9th edition

ABC of First Aid Asthma & Anaphylaxis

BEST SELLER

International Emergency Numbers

Latest Guidelines

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ABC of First Aid Asthma & Anaphylaxis

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This book has been written based on current guidelines and requirements as defined by:

- Australian Resuscitation Council
- New Zealand Resuscitation Council
- European Resuscitation Council
- Epilepsy Association of Tasmania
- Roads and Traffic Authority
- National Heart Foundation of Australia
- Australasian Society of Clinical Immunology & Allergy (ASCIA)
- Asthma Foundation of Queensland
- WorkCover QLD

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The information in this book contains, at the time of printing, the most current resuscitation guidelines. This book is designed to be an information resource and is not a substitute for attending a first aid course conducted by an approved provider. The author of this book accepts no responsibility for any injury or damage that may occur as a result of using this book in first aid management.

How to use this book

ABC of First Aid, Asthma & Anaphylaxis is divided into 7 main colour coded sections:

•Essential First Aid **•Trauma** **•Medical Emergencies** **•Anaphylaxis** **•Asthma**
•Education & Child Care **•General First Aid**

Each subsection shows you step-by-step how to recognise and deal with an emergency situation. Emergencies are recognised by SIGNS & SYMPTOMS which are contained in a **red box.** Displayed in a **green box** is the FIRST AID management of an emergency situation.

☎ means dial your country's emergency number.

A fold out ***World Map*** of international emergency numbers at the back of the book identifies emergency numbers across the world. The ***Emergency Numbers*** page is for writing local, national and international emergency numbers.

Also at the back, there is a ***First Aid Incident Report Form*** and ***Workplace Casualty Report Form*** which can be torn out and used in a first aid incident.

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World Map Inside Back Cover

Emergency Numbers

Unconsciousness

is a state of unrousable, unresponsiveness, where the person is unaware of their surroundings and no purposeful response can be obtained.

NO RESPONSE → **NO Breathing** or Abnormal Breathing → Follow **Basic Life Support Chart**

NO RESPONSE → **Breathing Normally** → Recovery Position, Call ☎, monitor

Causes of an **unresponsive (unconscious), breathing** state:

- A - Alcohol
- E - Epilepsy
- I - Insulin (Diabetes)
- O - Overdose
- U - Uraemia (renal failure)
- T - Trauma (head/spinal)
- I - Infections (meningitis)
- P - Pretending
- S - Stroke

Combinations of different causes may be present in an unconscious casualty eg head injury and diabetes.

NB. The sense of **hearing** is usually the last sense to go, so be careful what you say near an unconscious casualty.

All unconscious casualties must be handled gently and every effort made to avoid any twisting or forward movement of the head and spine.

(A noticeably pregnant, unconscious, breathing woman is best placed on her left side).

The recovery position:

- Maintains a clear airway - allows the tongue to fall forward.
- Facilitates drainage and lessens the risk of inhaling foreign material (eg saliva, blood, food, vomit).
- Permits good observation and access to the airway.
- Avoids pressure on the chest which facilitates breathing.
- Provides a stable position and minimises injury to casualty.

Airway management takes priority over spinal injury

Step 1

- Raise the casualty's furthest arm above the head.
- Place the casualty's nearest arm across the body.
- Bend-up the casualty's nearest leg.
- With one hand on the shoulder and the other on the knee, roll casualty away from you.

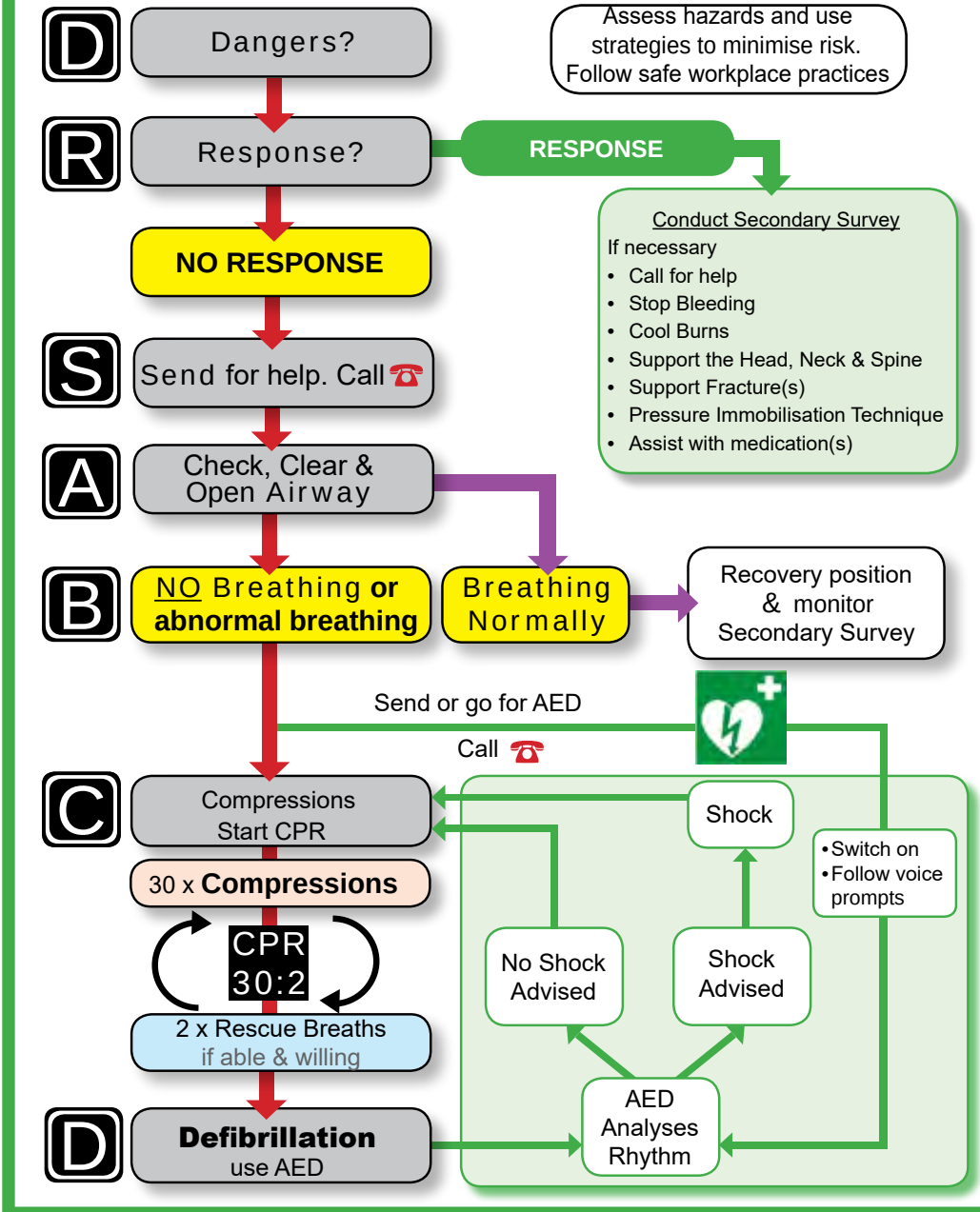
Step 2

- Stabilise the casualty by flexing the bent knee to 90° when resting on the ground.
- Tuck the casualty's hand under their armpit.
- Ensure the casualty's head is resting on their outstretched arm.

