bandage or cover wounds or split skin. See a doctor if stitching is required, or the injury does not get better.
- *For large injuries*, as described in 'Causes' above, call an ambulance;
- If it is safe and physically possible, all crushing forces should be removed from the casualty as soon as possible;
- Control any bleeding;
- Keep casualty warm and still;
- Make comfortable, use padding and pillows for fractures or dislocations;
- Monitor the casualty's condition and vital signs until ambulance arrives;
- DO NOT leave the casualty except if necessary to call an ambulance.

Ear injuries

Causes:

- **Foreign objects** - Children often stick objects into their ears, insects, debris or dirt when playing sport;
- **Trauma** - Blows when playing sport or in accidents, cuts etc.;
- **Ruptured eardrum** - Inserting cotton swabs, toothpicks, pins, pens or other objects into the ear. Sudden changes in pressure, as from an explosion, blow to the head, flying, scuba diving, falling while water skiing or being slapped on the head or ear. Loud noises such as a gun going off;
- **Illness** - Ear infection, excessive wax build up, infected piercing etc.

Symptoms - Will depend on the type of ear injury. The casualty may feel sick and/or dizzy and have a fever. There may be obvious bleeding, bruising, swelling or redness. They may have an earache, severe pain or suffer a loss of hearing.

First aid:

For ruptured ear drums, if part of the ear has been cut off, or if fluid is coming out of the ear:

- Call the ambulance, reassure and monitor until further medical attention is obtained;
- DO NOT block any drainage coming from the ear;
- DO NOT try to clean or wash the inside of the ear canal;
- DO NOT put any liquid into the ear;

Foreign objects:

- Seek medical attention to remove objects - DO NOT attempt to remove the object by probing with a finger, cotton swab, pin, tweezers or any other tool.

Insect in the ear:

- Try turning the casualty's head so that the affected side is up, wait to see if the insect flies or crawls out, otherwise seek medical attention.

Electric shock

Causes - Downed power lines, faulty equipment, overloading power boards, lightning strike.

Symptoms - Electric shock may result in respiratory arrest; cardiac arrest; burns.

Safety - When power lines are in contact with a vehicle or a person, do not approach the casualty until the situation is declared safe by rescue authorities. Ensure that all bystanders remain at least 10 metres clear of any electrified material. Remember, metal and water conduct electricity and may be extremely hazardous do not touch the casualty or any conducting material touching them until:

- The supply of electricity is turned off and, if possible, the appliance is unplugged from the power supply;
- Or, with extreme caution, disconnect the casualty from the electricity supply using a dry non-conducting material (e.g. wooden stick or dry clothing).

First aid should only be provided if it is certain that it is safe to do so. All casualties of electric shock must be referred for medical assessment.

First aid:

- Call an ambulance and keep bystanders back;
- Treat any other injuries that may be present;
- Use water to cool any entry or exit wounds and burns;
- Promptly refer all casualties of electric shock for medical assessment;
- The same treatment applies for people that have been struck by lightning;
- If in cardiac arrest commence CPR.

Eye injuries

The eye can be injured by a chemical, foreign object or direct blow. There will usually be pain and redness associated with an eye injury. There may also be bleeding, tearing, sensitivity to light, swelling and/or discolouration. Eye injuries may be due to:

1. **Trauma:** *being struck by an object or falling and banging the eye, cuts and bruises;*
2. **Burns to the eye;**
3. **Smoke in the eyes;**
4. **Minor foreign bodies:** *dust, small particles etc.;*
5. **Major foreign bodies:** *splinter, embedded object etc.;*
6. **Welding injuries:**
   - *Flash burn*; an electric welding arc produces ultraviolet (U.V.) light which will damage the retina;
   - *Mechanical damage* from being struck by flying particles and chipped slag;
   - *Irritation and chemical burns* from fumes and chemicals.

First aid - Any first aid provided must be extremely gentle and careful. Ice packs may reduce pain and swelling. Gentle washing or flushing may remove foreign objects; however embedded objects should only be removed by a medical professional. Padding should be used to control any bleeding. An ambulance should be called for serious injuries.

Black eye:

- Cold compress, ice pack wrapped in thin towel, or ice cubes tied into cloth;
- DO NOT attempt to remove contact lenses, medical professional will do this;
- A black eye or blurred vision can be a sign of damage inside the eye.

Minor foreign object:

- Never use sharp object such as tweezers to try to remove foreign bodies;
- Floating objects in the eye which can be visualised may be flushed from the eye with water or saline;
- If the object cannot be removed in this manner, seek medical attention.

Major foreign object:

- To be removed by professionals only, call for an ambulance;
- DO NOT allow casualty to touch or rub eye;
- DO NOT attempt to remove object, wash or use eye drops, or put any pressure directly on the object or the eye;
- Cover the affected eye - it may help to cover the unaffected eye as well to reduce the risk of movement, however, this should be removed if the casualty becomes anxious;
- Keep the casualty still as possible, reassure and monitor until help arrives.

Fractures & dislocations

Fractures

A fracture is the breaking of a bone or a bend in a bone which always has associated damage to the soft tissue around the broken bone. There are different types of fractures, however, they all require medical treatment.

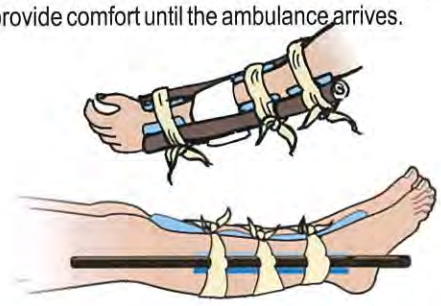
Causes - The most common sites for bone fractures include the wrist, ankle and hip. Falls, sporting and motor vehicle accidents account for the majority of broken bones. A fracture may be:

- **Closed** (simple) - The broken bone has not pierced the skin;
- **Open** (compound) - The broken bone juts through the skin or a wound leads to the fracture site;
- **Complicated** - Structures surrounding the fracture are injured. There may be damage to the veins, arteries or nerves and there may also be injury to the lining of the bone.

First aid - If the ambulance is on its way, the casualty should be asked not to move the injured limb. No further first aid treatment is required for the fracture unless the casualty's condition worsens. Monitor, reassure and provide comfort until the ambulance arrives.

If the ambulance will be a while:

- Do not move the casualty unless there is immediate danger;
- Control any bleeding and cover any wounds, if a bone is protruding, apply pressure around the edges of the wound;
- If you have been trained, apply a splint to help keep the limb still and to provide stability between the upper and lower joints;
- Keep an arm area from moving by applying a sling;
- Check and adjust splints or bandages if cutting off circulation.



Dislocations

Causes - A bone gets dislodged from a joint which then usually cannot move. This can happen spontaneously or as a result of trauma and may have associated fractures. The joints most frequently affected are: shoulders, elbows, fingers, hips, kneecaps and ankles.

Symptoms - Severe pain and deformity of the joint area, tenderness and inability to move limb without pain; shortening of the limb.

First aid - Like fractures, dislocations are considered urgent situations which require medical care. However, a dislocation can be treated until the casualty can receive professional medical help. Never try to straighten or put the dislocated joint back in place. Provide comfort and support for the injured area and use an ice pack to reduce swelling. Reassure and keep him/her warm. Do not let them eat or drink anything until they are seen by a doctor, in case they need surgery.

Head injuries

Head injuries may cause loss of consciousness, bleeding, neck or spinal injury, damage to the brain, eyes, ears, teeth, airways and mouth, or other structures. A severe blow may cause unconsciousness, however a casualty may sustain a significant head injury without loss of consciousness, or loss of memory (amnesia), therefore, loss of consciousness or memory loss should not be used to define the severity of a head injury or to guide management. Severe trauma and injuries may lead to death or permanent brain damage.