Step 3

- Carefully tilt the head slightly backwards and downwards. This facilitates drainage of saliva and/or stomach contents and reduces the risk of inhalation which may cause pneumonia.

Basic Life Support & AED



In an EMERGENCY CALL ☎ or

DRSABCD

Dangers
- Survey Scene
- Remove or Minimise Hazards

Protect yourself - use antiseptics and barrier protection: gloves, mask, goggles.

HAZARDS!
- **Biohazards –** blood, body fluids
- **Chemicals –** spills, fumes, fuel
- **Electricity**
- **On coming traffic**
- **Fire, explosion**
- **Unstable structures**
- **Slippery surfaces**
- **Broken glass**
- **Sharp metal edges**
- **Needle stick**
- **Aggressive behaviour**

Response
•Talk and touch

SPEAK LOUDLY – Don't shout*
"Hello, can you hear me"? "Are you all right?" "Open your eyes". "Squeeze my hands".
SQUEEZE SHOULDERS firmly – Don't shake

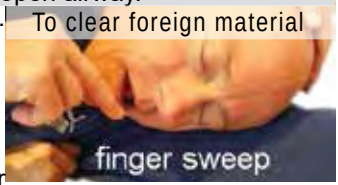
NB. Approach a collapsed casualty with caution, they could be anxious, irrational or aggressive.
Drowning. Assess victim on the back with head and shoulders at the same level. This decreases the likelihood of regurgitation and vomiting. The casualty should ***not*** be routinely rolled onto the side to assess airway and breathing.

Send for help. Call ☎

***To check for Response in infants** (<1yr): Check "grasp" reflex by placing your finger in the baby's palm. Infants lose grasp reflex when unconscious. Unconscious infants are often limp, without muscle tone.

Airway
- Check - for foreign material which could be obstructing the airway.
- Open - use chin lift and backward head tilt to open airway.

- Use **pistol grip** to achieve chin lift. Watch that your knuckle doesn't compress neck and obstruct airway and breathing.
- If foreign material is present, roll casualty onto the side and clear using postural drainage and finger sweep method.



Spinal injury and infants(<1yr): Keep head in a neutral position (i.e. minimise backward head tilt)
- The airway takes precedence over any other injury including a possible spinal injury.
- Promptly roll casualty onto the side to clear the airway if it is obstructed with fluid (eg vomit)

Breathing
- Look - for rise and fall of lower chest/ upper abdomen
- Listen - for breath sounds
- Feel - for movement of chest and escape of air from mouth

Abnormal or NO Breathing?
- If casualty is **unresponsive and not breathing normally** after the airway has been cleared and opened, this indicates **cardiac arrest** and the rescuer should immediately commence chest compressions then rescue breathing (CPR).
- If unwilling or unable to perform rescue breathing, continue with compression only CPR.

NB. In the first few minutes after cardiac arrest, abnormal gasping sounds, sighing or coughing are common, but this is ineffective breathing and CPR should be commenced.

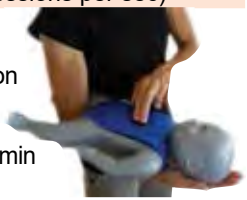
Compressions 30 Chest Compressions : 2 Rescue Breaths = CPR

CPR

30 Compressions

- Depth = 1/3 of chest wall (~ 5 cms)
- Rate = approx 100 - 120/ min (almost 2 compressions per sec)

- Place heel of one hand in centre of casualty's chest (which is the lower half of the sternum)
- Place other hand on top, arms straight and press down on sternum at least 5 cm in adults
- Allow complete recoil of chest after each compression
- Keep compressions rhythmical at approx rate 100 - 120/min
- Use 1 or 2 hands in children (use 2 fingers for infants)



2 Rescue Breaths (RB)

- 2 breaths over 2 secs

- **Take a breath.**
- **Close casualty's nostrils** (pinch with fingers).
- **Mouth to mouth** (good seal).
- **Blow** to inflate lungs.
- Turn head after each RB.
- **Listen** and **feel** for air exhaled from mouth.
- Avoid inhaling re-expired air.
- Inflate until chest starts to rise.
- Over-inflation can force air into stomach causing regurgitation.
- Infants – perform mouth to mouth/nose RB and inflate with puff of air from cheeks.
- Use resuscitation mask or barrier protection if possible
- Obviously pregnant - padding under right hip, if possible.
- If unwilling to give breaths - give **continuous** chest compressions at rate of approx 100 - 120 /min.
- Give oxygen if avail & trained

CPR 30:2

- Cardio Pulmonary Resuscitation • Rate = 5 cycles every 2 mins
- Combines 30 Compressions with 2 Rescue Breaths (30:2) = 1 cycle

Same ratio for infant, child, adult

- Change rescuers every 2 mins to reduce fatigue.
- Do compression-only CPR, if unwilling or unable to give rescue breaths (RB).
- Continue CPR until casualty responds or breathing returns. **Do not stop CPR to check for breathing.**

Stop CPR when:

- Casualty responds or begins breathing normally
- Exhaustion – you can't continue.
- Health professional arrives and takes over.
- Health professional directs that CPR be ceased

Defibrillation

An AED (Automated External Defibrillator) delivers electric shock to reverse abnormal heart rhythms. Not all heart rhythms are reversible

Placement of pads

NB. No rescuer has been harmed while using an AED in the wet

- Use AED when casualty is unconscious & not breathing normally.
- If 2 rescuers: continue CPR while 1 rescuer organises AED pads:
- Switch on AED & follow voice prompts of the AED.
- Place pads on bare, dry chest (wipe dry), remove clothing, jewellery, medication patches. Place 8 cm from implanted device (pace-maker), avoid piercings. Remove excessive chest hair.
- **No contact.** DO NOT touch casualty during analysis or shock.
- **No conduction.** DO NOT have casualty in contact with conductive material eg metal floor, puddles of water.
- **No explosion.** DO NOT use in explosive environment.

Under 8 years. Ideally, use paediatric pads and an AED with a paediatric mode. If the AED does not have a paediatric mode or paediatric pads then use adult AED pads. Pads must not touch each other, if necessary place one pad on the front and the other on the back of chest. Check manufactures instructions. Choose appropriate AEDs for child care.

An infant is under 12 months: A child is 1-8 years: An adult is over 8 years

Chain of survival: is the key to improving the survival rate from cardiac arrest. Time is the essence. The **4 steps** required are: **1)** Call ☎ Early **2)** Begin CPR immediately **3)** Early Defibrillation **4)** Advanced cardiac life support by paramedics

Choking

Inhalation of a foreign body can cause partial or complete airway obstruction.

Partial Airway Obstruction (Effective cough):

SIGNS & SYMPTOMS
- Coughing
- Wheezing
- Difficulty breathing
- Noisy breathing
- Cyanosis (blue skin colour)

FIRST AID
- Encourage casualty to keep coughing
- Reassurance
- DO NOT deliver back-blows if cough is effective
- Call ☎ If blockage doesn't clear

Complete Airway Obstruction (Ineffective cough):

SIGNS & SYMPTOMS
- Unable to breathe, speak or cough
- Agitated/ distressed
- Grips the throat
- Cyanosis (blue)
- Rapid loss of consciousness

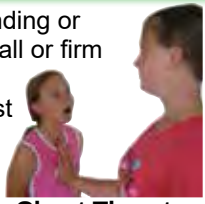
FIRST AID
- Deliver up to 5 back-blows.
- Check and clear mouth after each blow.
- Deliver up to 5 chest thrusts.
- Check and clear mouth after each blow.
- Alternate back blows and chest thrusts if obstruction not relieved.
- Call ☎.
- If unconscious, commence CPR (pg 4).

DO NOT apply abdominal pressure – may cause internal injury.

Back blows are delivered standing or lying using the heel of the hand between the shoulder blades. Lay an **infant** face down across the lap. If after 5 back blows the airway is still obstructed, use chest thrusts. *Check airway after each back blow. The aim is to relieve the obstruction with each blow rather than to give all five blows.*

An obstruction in the airway will cause resistance when giving **Rescue Breaths**. A foreign body in the airway can be removed later, if it is blown further into the airways during CPR.

Chest thrusts are delivered standing or lying using one or two hands- a wall or firm surface is required. Chest thrusts are sharper and slower than chest compressions (CPR). Check airway after each chest thrust.



Chest Thrusts

Back blows on infant

Positional Asphyxia

Is where an airway is obstructed due to body position. If it is necessary for security, law enforcement officers or carers to physically restrain a violent person, the restrained person must be continuously monitored.

To prevent positional asphyxia
- Avoid face-down restraint unless absolutely necessary and reposition as soon as possible.
- **Never** sit or lean on the abdomen.
- Identify persons at risk: **Psychosis and Drug** over dose can lead to cardiac rhythm disturbances and fatal breathing difficulties. **Obesity** can make it difficult to breathe in face-down position. **Physically disabled** may have breathing difficulty in some positions.
- Pay close attention to a person **saying they can't breathe**, gurgling or gasping sounds, lips and face turning blue, increased resistance or **sudden tranquility.**

Drowning

Drowning is the process of experiencing respiratory impairment from immersion in liquid. Interruption of oxygen to the brain is the most important consequence of drowning so early rescue and resuscitation are the major factors in survival. Drowning can be fatal or non-fatal.

SIGNS & SYMPTOMS

- Coughing • Chest pain • Frothy sputum
- Clenched teeth • Shortness of breath
- Blue lips and tongue • Unconscious
- Irregular or no breathing

- **DO NOT attempt to save a drowning casualty beyond your swimming ability.**
- **Remove** casualty from water as soon as possible.
- Only begin **Rescue Breathing in water** if trained to do so (requires a floatation aid) and immediate exit is impossible.
- **Cardiac compressions in water** are both difficult and hazardous and should not be attempted.

A Drowning Victim

Vomiting and regurgitation often occur during resuscitation of a drowned casualty. After rolling casualty onto their side to clear the airway, reassess condition. If not breathing, promptly roll the casualty on to their back and continue with resuscitation. Avoid delays or interruptions to CPR. **Do not attempt to expel water** or frothy fluid that re-accumulates in upper airway.

FIRST AID

On land or boat:

- Call ☎
- Assess the casualty **on the back** with head and body at same level.
- Do ***NOT*** routinely roll the casualty onto the side to assess airway and breathing.
- Commence **CPR** if required (pg 4)
- Roll into recovery position if **vomiting** or **regurgitation** occurs.
- DO NOT attempt to empty **distended stomach** by external compression.
- Treat for **Hypothermi**a (pg 29) - often associated with immersion.
- Give **oxygen** if available and trained.
- All immersion casualties, **even if seemingly minor**, must be assessed in hospital as complications often follow.

Rescuing a Drowning Victim

- **If conscious:** throw a **buoyant** aid (life jacket, surf board) or drag from water using an umbrella, rope, towel, stick.
- **If unconscious:** Turn casualty **face up** and remove from water.
- Consider possibility of **spinal injury** – remove from water gently, maintaining spinal alignment as much as possible.

Soft Tissue Injury & Fracture

Sprain: Over-extension of a joint with stretching and tearing of ligaments.
Strain: Over-stretching with tearing of muscle tissues or tendon fibres.
} Soft Tissue Injury
Dislocation: Displacement of bone ends in a joint.

Fracture (#): Broken bone, classified as:

Closed: Fractured bone doesn't penetrate skin.
Open: Fracture is exposed through open wound or penetrates skin.
Complicated: Vital organ, major nerve or blood vessel is damaged by a broken bone.

The **Signs & Symptoms** and **First Aid** for a fracture and soft tissue injury are very similar.

SIGNS & SYMPTOMS

- Pain
- Tenderness
- Snap or pop at time of injury
- Restricted movement
- Discolouration
- Swelling
- Deformity*

* Suggests fracture or dislocation

FIRST AID

- Control external bleeding or cover wound (pg <?>)
- Remove rings from fingers – swelling likely
- Support or Immobilise + **R.I.C.E.R.**
- Medical Assistance: X-rays are the only sure way of diagnosing the type of injury.
- Call ☎ if: **Deformity** as blood vessels and nerves can be damaged.
  Open Fracture: Risk of blood loss and infection.
  Breathing difficulty
- Monitor Vital Signs

Fracture Management:

The main aim of fracture treatment is to *support* or *immobilise* an injured part which:

• minimises pain • prevents further damage • minimises bleeding and • prevents a closed fracture becoming an open fracture.

Support: • Leave injured part as found and pack around to give support.

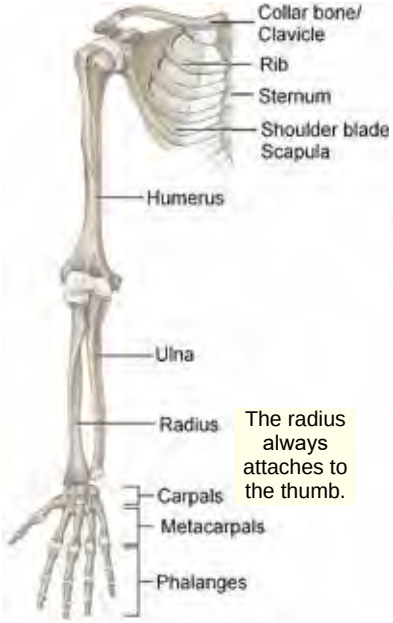
Immobilise:
- Use **Splint, Sling** or **bandage** to prevent movement.
- Stabilise joint above and below fracture site.
- Apply triangular or broad bandages above and below fracture site.
- Check circulation every 15 mins (pg 11).
- **DO NOT** elevate a suspected fracture until it has been immobilised.