Causes - Head injury should be suspected when any of the following has occurred:

- Trips and falls from heights;
- When found, the casualty was unconscious;
- Blunt force injury (e.g. From impact with or ejection from a car);
- Injury caused by diving;
- The casualty's head protection or helmet was broken;
- A high-impact sports injury.

Concussion - A temporary loss or altered state of consciousness after a head injury. The casualty may experience headache or dizziness, loss of memory, particularly of the event, confusion, altered state of consciousness, wounds on the head (face and scalp), nausea and vomiting. Always seek medical advice.

Progressive head injury - Casualties who show a decline in level of consciousness are suffering from a more serious brain injury, which requires urgent medical intervention. A brain injury should be suspected if the casualty has a reported or witnessed injury, or has obvious signs of injury to the head or face, such as bruises or bleeding. Remember though, a casualty may have a brain injury without obvious external signs of injury to the head or face. Serious problems may not be obvious for several hours after the initial injury. The casualty may become drowsy or vague, display behaviour changes, slur when talking or feel sick. Their pupils may change size.

First aid - Seek urgent medical assistance if casualty shows a subsequent decline in the level of consciousness. He/she may be suffering from a serious head injury. Handle extremely gently and maintain spinal alignment at all times. Complete a thorough assessment of the casualty, including the spine, eyes and ears. Assess and manage the airway and breathing as required, whilst caring for the neck and keeping the spine immobile. Control bleeding and other injuries when the casualty is stable. An ambulance must be called for any loss of consciousness or altered consciousness at any time, no matter how brief. Seek further medical assistance after first aid, no matter how minor the injury.

Tooth injury - The casualty may have cuts and swelling inside the mouth; loose teeth and bleeding; tooth completely knocked out.

First aid - If the tooth is knocked completely out, rinse gently and put back into socket – the correct way round. Another alternative is to place the tooth in a clean container surrounded with the casualty's own saliva or milk. Apply firm pressure to any bleeding wound or tooth socket. A sterile dressing or pad should be held firmly on the bleeding site for at least 10 minutes. Seek medical or dental assistance.

Motor vehicle accidents

A person may survive the initial impact of a motor vehicle accident but other associated elements may cause death, such as airway obstructions whilst unconscious or severe bleeding. The aim is to make the scene safe first, secondly, see who is injured, how many are injured and who requires treatment first, prioritise, then assist the injured.

Hazards include - The vehicle position, on-coming traffic, broken glass, fallen power lines, leaking fuel, fire, people in a panic etc.

Make the scene safe - Identify and assess dangers. Remove or minimise hazards. You may need to evacuate the casualties to a safer place. Provide protection:

- Protect yourself and the casualties from further injury, e.g. being hit by another car;
- Position other vehicles for protection or to use lights, use hazard lights, road triangles or torches;
- Ask other people to warn the on-coming traffic;
- Turn off the ignition in crashed cars and activate park brake or chock the wheels;
- Look out for inactivated airbags;
- Use head lights to light the area if dark;
- Keep at least 10m away from fallen power lines and ensure no one is smoking.

Trapped casualty or casualties - Ascertain quickly if someone is trapped and pass this information immediately to the emergency services operator. This allows the appropriate rescue organisation to be contacted.

First aid - For multiple cars and casualties, count the number of people injured and conduct a basic triage. Check responses. Look for unconsciousness first and those who are not breathing and treat first. Look for bleeding and other injuries. Call an ambulance. Special assistance may be required (e.g. fire brigade, electricity authorities, rescue organisations etc.).

- If the casualty in the vehicle is unconscious and not breathing normally, remove them from the vehicle and commence CPR immediately;
- Manage the unconscious breathing within the vehicle if possible;
- Open airways and check the breathing of each casualty;
- Clear the airway of foreign material;
- Maintain head tilt and jaw support, continuously reassess airways and breathing;
- Try to be aware of spinal alignment at all times;
- Stop any bleeding and immobilise fractures;
- Make comfortable and reassure, especially if a person is trapped;
- Complete a verbal casualty assessment noting the injuries;
- Move anyone lying on a road/railway line, etc. to safety;
- Write down changes in condition and the time of the observations;
- Monitor and treat as required until help arrives.

Motorcycle accidents:

- Remove the motorcycle from the casualty if necessary.
- Motorcycle crash casualties require special care because of their crash helmets.
- Conscious casualties may be able to remove an open face helmet by themselves if there are no injuries that prevent him/her from doing so.
- Only remove full face helmets, if absolutely necessary, for treatment to be commenced, remember the airway has greater priority over spinal care.
- Wherever possible two people should remove the helmet, one to support the casualty's neck and head, the other should remove the helmet. Hold the casualty's neck as still as possible with your hands spread wide over the bony part of the head. Remove the helmet, lifting it carefully and slowly off, ensuring your hands are expanding into a more supportive position on the head.
- Be careful not to drop the casualty's head during removal – place something soft under their head for protection.

Needle stick injuries

Causes - A needle stick injury occurs when the skin is accidentally punctured by a used needle. Blood-borne diseases that could be transmitted by such an injury include Human Immunodeficiency Virus (HIV), Hepatitis B and Hepatitis C.

First aid - If a needle stick injury occurs, seek medical advice. If you are at work, notify your supervisor or WHS officer. In many cases, treatment of the needle mark and counselling is all that is needed. You should receive support together with advice on the possible need for HIV and/or Hepatitis B/C testing, counselling, Hepatitis B and Tetanus vaccination and medication. Remember that the risk of catching a serious infection as a result of an accidental needle stick injury is very low.

Ways of reducing the risk of needle stick injuries:

- Workers who may come in contact with blood or body fluids should be vaccinated;
- Follow all safety procedures in the workplace;
- Minimise your use of needles;
- Remember that latex gloves don't protect you against needle stick injuries;
- Don't bend or snap used needles;
- Never re-cap a used needle;
- Follow safety precautions and procedures for disposing of needles;
- Place used needles into a clearly labelled and puncture-proof sharps approved container;
- Organisations may also benefit from a nationally recognised training course such as 10340NAT Course in safe handling of sharps and infectious waste.

Soft tissue injuries, sprains and strains

Soft tissue injuries may be sudden or get worse gradually. Further treatment depends on the type and severity of the injury. Always see your doctor if pain persists after a couple of days.

Causes - Sudden twists or jolts. The fibres overstretch beyond their capacity and tear. Bleeding from broken blood vessels causes the swelling.

A sprain - Joint injury - tearing of the ligaments and joint capsule. Common sites - thumb, ankle and wrist.

A strain - Injury to muscle or tendons. Common sites - the calf, groin and hamstring.

First aid = RICE

Rest - Stop the activity; take casualty to the sideline or first aid room; stop movement.

Ice - For the first 24 to 48 hours, ice or cold packs for 15 minutes every 2 hours.

Compression - Bandage the injured area firmly with a roller bandage, extend the wrapping above and below the injury. You may soak the compression bandage in cold water as it immediately reduces blood flow into the bruise which will assist the healing process.