Note: If medical help is close by and the casualty doesn't need to be moved, a splint may not be required to immobilise a fracture. However, where a casualty needs to be moved, especially over rough terrain or long distances a splint will help to immobilise a fracture.

Soft Tissue Management: Do No HARM No Heat: No Alcohol: No Running: No Massage.
R.I.C.E.R. Method used to treat soft tissue injuries (sprains/ strains) and fractures.
Rest: Rest casualty and injured part; this prevents further damage and reduces bleeding.
Ice: Reduces pain, fluid and swelling by constricting blood vessels. Apply wrapped ice pack for 10 - 20 mins – do not place ice directly on skin. Ice pack or frozen peas can be placed over a bandage. Continue to cool injury three times/day for 2-3 days after the injury.
Compression: Apply a firm supporting bandage to injured part. This restricts movement of injured part and reduces bleeding and swelling.
Elevation: Raise injured area above the level of the heart if possible. This slows the flow of blood and reduces swelling.
Refer: Refer casualty to a doctor, in case there is other injury eg fracture. **Record** incident.

- Degree of pain is not a good indicator of injury type since pain tolerance varies in individuals.
- Never manipulate a dislocation - there may be an associated fracture.
- When in doubt, always treat an injury as a fracture.
- Check circulation (pg 11) after immobilisation ie after bandaging, splinting, sling.
- May need to slowly adjust position of limb if no circulation is present.

Upper Limb Injury



The radius always attaches to the thumb.

Arm Slings: Use a triangular bandage or improvise.

Slings and splints can assist with support and immobilisation. If casualty is at rest and comfortable these may not be necessary.

Improvise:
By using a belt or buttons on shirt

Rigid Splint: Rolled up newspaper, placed **under** the fracture, tied either end with triangular bandages.

Finger Splints: Immobilisation reduces pain. After splinting, apply an elevation sling to minimise swelling.

Fractured humerus: Notice deformity →

Pain in:	Could be:	Management:
Shoulder	• Fractured clavicle • Dislocated shoulder • Fractured upper humerus • Sprain/ strain	• Allow casualty to adopt position of comfort. • Apply sling which best suits casualty. • Keep hand higher than elbow to reduce swelling • If unsure whether injury is a fracture or soft tissue injury, treat as for fracture (pg 8)
Upper Arm	• Fractured mid-humerus • Sprain/ strain	
Fore Arm/ Wrist	• Fractured radius/ ulna • Sprain/ strain • Fractured carpal bone	
Hand	• Fractured/ dislocated metacarpal • Fractured/ dislocated phalange • Sprain/ strain	

Lower Limb Injury

Pelvic Injury:

SIGNS & SYMPTOMS

- Pain in hip or groin region
- Pain worse on movement
- Inability to walk
- Shock (pg 14)

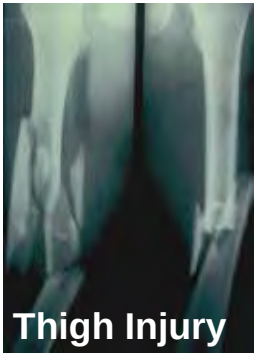
Consider internal bleeding from bladder, uterus, bowel damage.

FIRST AID

- Call ☎
- Reassure casualty
- Control any external bleeding.
- Place casualty in position of comfort.
- Immobilise and provide support with padding between legs and on either side of hips (eg blanket, towel, pillow).
- 'Figure-of-eight' bandage around ankles and feet may assist with immobilisation.
- Apply broad bandage above knees.
- Don't attempt to move casualty unless there is an urgent need to do so
- Discourage attempts to urinate.
- Maintain body temperature.
- Monitor vital signs

The first aid **aim** is to prevent further injury by **immobilizing the fracture**. The casualty will usually support and immobilize the injury in the most comfortable position and a splint will not usually be required, especially if an ambulance is available. Do NOT move, or align fractures unless it is necessary to maintain circulation. For suspected fractured pelvis always consider spinal injury. Do not move the casualty unless necessary.

Left leg appears shorter and is rotated outwards.
Notice swelling over hip due to internal bleeding. This is the typical position of the leg with a fractured hip (fractured neck of femur) and is common in the elderly after a minor fall.



A 1.5 litre blood loss can result from a closed fracture of the femur. In this case a 3 litre blood loss could result in shock (pg <?>) and death.

This type of injury is common in road traffic accidents.

R.I.C.E.R. for a sprained ankle:
Rest: Casualty doesn't move ankle
Ice: Cool injured area
Compression: Use a crepe bandage
Elevation: Place foot higher than hip
Refer and **Record**

R.I.C.E.R.
Support knee in position of comfort.
Do not try to straighten knee if painful.

Lower Limb Injury

Immobilising Lower limb:

- A body splint is an effective way to immobilise lower limb fractures.
- The key to immobilising leg fractures is a figure of 8 bandage around the feet.
- Place padding in natural hollows between legs.
- Stabilise joints above and below fracture site.
- Position all bandages before tying off.
- Apply broad bandages above and below injured area.
- Tie bandages off on uninjured side of body.
- If using a **rigid splint** (eg stick) ensure splint doesn't extend further than length of legs.
- Position splints under the injured limb to provide support.
- Pad over splint to make more comfortable.
- **Check circulation**

SIGNS AND SYMPTOMS
that a bandage is too tight:
• Pain • Numbness • Cold to touch • Tingling • Pale or discoloured • Pulse weak/absent below injury

Bandaging and splints may be required if the casualty needs to be transported. Use triangular bandages, broad bandages, belts, clothing or sheets to tie legs together. Tie-off on uninjured leg, above and below fracture site.

Splints can be classified as:

- **Body Splint:** Uses uninjured, adjoining body part to immobilise an injury. Lower limbs, fingers and toes are commonly strapped together as body splints.
- **Soft Splint:** Folded blankets, towels, pillows.
- **Rigid Splint:** Boards, sticks, metal strips, folded magazines and newspapers.

Checking Circulation:

- Check skin colour below injury - if pale or discoloured, there may be impaired circulation.
- Assess skin temperature by gently placing hand below level of injury. Compare to other side. If colder, there may be impaired circulation.
- Squeeze fingernail until nail turns white. Colour should return within a few seconds.
- Compare pulse below injury with other side - If weaker or absent, circulation may be impaired.

Pain in:	Could be:	Management:
Hip/groin	• Fractured Pelvis • Fractured neck of femur • Dislocated head of femur • Sprain/strain	• Allow casualty to adopt position of comfort. • If unsure whether injury is a fracture or soft tissue injury, treat as for fracture (pg 8). • Without causing pain, elevate limb, after immobilisation to reduce swelling. • Minimise movement to avoid further injury. • Check circulation after immobilisation (above).
Thigh	• Fractured femur • Strain: front of thigh (quadriceps) • Strain: back (hamstrings)	
Knee	• Fractured patella • Dislocated patella • Cartilage tear • Sprain	
Lower Leg/ Ankle	• Fractured tibia • Fractured fibula • Dislocation • Sprain/ strain	
Foot	• Fractured tarsal/metatarsal/phalange • Dislocation • Sprain/ strain	

Bleeding (Haemorrhage) can be external and obvious or internal and unseen.