Elevation -

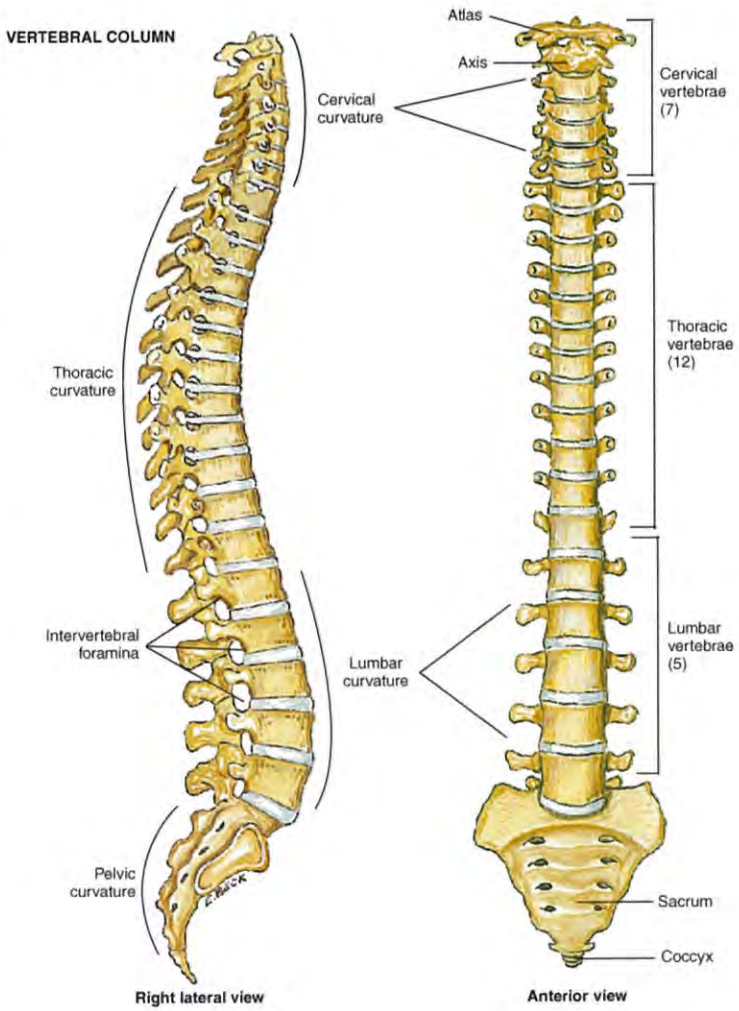
- If injuries permit, elevate the injured area above the level of their heart;
- Avoid heat, alcohol or massage, which can exacerbate the swelling;
- If symptoms get worse in the first 24 hours, seek further medical advice.

***Note** – It is not only ice that reduces the swelling, but any application of a cold treatment regime. A cold compression bandage assists healing by reducing bleeding into the tissues and reduces pain and swelling. To avoid cold injury and frostbite, do not apply the ice directly to the skin.*

Spinal injuries

The spinal cord is a mass of nerve fibres that enables signals to travel between the brain and the rest of the body. It runs down through the neck and is protected by the spinal column.

The spinal column consists of 33 vertebrae bones. They have a spongy disc between each vertebra. The lower spinal bones are fused together. In an accident the vertebrae may be fractured or dislocated, causing injury to the spinal cord.



The spine is broken into 4 regions:

1. The neck **(cervical spine)** – most vulnerable;
2. The back of the chest **(thoracic spine)**;
3. The lower back **(lumbar spine)**;
4. The pelvic region.

Neck injury - The head is supported by the neck, which is made up of seven of vertebrae stacked one on top of the other, that are cushioned by discs of cartilage and bound together with ligaments. Muscles provide movement and additional support.

The neck is very mobile, which means it is less stable than other areas of the body and more susceptible to injury.

Fractures, whiplash or poor posture and degenerative diseases such as arthritis, are the most common causes of neck pain or injury.

Whiplash injury - Injury to the neck that results from a sudden jerking backwards and forwards. Typically, from a rear-end motor vehicle accident. The neck and upper back region are overstretched, resulting in a strain or tear to the supporting ligaments, muscles and discs, and even irritating the nerves. The common symptoms of a whiplash injury are pain, stiffness, dizziness and headache.

Special considerations - The possibility of spinal injury must be considered for ALL trauma incidents.

- If the spinal cord is partially damaged, there may be loss of feeling or loss of normal movement below the injury site;
- If the spinal cord is completely severed, there will be loss of movement below the injury site.

First aid - Handle the casualty extremely carefully. Use spinal alignment at all times to try to prevent further or permanent damage. If a person feels numbness, tingling or pins and needles in the hands or feet, has loss of movement to arms and/or legs, has an altered conscious state or their head or neck is in an abnormal position after an accident or after any sort of trauma, a thorough examination must be completed.

- Call an ambulance as soon as possible;
- If conscious, keep the casualty still and manually support their neck until help arrives;
- Airway management takes precedence over any suspected spinal injury;
- It is acceptable to gently move the head into a neutral position to obtain a clear airway;
- If the casualty is unconscious and breathing, they must be gently rolled onto their side with as much support as possible.

INJURIES AND ISSUES RELATED TO THE ENVIRONMENT

Drowning

The most important consequence of drowning is interruption of the oxygen supply to the brain. Early rescue and resuscitation are the major factors in survival.

The rescue – Do not attempt a water rescue beyond your swimming ability.

- If the casualty is conscious and can move, consider using devices such as a stick, umbrella, rope or towel to rescue them. A buoyant aid such as a life jacket, Esky lid or kickboard may assist the casualty to stay afloat until a safe rescue can be attempted;
- If the casualty is conscious but paralysed or can't move due to neck pain, or altered sensations in the fingers and toes, enter the water if you feel safe and confident, support the casualty's neck and maintain spinal alignment as much as possible;
- If unconscious, turn casualty face up and remove the casualty from the water as soon as possible before any attempts at revival. CPR in deep water should only be attempted by an appropriately trained rescuer using floating devices.

Symptoms - A person that has been submerged may become unconscious, have abnormal breathing, or no breathing at all, spinal injury, other injuries and/or hypothermia. Be aware that they will most likely vomit or regurgitate.

First aid - If unconscious and not breathing, immediately start CPR. If the airway is obstructed with fluid (water or blood) or matter (sand, debris, vomit), promptly roll the casualty on to his/her side to drain and clear the airway. Reassess their condition. If not breathing, return the casualty to his/her back and continue CPR. If breathing commences, leave on his/her side with head tilt. Monitor to detect a possible relapse into unconsciousness. Treat other injuries as required. Call an ambulance for all immersion incidents, even if seemingly minor or the casualty seems to have fully recovered. Complications sometime after immersion are common.

Envenomation

Pressure Immobilisation Technique (PIT)

A simple pressure bandage over the bitten area and immobilisation of the limb slows the flow of the venom through the lymphatic system. The lymphatic system is a network of tubes that drains fluid (lymph) from the body's tissues and empties it back into the bloodstream. Venom may produce pain and/or tissue damage.

Bandaging the wound firmly, tends to squash the nearby lymph vessels which helps to prevent the venom from leaving the puncture site. If you don't have any bandages at hand, use whatever is available, including clothing, stockings or towels. Firmly bandage the wound but not tight enough to cause numbness, tingling or any colour change to the extremities.

PIT IS RECOMMENDED for bites and stings by the following creatures:

- All Australian venomous snakes, including sea snakes;
- Funnel web spider;
- Blue ringed octopus;
- Cone shell.

PIT IS NOT RECOMMENDED for bites and stings by the following creatures:

- Other spiders including redback spider;
- Jellyfish stings;
- Fish stings including stone fish;
- Bites or stings by bees, wasps, ticks, ants, scorpions, centipedes or beetles.

Advice on all types of envenomation is available from:

- Australian Venom Research Unit: avru.org
- Poisons Information Centre on: 13 11 26
- Australian Resuscitation Council: resus.org.au

Bee, wasp & ant

Single stings from a bee, wasp or ant, while painful, seldom cause serious problems except for those who have an allergy to the venom. Bee stings with the venom sac attached continue to inject venom into the skin, whilst a single wasp or ant may sting multiple times.

Symptoms - Usually immediate and intense pain on the bite site, followed by local redness and swelling. Multiple insect stings increase the pain and local skin reaction and may cause serious envenomation or difficulty breathing. Airway obstruction may result from swelling of the face and tongue, or from insect stings in or around the mouth. This may occur immediately or over several hours and always requires urgent medical care.

First aid - Move to a safer area. Remove the insect. Remove the sting by scraping sideways. Applying an ice compress to relieve the pain. Allergic reaction to insect venom may cause an itchy rash to develop, facial swelling, a wheeze, and abdominal pain and vomiting. If the reaction is severe, treat for anaphylaxis and seek medical attention immediately.