Bleeding is classified acoording to the type of blood vessel damaged:
Arterial - bright red; spurting. **Venous** - dark red; flowing.
Capillary - bright red; oozing.

Types of wounds associated with bleeding are: • Abrasion • Incision • Laceration • Puncture • Embedded object • Tear • Amputation.

Direct Pressure

External Bleeding:

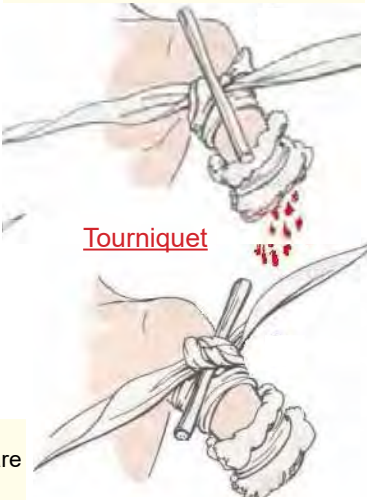
The aim is to control blood loss. Sustained pressure on or near the wound usually controls bleeding.

FIRST AID

- Check for Dangers to self, bystanders & casualty.
- Use standard precautions (eg gloves, glasses) if readily available.
- Check for embedded objects (pg 13).
- Apply sufficient direct or indirect pressure on or near the wound as appropriate to stop bleeding. Maintain pressure **over the wound** using hands or pad (sterile dressing, tea towel or handkerchief).
- Bandage firmly to hold pressure pad in place.
- Lie the person down if bleeding from the lower limb or severe bleeding.
- **If bleeding is not controlled** - apply another pad and a tighter bandage. It may be necessary to remove the pads to locate a bleeding point. Aim to press over a small area to achieve greater pressure over the bleeding point. (*For this reason an unsuccessful pressure dressing may be removed to allow a more direct pressure pad and dressing on the bleeding location).*
- **If major bleeding continues** - use a haemostatic dressing (pg 13) if available and trained in its use or use a tourniquet (pg 12) above the bleeding point if trained in its use.
- Elevation is not recommended: there is no evidence it reduces bleeding and it could increase pain or injury.
- To control bleeding: immobilise the part, restrict movement, advise casualty to remain at total rest.
- Call ☎
- Reassure casualty.
- Monitor vital signs at frequent intervals. .
- Give oxygen if available and trained to do so.
- DO NOT give casualty food, alcohol, medication.

TOURNIQUET: Used to control life-threatening bleeding that can't be controlled with direct pressure (eg traumatic amputation of a limb).

- Use as a **LAST RESORT.**
- Use a wide bandage (>5 cm).
- Apply **5 cm** above bleeding point.
- Tighten until bleeding stops.
- **Note the time of application**; write time of application on casualty, advise paramedics.
- DO NOT cover tourniquet with any bandage or clothing.
- DO NOT apply tourniquet over a joint or wound.
- DO NOT remove tourniquet until casualty receives specialist care.
- Call ☎



Tourniquet

Haemostatic Dressings: work by assisting the natural clotting process. There are different types of haemostatic dressings; some are cloth dressings which are impregnated with a clotting agent, others are in granular form to be sprinkled on a wound.

Internal Bleeding: May be difficult to recognise but suspect internal bleeding where there are signs and symptoms of shock (pg 14).

Internal bleeding may be consealed or obvious →

Suspect internal bleeding in the following:

- **Blunt force -** eg road traffic accident or fall from a height.
- **Penetrating injury.**
- **History of stomach ulcers.**
- **Early pregnancy** - ectopic pregnancy.
- **Pain, tenderness or swelling** over affected area.

Internal bleeding requires urgent treatment call ☎

Concealed internal bleeding:
Spleen, liver, pancreas, brain (no bleeding visible).

Obvious internal bleeding:
Lungs – Cough up frothy pink sputum.
Stomach – Vomit brown coffee grounds or red blood.
Kidneys – Blood stained urine.
Bowels – Rectal bleeding: bright red or black and "tarry".
Uterus/ Bladder - Bleeding from vagina or penis.

Embedded Object: eg knife, glass, stick

FIRST AID

- DO NOT remove the object - it could be plugging the wound.
- Build up padding around or above and below the object.
- Apply sustained pressure over the pad (indirect pressure).
- Bandage firmly over the pad.
- DO NOT apply pressure over the object.
- DO NOT shorten object unless its size is unmanageable.
- Immobilise object and restrict movement of the limb.
- Advise casualty to remain at rest.
- Call ☎

Nose bleed

FIRST AID

- Pinch soft part of nose just below the bone.
- Have casualty seated and leaning forward.
- Ask casualty to breathe through their mouth.
- Maintain pressure and posture for at least 10 mins (up to 20mins may be required after exercise, hot weather or if casualty has high blood pressure or takes aspirin or warfarin).
- If bleeding continues >20 mins - seek medical assistance.
- Apply cold compress to forehead and neck.
- Advise casualty not to blow or pick their nose for a few hours.

Amputation Manage amputated limb as for major external bleeding (pg 12).

Amputation of a limb may require a **tourniquet** (pg 12) to control life-threatening bleeding.

- DO NOT wash or soak amputated part in water or any other liquid.
- Wrap the part in gauze or a clean handkerchief and place in watertight plastic bag.
- Place sealed bag or container in cold water which has ice added to it
- (The part should not be in direct contact with ice).
- Label the bag and send to hospital with the casualty.

Shock

Shock is a loss of effective blood circulation resulting in tissue/ organ damage and is life threatening.

CAUSES

Loss of blood volume: Bleeding or fluid loss

Loss of blood pressure: Heart/ pump failure or abnormal blood vessel dilatation.

- Internal or external bleeding
- Major or multiple fractures

} bleeding

- Severe burns or scalds
- Severe diarrhoea and vomiting
- Heat stroke

} fluid loss

- Heart attack

- pump failure

- Severe infection
- Anaphylaxis (severe allergy)
- Brain/ spinal cord injury

} abnormal dilatation of blood vessels

The total blood volume in the body is about **6 litres.** Blood loss of **>1 litre** (20%) may result in shock. Rapid blood loss leads to more severe shock.

SIGNS & SYMPTOMS

- Pale, cool, clammy skin.
- Thirst.
- Feeling cold.
- Rapid, shallow breathing.
- Nausea/ vomiting.
- Confusion.
- Reduced level of consciousness.
- Rapid, weak pulse.
- Ridged, painful abdomen (from internal abdominal bleeding).

NB. In early stages of blood loss, children may have a normal pulse rate, but pallor is the warning sign.

FIRST AID

- Control external bleeding (pg <?>).
- Call ☎
- Place casualty in position of comfort, ideally lying down.
- Administer oxygen if available.
- Maintain body temperature.
- Reassure.
- Monitor vital signs
- Give nothing by mouth (may cause vomiting and/ or delay surgery).

If Unconscious:

DRSABCD (pg 3)

Crush Injury

A heavy, crushing force to part of the body caused by fallen debris, vehicle entrapment or by prolonged pressure to a part of the body due to their own body weight in an immobile victim (eg stroke).