Things to remember:

- Refer to hospital if stung multiple times, or if stung on the face or tongue;
- If the casualty has a known allergy, monitor and treat for anaphylaxis if required;
- Call an ambulance for anaphylaxis, unconsciousness, condition is serious;
- Resuscitate if required.

Bee

Wasp

Jack Jumper Ant

Tick

Ticks are tiny parasites which feed on the blood of animals and sometimes people. Ticks inject a toxin that may cause local skin irritation or a mild allergic reaction; most tick bites cause little or no symptoms. However, in some susceptible people tick bite may cause a severe allergic reaction or anaphylaxis, which can be life threatening.

Adult female tick - early attachment on human skin behind ear at hair line. Note swollen lymph node on neck below the tick.

Symptoms - Most casualties will experience local irritation. Some will feel lethargic, have muscle weakness and may walk unsteadily. They may experience double vision, breathing problems and swallowing problems.

First aid - If the casualty is not allergic to ticks - the tick may be removed by using fine curved forceps or equivalent, to lever the tick out by the head, not the body. Alternatively, a lasso of thread (knot) may be positioned low around the mouth parts and steady upward traction applied opposite the direction of entry. After removal, antiseptic may be applied to the site. A cold compress may help reduce pain and swelling. If the casualty has a history of, or any signs of allergy, prepare for anaphylaxis and treat as required. Further medical assistance should be sought.

Not engorged

Slightly engorged

Moderately engorged

Fully engorged

Things to remember:

- If the casualty becomes ill, has a history of or any signs of severe allergy, do not remove the tick, prepare for anaphylaxis and monitor. The tick must be killed where it is, rather than removed e.g. use permethrin cream or freeze with ether-containing spray. This should be done if possible in a medical facility. For more information go to http://www.tiara.org.au/how-to-remove-a-tick/
- A careful search should be made for other attached ticks;
- Call an ambulance for anaphylaxis, unconsciousness, if condition is serious;
- Resuscitate if required.

Spiders

General first aid - The appropriate first aid for spider bite depends on the type of spider responsible. All spiders should be treated symptomatically. Always see your doctor if any spider bite does not clear up, blisters or ulcers appear, or if you did not see the spider, or are unsure of the type of spider. If serious symptoms or signs develop from any spider bite, take the casualty to hospital. An ambulance should always be called if the casualty is a young child, pain is severe, or if collapse occurs. It is reasonable to save the spider for identification if this can be done safely, although the casualty can still be treated without it. If the casualty has been in an area where there might be a spider, e.g. long grass, damp wet garden etc. and the casualty becomes unwell, do not discount the possibility of a bite.

Redback, White-tailed & other spiders

White-tailed spider

White-tailed spider - In most cases the bite only causes a mild reaction, with itching and skin discolouration. This usually resolves after a few weeks. In some cases, it may cause severe inflammation. On rare occasions ulcers may appear.

First aid - Use icepacks to help relieve the swelling.

Redback spider

Redback spider - Rarely serious for an adult. The venom is slow to act, so serious illness is unlikely. Rapid, immediate, intense local pain which increases and spreads. The bitten area may become hot, red and swollen. Nausea, vomiting and abdominal pain can occur. They sweat profusely, especially at the bite site. Glands under armpits or in groin may swell. A bite in a child can be serious. Anti-venom is available.

First aid - The Pressure Immobilisation Technique **should not** be used. Apply icepacks/cold compresses to ease pain, but for no longer than 20 minutes. Monitor until all symptoms subside, if they get worse, see a doctor.

Female Funnel Web spider

Funnel Web

Funnel Webs are deadly and aggressive. They are solid in appearance and are black over most of their body. Any bite from a dark coloured spider bigger than 2cm should be considered dangerous requiring immediate treatment. Life threatening effects may occur within 10 minutes.

Male Funnel Web spider

Symptoms - Great pain at the bite site, but little local reaction. Tingling around the mouth, nausea, abdominal pain, profuse sweating, excessive saliva, muscular twitching, breathing difficulties, confusion and unconsciousness are other symptoms.

First aid - Call an ambulance straight away. The casualty must lie down and keep still. Reassure to keep them calm. Apply the Pressure Immobilisation Technique. Apply a splint or sling to the limb to restrict movement. If the bite is on the trunk of the body, apply firm pressure to the bitten area, however, do not restrict chest movement. Where possible help should be brought to the casualty rather than moving them. Transport to hospital preferably be by an ambulance.

Snakes

Many in Australia are capable of lethal bites. These include: taipans, brown snakes, tiger snakes, death adders, black snakes, copperhead snakes, rough scaled snakes and many sea snakes. Anti-venom is available for all venomous Australian snake bites.

King Brown snake

Snake identification - Identification can be made from venom on clothing or the skin using a Venom Detection Kit. Do not wash or suck the bite or discard clothing. Do not kill the snake for identification purposes, you may get bitten yourself and medical services do not rely on visual identification of the snake species.

Suspicion of a snake bite - If in an area where there might be a snake, e.g. long grass, damp wet garden, etc. and the casualty becomes unwell, do not discount the possibility of a bite; treat immediately. If a child says that he/she has been bitten, do not delay treatment looking for evidence of the bite, life-threatening effects may be seen in children within minutes. Immediate treatment is vital. A snake bite may be painless and without visible marks.

Red Bellied Black snake

Symptoms - One or two fang marks or a scratch mark. Neurotoxic muscle paralysis occurs, causing breathing failure, respiratory weakness or respiratory arrest. There may be bleeding due to coagulation failure and/or muscle damage. They may have a headache, abdominal pain, nausea and vomiting. Blurred or double vision, drooping eyelids, difficulty speaking, swallowing or breathing, swollen tender glands in the groin or arm pit, limb weakness

First aid - Call an ambulance straight away. Ensure it is safe before assisting the casualty. If possible, stay with the casualty and arrange for someone else to make the call and get resources, such as something to use for bandages and splints. The casualty must lie down and keep still. Reassure to keep them calm. Apply the Pressure Immobilisation Technique. Apply a splint or sling to the limb to restrict movement. If the bite is on the trunk of the body, apply firm pressure to the bitten area, however, do not restrict chest movement. Where possible help should be brought to the casualty rather than moving them. Transport to hospital preferably be by an ambulance.

Marine creatures

Blue-ringed octopus & Cone shell

Blue-ringed octopus *- Found in all Australian coastal waters, usually in tidal pools. They have a potentially fatal bite. The venom is stored in salivary glands and is injected by a bite from a beak like mouth.*

Photographer: Richard Ling

Cone shells *- Found in tropical waters. They have venom glands that can inject venom when handled or stepped on.*

Symptoms - The venom from the Blue-ringed octopus and the Cone shells cause prolonged muscle weakness and without basic life support, death from respiratory paralysis can occur within 30 minutes. There may be a spot of blood on a visible, but painless bite. They may feel numbness of lips and tongue. This is likely to progress into weakness of the muscles until the casualty cannot move. Although the casualty may not be able to move, they may still be able to hear. Progressive slowed inadequate breathing may eventually stop altogether.

First aid - Call an ambulance immediately. The casualty must be kept at rest, reassured and observed at all times until the ambulance arrives. **Apply the Pressure Immobilisation Technique** if possible over the bite. Be prepared to resuscitate.

Fish stings

Causes - Many species of fish in Australian waters have spines or barbs which inject venom causing a painful local reaction. The most common fish sting is caused by a Stonefish. Another common injury is from a stingray barb.