FIRST AID

- DRSABCD - ensure your own safety.
- Call ☎
- If safe - remove crushing force as soon as possible.
- Control external bleeding (pg <?>).
- DO NOT use a tourniquet (pg <?>) for a crush injury.
- Manage other injuries.
- Comfort and reassure.
- Monitor vital signs

NB - Casualty may not complain of pain and there may be no sign of injury. Continue to monitor the casualty's condition as they may deteriorate quickly. All victims of crush injury should be taken to hospital for immediate investigation.

Crush Injury Syndrome:

- Is a complication of crush injury usually involving a thigh or pelvis (ie not a hand or foot).
- Toxins released from damaged tissue may cause complications but the risk of sudden death following removal of a crushing force is extremely small.
- It is recommended to remove the crushing force as soon as safe and possible.

Burns

Burns may result from: **heat** (flame, scald, direct contact), **cold, friction, chemical** (acid, alkali), **electrical** or **radiation** (sunburn, welders arc).

FIRST AID

Aim: Stop burning, Cool & Cover burn.

- Check for DRSABCD.
- Cool area with cool flowing water - 20 mins.
- Remove rings, watches, jewellery or other constricting items from affected area.
- Remove wet non-adherent clothes because they retain heat.
- Cut off contaminated clothing.
- Cover burnt area with a loose light , non-stick dressing eg sheet, plastic cling wrap. (no cling wrap on chemical burns).
- Cover unburnt areas and keep rest of victim warm to avoid hypothermia (pg <?>).
- If feasible elevate burnt limbs to reduce swelling.

- DO NOT use ice water - causes more damage.
- DO NOT break blisters.
- DO NOT use lotions, ointments, creams or powders (except hydrogel(non-chemical)).
- DO NOT peel off adherent clothing or burning substances.
- DO NOT use "fluffy" dressings to cover burn (such as towels, tissues, cotton wool).

Seek medical help for:

- Chemical burns
- Electrical burns
- Inhalation burns
- Full thickness burn
- Very young or old: or pre-existing condition.
- Burns to hands, face, feet, major joints, perineum or genital area.
- Burn size > casualty's palm.
- Full thickness burns >5% TBSA. (Total Body Surface Area)
- Burns encircling limbs or chest.
- Burns with associated trauma.

Extensive burns may result in shock from fluid loss (pg <?>)

Superficial Burn
Reddening (like sunburn)
Painful

Partial Thickness Burn
Red and Blistering
Very Painful

Full Thickness Burn
White or blackened
Not painful

Heat/ Contact/ Flame: • STOP, DROP, COVER, ROLL the victim to put out flames • Smother flames with a blanket, coat or rug and lie casualty on the ground • Move to safety • Call ☎

Inhalation: (See also pg <?>, Poisons) • Inhalation of flames, heated air or fumes can cause severe damage to the airways resulting in swelling and possible airway obstruction • DO NOT enter a burning or toxic atmosphere without appropriate protection • Remove to a safe, ventilated area ASAP • Look for evidence of inhalation injury around nose or face • Coughing or hoarseness may indicate exposure to irritant gases such as ammonia, formaldehyde, chlorine, nitrogen dioxide and phosgene • Give oxygen if available and trained in its use • Call ☎

Chemical: Aim is to dilute chemical • Move to safety • Brush powdered chemicals from the skin before flushing with water **for 1 hour** or until stinging stops • **Eyes**: hold eye/s open, flush for as long as tolerated, away from good eye. Flushing of eyes has priority over transport • Don't neutralise acids or alkalis: it generates heat • Refer to SDS* and /or Poison Information Centre • **Don't use cling wrap or hydrogel on chemical burns** • Call ☎

Radiation: Causes include sunburn, welding, laser, microwave • Cover to prevent infection.

Electrical: • Isolate/ turn off power without touching victim • Cool with running water for 20 mins, if safe to do so • Often associated with other injuries ("Electric Shock" pg <?>) • Call ☎

* SDS = Safety Data Sheet. These sheets provide advice for specific treatment.

Electric Shock

Electric shock may cause: • **Respiratory Arrest** • **Cardiac Arrest** • **Burns**

FIRST AID
- ENSURE SAFETY OF YOURSELF AND BYSTANDERS.
- Call ☎
- Turn off power at plug point (or if not possible at fuse box or main circuit breaker).
- Move casualty from electrical supply.
- Commence CPR if required (pg 4).
- Apply first aid to burns (pg 15).

DO NOT touch casualty's skin before electrical source is disconnected.
BEWARE: Water on floor and **metal** materials can conduct electricity from casualty to you.

- When **POWER LINES** are in contact with a vehicle or a person, there should be no attempt at removal or resuscitation of the casualty until the situation is declared safe by electrical authorities.
- Remain at least **10 m** from electrified material (car body, pool of water, cable).
- You can do nothing for a casualty within the danger zone! Protect yourself and others.

Multiple Casualties/ Prioritising

You may be faced with the dilemma of two or more casualties needing your care. In making a decision who to treat first, remember the goal is for the **greatest good for the greatest number of people.** In all cases remember the principles of safety to yourself, bystanders and casualty.

PRIORITIES: 1= top priority, 5 = lowest priority

1
ALWAYS manage an UNCONSCIOUS casualty first. Opening the airway and rolling the casualty into the recovery position may be all that's required initially.

2
- Severe bleeding (> 1 litre)
- Crush injury
- Shock
- Open chest wound
- Open abdominal wound
- Open fractures
- Burns to 30% of body
- Head injury, showing deterioration

3
- Moderate bleeding (< 1 litre)
- Spinal injury
- Multiple fractures
- Burns (10-30% of body)

4
- "Walking Wounded"

5
- Obvious death – decapitation, massive head or torso injuries

Remember: A casualty is always in a changing, non-static condition. This is especially important in head and abdominal injuries in which deterioration can occur.

Chest

Major chest injuries include **fractured rib**, **flail chest** (multiple rib fractures, producing a floating segment of ribs), and **sucking chest wound.** A fractured rib or penetrating injury may puncture the lung.

Fractured Rib/ Flail Chest:

SIGNS & SYMPTOMS

- Holding chest
- Pain at site
- Pain when breathing
- Rapid, shallow breathing
- Bruising
- Tenderness
- Blue lips (flail chest or punctured lung)
- Flail Chest –section of chest wall moves in opposite direction during breathing.
- Onset of shock (pg 14)

NB. DO NOT apply a tight compressive bandage around the chest as it may restrict breathing.

FIRST AID

- Position casualty in position of comfort; half-sitting, leaning toward injured side, if other injuries permit.
- Encourage casualty to breathe with short breaths.
- Place padding over injured area.
- Bandage and sling may help to immobilise the injury.
- If bandages increase discomfort, loosen or remove them.
- Apply a 'Collar & Cuff' sling to arm on injured side.
- Call ☎ for an ambulance
- Monitor for internal bleeding/ shock (pg 13, 14)
- **If Unconscious:** Recovery position, injured side down.

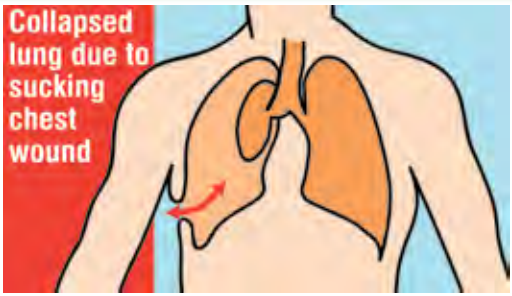
Sucking Chest Wound:

SIGNS & SYMPTOMS

- Pain
- Breathing difficulty
- Sucking sound over wound when casualty breathes.
- Bloodstained bubbles around wound when casualty breathes.
- Coughing up bloodstained frothy sputum.
- Onset of shock (pg 14).

FIRST AID

- Position casualty in position of comfort; half-sitting, leaning toward injured side.
- If the object is still in place, stabilise with padding around the wound.
- If the wound is open, cover with plastic or non-stick pad taped on 3 sides: This allows air to escape from pleural cavity and prevents lung collapse (pneumothorax).
- Call ☎ for an ambulance .
- Monitor for internal bleeding/ shock (pg 13, 14).



Abdomen

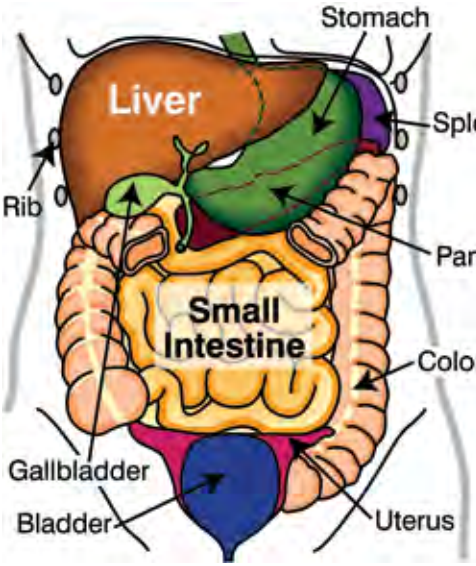
An injury to the abdomen can be an open or closed wound. Even with a closed wound the rupture of an organ can cause serious **internal bleeding** (pg 13, 14), which results in **shock** (pg 1314). With an open injury, abdominal organs sometimes protrude through the wound.

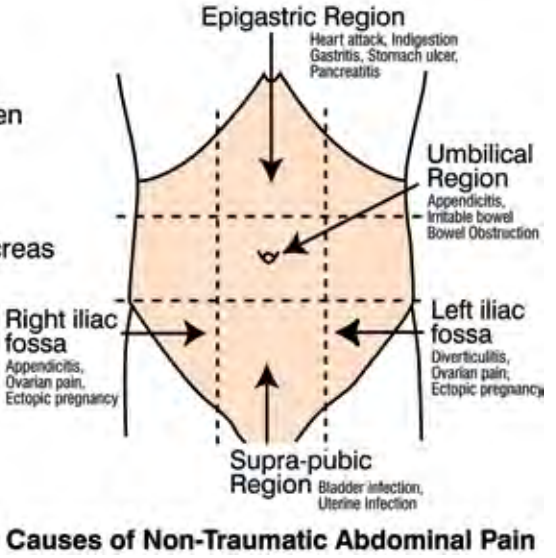
FIRST AID

- Call ☎
- Place casualty on their back with pillow **under head and shoulders** and support under **bent knees.**
- **If unconscious,** place in recovery position, legs elevated if possible.
- Cover exposed bowel with moist non-stick dressing, plastic cling wrap or aluminium foil.
- Secure with surgical tape or bandage (not tightly).
- Rest and reassure.
- Monitor vital signs.

- DO NOT push bowel back into abdominal cavity.
- DO NOT apply direct pressure to the wound.
- DO NOT touch bowel with your fingers (may cause spasm).
- DO NOT give food or drink (this may delay surgery for wound repair).

Plastic cling wrap has been placed over an open abdominal wound and secured with surgical tape.





Causes of Non-Traumatic Abdominal Pain

Eye

Types of eye injuries:**•Burns •Foreign bodies •Penetrating injury •Direct blow**

Burns:

Chemical - acids, caustic soda, lime
UV - welder's flash, snow blindness
(the eyes are red and feel gritty hours later)
Heat - flames or radiant heat

Contact Lenses: • DO NOT remove if the surface of eye is badly damaged • Casualty should remove own lenses • Lenses may initially protect the eye but if a chemical or foreign body tracks under the lens, severe injury may occur.

FIRST AID

- IRRIGATE with cool running water or sterile eye (saline) solution for 20 -30 mins.
- Flush from the inside to the outside of eye.
- Irrigate under the eyelids.
- Lightly pad affected eye(s).
- Seek urgent medical assistance.

- **If chemical burn**, DO NOT neutralize with other chemicals as this can create heat.

Foreign body:

Grit, dust, metal particles, insects, eyelashes

FIRST AID

- Gently irrigate eye to wash out object – use sterile eye (saline) solution or gentle water pressure from hose/ tap.
- If this fails, and the particle is on white of eye or eyelid, gently lift particle off using a moistened cotton bud or the corner of a clean handkerchief.
  (DO NOT attempt this if particle is on coloured part of eye – irrigate only)
- If still unsuccessful, cover the eye with a clean pad ensuring no pressure is placed over injured eye.
- Seek medical aid.
- DO NOT allow casualty to rub eye.

Penetrating Injury:

FIRST AID

- Lay the casualty flat
- Reassure
- Call ☎
- Aim is to prevent further damage
- Position padding to immobilise the object.
- Protect the area to avoid further damage
- Advise casualty to avoid moving unaffected eye, because this will cause movement of injured eye.
- Cover the unaffected eye, but remove if casualty becomes anxious.
- DO NOT remove embedded object.
- DO NOT apply pressure over the object.

Direct Blow:

Any direct blow to the eye such as a fist or squash ball can cause fracture of the eye socket or retinal detachment.

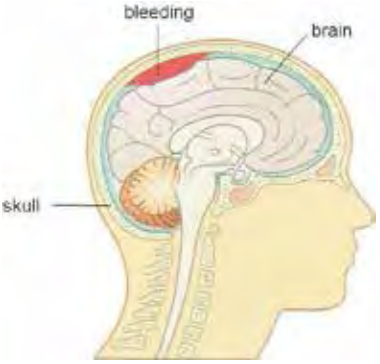
FIRST AID

• Rest and Reassure • Place padding over eye • Secure with tape or bandage
• Ask casualty to limit eye movement • Seek urgent medical aid

Head Injury

Possible causes of head injury include: falls, assaults, motor vehicle crashes, sporting injuries and penetrating injuries. Brain injury may also be present as well as external head injury.

- A victim may have a significant head injury without losing consciousness or losing memory (amnesia).
- A brain injury **may exist without external signs of injury to the head or face**. Serious problems may not be obvious **for several hours** after the initial injury.
- Loss of consciousness, memory loss or external signs of injury should not be used to define the severity of a head injury or to guide management.