Stonefish *- Lies on the seabed half buried in sand or mud camouflaged as a rock. Any of the thirteen spines may penetrate the foot to a considerable depth even through footwear. The result envenomation is immediate and excruciating pain and possible tissue damage. There is anti-venom which will reduce the pain and the likelihood of tissue damage.*

*The **stingray** has a powerful spine called a 'barb' on its tail which can inflict a serious wound with surrounding tissue death, and may cause damage to major blood vessels. Fragments of the spine or barb, may remain in the wound. While stingray spines contain venom, the tissue damage and possibility of infection may be more important considerations. Call an ambulance for a stingray injury.*

Symptoms - The casualty may feel intense pain, swelling. There could possibly be a bleeding open wound. The surrounding skin may become grey/blue in colour. The casualty may also become irrational and start to panic.

First aid - These first aid principles can be applied to all fish stings as required by the nature of the injury. Move to a safe area. If a barb is still in place, don't remove it. Leave that to the staff in hospital. ***Do not*** **use the Pressure Immobilisation Technique.** Stop bleeding using local pressure above bleeding wounds. Immerse the stung area in tolerable hot water. In the uncommon event that heat does not relieve the pain, the application of cold may be effective. Call an ambulance if their condition worsens or is serious. Always seek medical attention after first aid treatment. Anti-venom is required in cases which present with more than mild to moderate local pain, or with systemic symptoms. The wound should be regarded as possibly contaminated and a tetanus shot should be updated if required.

Jellyfish

Causes - Stinging is caused by the discharge of thousands of microscopic stinging capsules called nematocysts which contain coiled threads loaded with venom. The more tentacles that make contact with the skin, the more venom is injected.

Symptoms - Easily visible tentacles stuck on the skin, or no tentacle at all may remain. They may cause an inflammatory skin reaction consisting of redness, weals, blisters and swelling. There may be multiple whip-like weals or a frosted ladder pattern. They usually have severe immediate sharp pain, however, sometimes the pain may be moderate or mild. Muscle aches or cramps may occur. A sting with several metres of tentacles can cause rapid collapse, respiratory and cardiac arrest in just a few minutes. Due to their smaller body size, children are at greater risk of the effects of envenomation.

Box jellyfish *- Has a large box like bell with multiple very long tentacles (20–30cm). Urgent assistance is required. In tropical areas hospitals and ambulances carry anti-venom.*

'Blue Bottle' or 'Portuguese Man-o'-War' *- Although a tropical jellyfish the sting is treated as for non-tropical jellyfish stings. If Blue Bottles are present in the water and tentacles are bluish – assume Blue bottle sting.*

The specimen above is only about 10mm across the bell.

Irukandji syndrome *- Approximately 10 small to medium sized offshore and onshore jellyfish are known to produce an "Irukandji syndrome." These jellyfish have only four tentacles and some are too small to be seen.*

There may be a minor sting with no tentacle visible. 5-40 minutes after the sting there will be severe generalised pain, cramping, nausea and vomiting.

Symptoms - The casualty may experience difficulty breathing, and be sweating. They may be restless and have a feeling of impending 'doom'. This sting could possibly cause serious complications to occur. If casualty is still unstable 30 minutes after being stung and having first aid treatment, it may be Irukandji syndrome. Seek urgent medical assistance.

First aid - Appropriate first aid depends on the species responsible for the envenomation, and the region it is in. An ambulance should be called if the condition and pain worsens, if the sting area is large, on half a limb, or on more sensitive areas such as the eye are stung. Seek assistance from a lifesaver or lifeguard where possible.

Since it is usually difficult to recognise which species of jellyfish has caused a sting, first aid treatment should be based on the risk of serious stings and the known geographical distribution of dangerous species. There can be no one nationwide recommendation for first aid treatment because of the differences between jellyfish species around Australia. Treatment is dependent upon the region.

Regions of Australia

Tropical region of Australia - From Bundaberg (QLD) northwards, across the northern coastline and down to Geraldton (WA).

Jellyfish that cause life-threatening stings, primarily occur along the tropical coastline. The priority for treatment is to preserve life. After DRSABCD, except for the blue bottle, treatment usually starts with dousing the sting with vinegar, and then cold packs, and further medical assistance. The most severe cases in Australia have been associated with the Box jellyfish (Chironex Fleckeri), and jellyfish that cause Irukandji Syndrome (Carukia Barnesi).

Non-tropical region of Australia - South from Geraldton (WA) around the south coast line and northward to Bundaberg (Qld). Outside of the tropics, non-life-threatening stings occur, the primary objective is pain relief, rinse with seawater and apply cold pack, icepack or hot water.

TROPICAL

PRIORITY - TO PRESERVE LIFE

Remove from water, restrain if necessary
Resuscitate if required

VINEGAR FOR 30 SECONDS

Liberally douse the stung area with vinegar

Pick off any remaining tentacles
(not harmful to first aider)

If no vinegar:
Pick off the tentacles, rinse with seawater

DO NOT APPLY FRESH WATER
(this may cause more stinging)

APPLY COLD PACK

SEEK MEDICAL ASSISTANCE
(lifeguard, 000)

NON-TROPICAL

PRIORITY - TO RELIEVE PAIN

Do not use vinegar or rub the sting area
Rest, reassure and monitor

PICK OFF TENTACLES

RINSE WITH SEAWATER

PLACE IN HOT WATER FOR 20 MINUTES

If pain is not relieved by heat or if hot water is not available, use a cold pack

Environment - Cold

Snow activities, such as skiing or hiking, can cause common injuries such as sprains and strains, fractures and dislocations etc. Being in a cold climate can also cause 'snow blindness' and sunburn. Prolonged exposure to cold weather can lead to serious cold injuries such as hypothermia, and frostbite.

Frostbite

Causes - Prolonged exposure the cold causes the body to redirect the blood away from the extremities such as face and ears, fingers, hands, toes and feet. Ice forms inside and around skin cells blocking the movement of blood through capillaries and depriving the tissue of oxygen and nutrients. The longer the tissue remains frozen, the greater the amount of damage.

Symptoms - Skin will be cold, white and hard. Pain and itching, or loss of feeling in the affected area. The skin may be blotchy, swollen or blistering. Blood-filled blisters signal severe frostbite which may lead to dry or wet gangrene. (*Dry gangrene - skin becomes hard and black. Wet gangrene - the skin looks soft and grey).*

Frostbite is categorised into **superficial**, where only the skin is frozen, or **deep**, which involves deeper tissues.

First aid - Generally, remove from exposure to the cold, rest and slowly re-warm the area. This can be very painful.

For **superficial frostbite:**

- *Re-warm* - Affected areas **slowly**;
- *Fingers* - Place under armpits;
- *Cheeks and ears* - Cover with warm hands;
- *Feet* - Place on companions tummy under clothing;
- *Colour and consistency of the skin* - Should return to normal and no further assistance is required.

For **deep frostbite** - Replace wet clothing with dry, if possible, and seek medical assistance immediately. If frostbite occurs far from help do not thaw out the affected areas in case they re-freeze again. Thawing and re-freezing affected areas is dangerous and must never occur.

Hypothermia

Causes - Hypothermia is when the core body temperature is at or below 35°C. As body temperature falls, the body systems and organs progressively fail, usually causing cardiac arrest and possibly death. It can occur rapidly e.g. falling into icy water, or be gradual, e.g. people who lay immobile following a stroke, or after taking drugs. Situations that can cause the body to lose more heat than it can generate can include:

- *Environmental*, for example:
  - Prolonged exposure to cold weather;
  - Spending excessive time in wet clothes;
- *Trauma* - Injury, immobility and burns;
- *Drugs* - Alcohol and/or sedatives;
- *Neurological* - Stroke and altered consciousness;
- *Endocrine* - Impaired metabolism;
- *Systemic illness* - Severe infections, malnutrition.

Mild hypothermia - body temperature is 35 - 34°C - Feeling cold, severe shivering, pale cool skin, slurred speech, dizziness, loss of concentration, drowsiness, confusion; usually responsive, but has apathy and slowed breathing, irritable, unsteady.

Moderate hypothermia - body temperature is 33 -30°C - Shivering mostly stops, muscle stiffness, consciousness clouded, pulse and respiration slow and difficult to detect, difficulty speaking.

Severe hypothermia - body temperature is less than 30°C - Progressive loss of consciousness, cardiac abnormalities develop, pupils fixed and dilated, may appear dead.

First aid:

- Move to shelter or protect from wind, insulate their body from the cold ground and call for medical assistance or rescue;
- Remove sources of heat loss such as wet clothing if there is a dry cover available;
- Don't massage or rub the person, don't allow them to help you, keep them still;
- Dry them, cover their body and head with a blanket or warm dry clothes;
- If alert and able to swallow and not vomiting, give a warm non-alcoholic drink;
- **Slowly re-warm** the casualty with body to body heat or warm compresses to the neck, chest wall and groin (do not use warm bath or heater);
- Monitor until help arrives.

Environment - Hot

Heat induced illnesses

Heat stress can cause mild conditions such as a rash or cramps, serious and life-threatening conditions such as heat stroke, and can worsen pre-existing medical conditions. Heat stress occurs when the body can't cool itself and maintain a healthy temperature. The body normally cools itself by sweating, but sometimes sweating isn't enough and the body temperature keeps rising. Once the body becomes too dehydrated to sweat, the body temperature can rise rapidly and dramatically. The young and the very old are more prone to heat induced illness.

Dehydration

Water is essential for the human body to function. The body cannot store water and must have fresh supplies every day to perform virtually every metabolic process.

Causes:

- Not drinking enough water, increased sweating due to hot weather, humidity, exercise or fever;
- Insufficient signalling mechanisms in the elderly – sometimes they do not feel thirsty even though they may be dehydrated;
- Increased output of urine due to a hormone deficiency, diabetes, kidney disease or medications;
- Excessive diarrhoea or vomiting;
- Recovering from burns.

Symptoms - If a person becomes dehydrated, they don't sweat as much and their body temperature keeps rising. They may feel tired and weak. They will usually have a headache. Lips and nasal passages become dry. They may experience mood swings, respond slowly, feel confused or have hallucinations. Urine will usually become dark.

First aid - Dehydration occurs when the water content of the body is too low. This is easily fixed by increasing fluid intake. If dehydration is not countered by fluid intake, eventually urination stops, the kidneys fail and the body can't remove toxic waste products. In extreme cases, dehydration may result in death. Dehydration in the elderly, babies and children can be very serious, even a life-threatening condition in children.

Hyperthermia

Causes - Hyperthermia is elevated body temperature, from when the body produces, or absorbs, more heat than it dissipates. This can be due to:

- Excessive heat production (e.g. Activity or physical exertion or heavy dark clothing on a hot day);
- Excessive heat absorption from a hot environment (e.g. High humidity, unventilated buildings);
- Failure of cooling mechanisms or inadequate fluid intake;
- Alteration in body's set temperature (e.g. Infection or illness, drugs).

Heat cramps - Muscle cramps following prolonged exertion. The body temperature is still usually normal.

Heat exhaustion (37° – 40°C) - Recognised by fatigue, headache, nausea, hot dry skin, pallor (lack of colour), sweating, thirst, fainting and moderately elevated body temperature, dizziness and possible collapse.

Heat stroke (+40°C) - Very serious. May cause impaired mental function and very high body temperature, which may lead to unconsciousness and death. All body organs are affected. May have a lack of sweating or sweating may be profuse. This is a life-threatening condition, cool as quickly as possible.

First aid:

- Call the ambulance, move to a cooler area such as shade;
- Lay the casualty down, loosen and remove excessive clothing;
- Remove the cause and assist the normal cooling mechanisms;
- Cool and moisten skin with atomiser sprays, moist cloths, fans, fanning etc.;
- Apply wrapped ice packs to neck, groin and armpits;
- Give water to drink if fully conscious;
- Monitor until help arrives.

Poisoning

FOR ALL POISONING, call the Australian Poisons Information Centre on 13 11 26 anywhere in Australia 24 hours a day, 7 days a week. The ambulance should also be called.

Poisons can enter the body by:

- **Ingestion** - By eating or drinking poisonous substances;
- **Injection** - Through drug use;
- **Absorption** - Through the skin via contact with various poisons;
- **Inhalation** - Breathing the gas vapours or fumes into the lungs.

Causes - May be accidental or deliberate. Most pharmaceuticals are poisonous, even lethal in overdose. If poisoning occurs in an industrial area, farm or laboratory setting, suspect particularly dangerous agents and take safety precautions. If more than one person simultaneously appears affected by a poison, there is a high possibility of dangerous environmental contamination.

Symptoms - A person may complain of physical symptoms without realising these are due to a poison. They may exhibit abnormal behaviour reflecting alcoholic confusion or a psychiatric disturbance. The speed of effects will depend on the nature of the poison, its concentration and the time of exposure. Signs and symptoms may include: unconsciousness, nausea, vomiting, burning pain in the mouth and throat, headache, blurred vision, seizures, respiratory arrest or cardiac arrest.

First aid - Where possible, ascertain what has caused the poisoning, how much has been taken and when. Medical advice will depend on the situation. Decontamination will be in accordance with the type of poison and how it entered the body. The poisons information centre will provide advice on what to do. Monitor the casualty and manage as required until the ambulance arrives. Never go into an unsafe environment and undertake safety precautions before providing first aid. Ensure that you will not be contaminated or poisoned yourself.

Unconscious casualty:

- Place on their side, maintain an open airway;
- If not breathing normally or at all, wash the poison from the face of the casualty, use a facemask, commence CPR;
- Perform compression only CPR if no protection is available.

If swallowed:

- Give a sip of water to wash out their mouth;
- DO NOT try to make them vomit;
- DO NOT use Ipecac Syrup.

If inhaled:

- Immediately get the casualty to fresh air;
- Avoid breathing fumes;
- If it is safe to do so, open doors and windows.

Enters the eye:

- Flood the eye with saline or cold water;
- Continue to flush for 15 minutes, holding the eyelids open.
- Perform compression only CPR if no protection is available.

Skin contact:

- Remove contaminated clothing, taking care to avoid contact with the poison;
- Flood skin with running cold water;
- Wash gently with soap and water and rinse well.

Button batteries

Lithium batteries or 'button batteries' are found in everyday items such as hearing aids, watches, toys, games, flashing jewellery, singing greeting cards, remote control devices etc.

What happens - Most button batteries pass through the body and are eliminated in the stool. However, the battery could block the airway and cause choking, or get stuck in the throat, which can cause severe burns or even death. When a button battery gets stuck in the throat, the saliva triggers an electrical current causing a chemical reaction that cause serious burns in as little as two hours, without showing immediate signs of injury.

Symptoms - A child could swallow a battery without anyone knowing. Symptoms can be easily dismissed as a common cold, coughing, drooling, vomiting, fever, lethargy and poor appetite. Other symptoms may include abdominal pain, difficulty swallowing, irritability, dark or bloody bowel movements.

First aid - If a battery is swallowed, seek immediate medical help and **call the Poisons Information Centre urgently.** Before making the call, try to determine:

1. The type of battery and the battery identification number, (found on the package or from a matching battery);
2. The casualty's age, weight and condition;
3. The time it was swallowed;
4. The amount swallowed.

Button batteries may also cause permanent injury if placed in the nose or the ears. Symptoms - pain and/or a discharge from the nose or ears. DO NOT use nose or ear drops as these fluids can cause additional injury if a battery is involved.

Medication or drug overdose

Causes - Drug use is common in today's society, especially the so called "party drugs". Many have dangerous side effects, particularly if they are mixed together or taken with alcohol. Whilst the major cause of drug overdose is illegal drugs, legal and prescription drugs taken in the wrong doses or combinations can also be of concern. Regardless of the drug taken, getting help as soon as possible is vital.

Symptoms - Witnesses or bystanders can help with what type of drug has been taken. Witnesses should be assured that they will not get into trouble by the police if they admit that illegal drugs were involved. It is way more important to get that information so the casualty can be treated appropriately. Other evidence may be syringes, empty bottles, containers, left over drugs. A person that has overdosed may have pale, cold clammy skin, be very drowsy and nauseous and could vomit.

First aid - If an overdose is suspected immediately call Triple Zero (000). Many overdoses cause death. Treatment should be in accordance with the casualty's condition. Try to ascertain what has been taken, how much and when. Call the Australian Poisons Information Centre on 13 11 26. Treat the unconscious and resuscitate if required. Monitor the casualty and manage as required until the ambulance arrives.

A description of commonly used drugs:

Description	What does it do	Possible serious side effects
Alcohol – Although legal, it is still a drug. **Taken by**: A liquid taken by drinking it.	Alters the psychological state. Relaxant or stimulant. Decreases anxiety. Reduces inhibitions.	Serious effects: falls / obstructed airway if casualty vomits in their sleep or passes out whilst lying on their back / damage to the heart / stroke / brain damage / dementia / nerve damage / coma / death.
Heroin – An 'Opiate' drug. **Taken by**: Injecting, inhaled or smoked.	A depressant.	Suppression of breathing / coma / permanent brain damage / death.
Benzodiazepines – 'Benzos' or 'BZDs'. Minor tranquillisers / sedatives / relaxants / anti-anxiety pills / sleepers. **Taken by**: Usually swallowing in the form of tablets, pills and capsules.	Used to treat anxiety, insomnia, agitation, seizures, muscle spasms. Premedication for medical or dental procedures.	Overdose - deep unconsciousness. Death is rare; however combined with other central nervous system depressants such as ethanol and opiates, the potential for death increases.
Cocaine – Stimulant drug derived from the leaves of the coca plant. **Taken by**: Snorting, injecting, ingesting, or smoking.	Stimulates (speeds up) the central nervous system. Euphoria. Energetic, talkative, mentally alert.	Heart attack / neurological effects / seizures followed by respiratory arrest / stroke / cardiac arrest / death.
Ecstasy – 'MDMA'. Synthetic drug called methylenedioxymethamphetamine. **Taken:** Usually swallowed orally in the form of tablets, pills and capsules.	Alters the user's perception of reality.	A sharp increase in body temperature / liver, kidney, or cardiovascular system failure / death.
Rohypnol – 'Date rape' drug. The trade name for flunitrazepam. **Taken**: Small white tablets: taken orally / ground up & snorted / ground up & dissolved into a drink.	Produces sedative-hypnotic effects. Muscle relaxation. Amnesia. Dependence.	Mixed with alcohol it can incapacitate victims and prevent them from resisting sexual assault. Can be lethal when mixed with alcohol and/or other depressants.
Liquid Ecstasy – 'Grievous bodily harm' or 'Fantasy'. Different to ecstasy. Gamma-hydroxybutyrate or GHB. Also found in cleaners, strippers and solvents. **Taken**: Orally via a colourless, odourless, tasteless liquid / small bottles or vials. May also be bright blue or a crystal powder.	A powerful, rapidly acting central nervous system depressant drug. Sedative and anaesthetic effects. Euphoria. Hallucinations. Relaxant. Reduces inhibitions.	Nausea / vomiting / delusions / depression / loss of balance / seizures / respiratory distress / loss of consciousness / low heart rate & blood pressure / amnesia / coma.
Crystal Methamphetamine (Meth) – 'Ice' or 'Glass'. Made of highly volatile, toxic substances such as methylamine and amyl amine. **Taken by:** Snorting, smoking, or injecting.	A false sense of happiness and well-being. A rush of confidence. Hyperactivity and energy. Decreased appetite.	Systematically destroys the body. Highly addictive. Can only be relieved by taking more. Memory loss / aggression / psychotic behaviour / potential heart and brain damage.

Assessment Section

How to complete the pre-course study workbook

There are several ways of completing the workbook. Whichever way you choose to do the pre-course study, you must take evidence that you have completed it, to the practical session to show your trainer. Examples are given below.

EBook (computer workbook)

1. Print the quiz pages and complete.
2. Write your name at the top of each page in case they get separated.
3. **Take the quiz pages to the practical session and present them to your trainer as evidence of your pre-course study.**

Hardcopy (printed workbook)

1. Complete the quiz in the book.
2. **Take the workbook to the practical session and present them to your trainer as evidence of your pre-course study.**

Don't forget to also take all the other requirements, such as ID, to your practical session!

Examples of ID include at least one of the following:

- Australian Driver Licence or Passport;
- Birth Certificate;
- Medicare Card;
- Citizenship Certificate.

USI Number

It is a government requirement to have a unique student identifier (USI number) for your certificate to be issued on completion of your first aid course. We recommend you obtain one before you go to your practical session. This number is unique to you and it will be required for most courses you do. It is easy to obtain one, just go to www.usi.gov.au and follow the instructions. Once you have your number, write it below so you will have it for your practical session.

Personal details

Full name: _____ **USI:** | | | | | | | | | | |

I, the above named, declare that I completed the answers myself, without assistance from anyone else. I understand that this quiz must be presented to my trainer at my practical session.

Signature: _____ **Date:** _____

Name:.....

Knowledge Quiz

Complete the entire quiz and take it to the practical session.

Please note: the quiz is not part of your final assessment.

Your trainer will provide you with the final assessment at the end of your practical session.

Select (✓) True or False for the following statements:

1. The First Aid Code of Practice determines the requirements for first aid training and first aid kits in the workplace.	☐ True	☐ False
2. The Australian Resuscitation Council provides guidelines for how first aid and CPR should be delivered.	☐ True	☐ False
3. A first aider should always ensure that their skills are current, never go beyond their limitations and be aware of available stress management assistance if support is required.	☐ True	☐ False
4. Gaining consent to provide first aid to an injured casualty who is conscious is not necessary.	☐ True	☐ False
5. When providing first aid, you should ignore anything dangerous and don't worry about protecting yourself. You must always help, even when the area is unsafe.	☐ True	☐ False
6. The best outcomes for a casualty in cardiac arrest is when the ambulance is called urgently, CPR is performed, defibrillation and advanced care is carried out as quickly as possible. This is called the chain of survival.	☐ True	☐ False
7. Once you start CPR, you should try to continue until help arrives or go for as long as you can.	☐ True	☐ False
8. You should always immediately call an ambulance for an unconscious casualty who is not breathing normally. Try to have someone else call for you if possible so you can begin CPR if required.	☐ True	☐ False
9. A defibrillator should only be used according to the manufacturer's instructions.	☐ True	☐ False
10. You do not need to continually monitor and re-evaluate the casualty's illness or injury after you have done the initial examination.	☐ True	☐ False
11. The Australian Resuscitation Council states that CPR should be completed by rotating 30 compressions and 2 rescue breaths. However; if you are unable or unwilling to do the rescue breaths, you can do compressions only CPR.	☐ True	☐ False
12. After providing first aid in a workplace, a first aider should always report incident details as accurately as they can to their supervisor as soon as possible.	☐ True	☐ False
13. A first aider should be aware of possible psychological effects, such as stress, when an incident happens. They should seek assistance when necessary and may find great benefit in attending a debriefing meeting with colleagues or a professional.	☐ True	☐ False
14. Using good manual handling skills to avoid injury during first aid means to: lift without bending over; not lift something that is too heavy for you; ask for help; avoid twisting the body.	☐ True	☐ False
15. You discover a man lying on his back. He is not responding. You can tell he is breathing because his chest is rising and falling and you can hear air escaping from his nose and mouth. You should turn him onto his side so his tongue doesn't block his airway and fluids drain away and do not enter his lungs.	☐ True	☐ False

STOP HERE if doing CPR only course, continue for all other first aid courses.

16. Asthma should be treated as soon as possible, using a blue/grey puffer, preferably with a spacer device, to help relieve shortness of breath and any wheezing.	☐ True	☐ False
17. A casualty has been cut on the arm and is bleeding. Apply pressure it to help stop the bleeding, then apply a pad with pressure, apply a firm bandage over the pad and restrict movement.	☐ True	☐ False
18. Maintaining the casualty's privacy, maintaining confidentiality of records and information, displaying a respectful attitude towards all involved and gaining consent from the conscious casualty are very important concepts in providing first aid at work or in the community.	☐ True	☐ False
19. A person's airway has become completely obstructed due to choking on a piece of apple. To help, alternate between 5 back blows and 5 chest thrusts until the object is expelled.	☐ True	☐ False
20. A first aider should be aware that obstruction of breathing can occur in a person who is pinned down, or restricted whilst on their back, which could possibly cause suffocation.	☐ True	☐ False

Name:.....

Please write your answers in the space provided under each picture *(there are clues at the bottom)*:

21.

This gentleman cannot smile or speak properly, he can't raise his right arm or right leg and he has a headache.

You should immediately call an ambulance because he could be having a.....

- -

22.

This is a demonstration of a baby being treated for choking on an object.

What is the treatment for a choking baby?

- -

- -

- -

23.

This casualty needs to be kept still and warm until an ambulance arrives. She is pale with a fast pulse rate, dizzy, thirsty, cold and clammy after a severe bout of diarrhoea and vomiting.

What could this first aider be treating this casualty for?

- -

24.

What should you do before assisting this man?

Call the ambulance and.....

- -

- -

- -

25.

The first aider is giving treatment by administering medication from a blue/grey puffer to be inhaled through a spacer and mask.

What is this little boy being treated for?

- -

- -

26.

This rash indicates that the casualty is having an allergic reaction.

What should you do if they start having breathing difficulties and their tongue starts to swell?

- -

- -

- -

- -

27.

When should disposable gloves be used?

- -

- -

- -

28.

What would this equipment be used for?

For protection against bodily fluids whilst giving.....

- -

- -

29.

This is an automated defibrillator (AED).

It should only be used when a casualty is .....

- -

- -

- -

Where possible, whenever providing first aid treatment. Asthma. Ensure safety and turn the power off.

Stroke. Rescue breaths. Unconscious, with no response and not breathing normally, or at all. Shock.

5 back blows and 5 chest thrusts alternatively until the object is removed. Give adrenaline using an autoinjector.

Name:.....

30. Please write in the space on the right. What telephone number would you use in Australia to call the emergency services, such as the ambulance, in an emergency? -

31. For assessment the First Aid Training Package requires you to **complete 2 minutes of CPR on the floor to pass the course** and be awarded a statement of attainment.
- ☐ **True - Attend the practical session**
- ☐ **False - See your trainer**

32. Please tick the most appropriate box which best describes your situation.
- ☐ I have no pre-existing conditions that would stop me completing 2 minutes of CPR on the floor. I can attend the practical session and complete the assessment.
- ☐ I have a condition/injury/disability that would make it difficult. I would have to practice CPR at the practical session in another manner (i.e. on a table instead of the floor), but I understand that I have to complete 2 minutes of CPR on the floor for assessment.
- ☐ I cannot perform CPR techniques on the floor for 2 minutes, therefore I cannot pass the course. I can contact my trainer for more information.

33. The Australian Government now requires all students to supply a Unique Student Identifier (USI) when attending a course.
- ☐ **True - I have a USI, it is:** _ _ _ _ _ _ _ _ _ _
- ☐ **False - See your trainer**

STOP HERE if doing Provide basic emergency life support course, continue for all other first aid courses.

34.

This persons tongue is pink and the skin appears normal. This is healthy.

Look at the second picture. When checking vital signs of an injured casualty, **what does the paler than usual tongue and skin indicate?**

- -

- -

35.

This person has been running his hand under cold water for 20 minutes.

What type of injury does he have?

- -

Should he remove his ring?

- -

- -

36.

This is a minor wound. How would you treat this casualty?

Put on gloves, make the casualty comfortable and then.....

- -

- -

- -

- -

37.

Look at how the casualty is being treated.

What injury do you suspect this person might have?

- -

- -

- -

38.

This lady is unconscious. Her body position caused an airway obstruction and now she is not breathing and is not responsive. She needs CPR.

You do this by positioning her on her back and then doing...

- -

- -

39.

It is a very hot day and this lady has collapsed whilst gardening in the backyard. The first aider is giving her sips of water.

She could be....

- -

- -

30 compressions then 2 rescue breaths alternately. Dehydrated. The casualty has suffered blood loss. A spinal Injury.

A burn. Clean with water and antiseptic then cover with a sterile non-stick dressing. Yes, if the finger is not too swollen.

Name:.....

Some more True or False questions - Tick (✓) your answer.

40. A dislocation should be handled carefully because the bone has been dislodged from the joint.	☐ True	☐ False
41. A young man has suffered an abdominal injury after being hit in his stomach with a blunt object. He is paler than usual, cold and clammy and his pulse is racing. These are not signs of shock.	☐ True	☐ False
42. There may be potential hazards when providing first aid such as, manual handling injuries, risk of infection, hazardous substances, fires, dangerous goods, chemicals, needle stick injuries, glass etc.	☐ True	☐ False
43. A casualty is found in a swimming pool floating face down and unconscious. After calling for help and ensuring it is safe, quickly remove from the water and roll on to his/her side to clear the airway of obstructions or water. If they are not breathing, start CPR immediately.	☐ True	☐ False
44. It is suspected that a casualty has suffered a spinal injury whilst playing sport. The first aid officer should immediately remove the casualty from the field to allow the game to continue.	☐ True	☐ False
45. A female friend who has diabetes appears to be confused, sweating and not making any sense. If she can safely swallow, give her lollies or food and keep an eye on her.	☐ True	☐ False
46. A casualty who is suffering from dehydration needs plenty of fluids such as water.	☐ True	☐ False
47. A casualty who is suffering from a severe cold injury should be rewarmed slowly.	☐ True	☐ False
48. A farmer got dust in his eye whilst working. The eye should be gently washed.	☐ True	☐ False
49. A casualty is unconscious and not breathing after being heavily tackled during a football game. You should move him into position to start CPR even though he may have a spinal injury.	☐ True	☐ False
50. You are providing first aid for a casualty whilst he is lying on the ground. He has broken his leg but has no other injuries. He tells you he feels like he is going to vomit. You should assist him to lean on to his side to ensure his airway doesn't get blocked.	☐ True	☐ False
51. Any unconscious casualty who is breathing normally should be placed on his/her side.	☐ True	☐ False
52. Signs of hyperthermia (hot) may include a high body temperature and hot dry skin. Heat stroke (very hot) is serious, casualties should be cooled down as quickly as possible.	☐ True	☐ False
53. The name of the bandaging technique used to reduce/stop the flow of the venom after a person has been bitten by a snake is called the Pressure Immobilisation Technique.	☐ True	☐ False
54. A sprained ankle or a strained muscle should NOT be treated with ICE.	☐ True	☐ False
55. Burns should be immediately treated with water. Lots of it. For 20 minutes.	☐ True	☐ False
56. Having a defibrillator in a workplace or shared between a number of workplaces, is vital in giving a cardiac arrest casualty every chance of survival.	☐ True	☐ False
57. Signs of hypothermia (very cold) include reduced body temperature and confusion.	☐ True	☐ False

Great, you have finished your quiz! What next?

Please take the entire Assessment Section to the 'face to face' practical session and present to your trainer.

NOTES

NOTES

This first aid workbook provides information about first aid protocols, treatments and procedures for specific illnesses and injuries.

It also covers legislation, duty of care and the roles and responsibilities for those providing first aid and how to provide first aid safely.

It is used as 'pre-course' study for your first aid course.

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