Unequal pupils

SIGNS & SYMPTOMS

- Headache or giddiness
- Nausea or vomiting
- Drowsy or irritable
- Slurred speech
- Blurred vision
- Confused or disorientated.
- Loss of memory
- Swelling and bruising around eyes.
- Bleeding into corner of eyes.
- Bruising behind ears.
- Straw coloured fluid or bleeding from nose or ear.
- Loss of power in limbs.
- Loss of co-ordination.
- Seizure
- Unequal pupils
- Loses consciousness, even briefly.

A brain injury should be suspected if the casualty reports a head injury or injury is witnessed; has signs of injury to head or face (eg bruising or bleeding), or is confused or unconscious.

FIRST AID

Check **DRSABCD** (pg <?>)

Conscious:

If there has been a loss of consciousness, or altered consciousness at any time, **no matter how brief** call ☎

- Protect the neck while maintaining airway.
- Reassure, especially if confused.
- Control significant bleeding with direct pressure if possible (pg <?>).
- DO NOT give aspirin for headache.
- Prepare for possible vomit - locate bowl, towel
- Advise to be assessed by a health care professional even if no loss of consciousness.

Unconscious:

- Recovery position with head & neck support.
- Call ☎
- Monitor vital signs frequently
- Control bleeding and cover wounds.
- Support/stabilise head and neck.
- Keep warm with a blanket.

All victims who appear to have suffered a head injury (including a minor head injury) should be assessed by a health care professional before continuing with sport or other activity. The serious consequences of not recognising concussion in the first aid environment warrants advising all victims who have sustained a head injury, regardless of severity, to seek assessment by an health care professional or at a hospital.

Remember: AIRWAY management takes priority over ALL injuries, including spine.

Spinal Injury

SIGNS & SYMPTOMS

- Head or neck in abnormal position.
- Associated head injury.
- Altered conscious state.
- Breathing difficulties.
- Shock (pg <?>).
- Altered muscle tone: flaccid or stiff.
- Unable to move legs or arms.
- Loss of bladder or bowel control.
- Uncontrolled penile erection.
- Pain in injured region.
- Tingling, numbness in limbs or area below injury.
- Nausea.
- Headache or dizziness.
- Altered or absent skin sensation.

QUICK CHECK

- Can you wriggle your fingers and toes?
- Can you move your arms and legs?
- Do you have tingling anywhere?
- Can you feel me touch your hands/ feet?

Suspect spinal injury with all trauma: incidents with car, motor bike or bicycle as occupant or pedestrian, diving, falls greater than from standing height, minor falls in the elderly, significant blow to head, severe penetrating wound (eg gunshot) and sports injuries (eg rugby, fall from horse)

The risk of worsening the spinal injury is probably less than previously thought, yet caution must be taken when moving a victim with a suspected spinal injury

The priorities for spinal cord injury: **Call ☎, manage airway, minimise spinal movement.**

FIRST AID

- Call ☎
- Advise casualty to remain still, but do not restrain if uncooperative. Muscle spasm may splint injury.
- If necessary to move from danger support injured area: minimise spinal movement in any direction. Ideally, only move by those trained.
- Reassure casualty.
- Maintain body temperature.

Conscious Casualty:
Support the head and neck in a conscious casualty with neck pain. Do not remove helmet and ask casualty to remain still.

Unconscious casualty:
Turn casualty onto their side, without twisting. Aim to maintain alignment of head & neck with torso during the turn & afterwards. Maintain open airway: use jaw thrust and chin lift, avoid head tilt.

Note: Rescuer at head takes control. Give clear directions. eg • Ready to roll. • On my count roll. • 3-2-1 Roll.

Unconscious: Any person found unconscious is potentially spinal injured until proven otherwise - turn casualty onto their side and maintain an open airway.
REMEMBER, airway management takes priority over spinal injury.

Helmet Removal: Remove a motorbike helmet from a person if it is necessary to manage the airway, assist breathing or control bleeding. Use 2 people (if possible)

- 1st person holds helmet (& head) still.
- 2nd person removes glasses.
- 2nd person undoes or cuts chin strap.
- 2nd person supports neck and head as
- 1st person slides helmet off.
- Rotate helmet backwards to clear nose

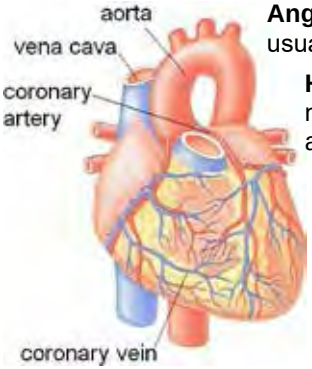
FIRST AID

Airway takes precedence.

- Recovery position with head & neck support
- Call ☎
- Monitor & record Vital Signs every 5-10 mins
- Control bleeding and cover wounds
- Support/ stabilise head and neck
- Keep warm with a blanket
- Prepare for possible vomit

Heart Conditions

"Heart attack" and **"Angina"** are heart conditions which present with similar signs and symptoms.



Angina is a pain of the heart muscle caused by lack of oxygen; usually relieved by rest, with no permanent muscle damage.

Heart attack is caused by a blocked coronary artery, which may result in **muscle damage** and lead to complications such as cardiac arrest.

Cardiac arrest is a condition in which the **heart stops** beating and pumping effectively. The damage caused by a heart attack may cause abnormal rhythms (eg **VF, V**enticular **F**ibrillation) which result in cardiac arrest. Some abnormal rhythms can be reversed by an AED. Cardiac arrest is fatal without basic life support (ppg 3).

SIGNS & SYMPTOMS

Signs and symptoms vary greatly and not all are present!

Does the person feel any:

- Pain • Pressure • Heaviness • Tightness

In one or more of these areas:

- Chest • Neck • Jaw • Arm/s • Back • Shoulder
- Upper abdomen - *indigestion* like symptoms.

Is the person:

- Short of breath
- Dizzy
- Nauseous or Vomiting
- Pale • Cold • Clammy (see shock pg 14)

NB. Casualties having a heart attack may present with breathlessness alone (***Atypical*** symptoms - no pain or discomfort) while others may have heaviness in the arm or believe they have ***indigestion.***

Atypical symptoms present more commonly in:

- Elderly • Women • Persons with diabetes
- Australian Indigenous population
- Māori and Pacific Island people.

IF - • Symptoms are severe
• Getting worse quickly
• Have lasted for > 10 mins

FIRST AID for ANGINA

STOP and **REST**

- Reassure and talk to casualty
- If available, assist casualty to take **prescribed heart medication** (eg tablet or oral spray) as directed
- Wait 5 minutes
- If symptoms remain take another dose of angina medication wait 5 minutes
- If symptoms **still persist** then manage as a **HEART ATTACK**

FIRST AID for HEART ATTACK

STOP and **REST**

- Call ☎ (Do not wait)
- Give **Aspirin (300mg)** if available. (Preferrably dissolvable aspirin).
- Give **oxygen** if available & trained in its use and shortness of breath is obvious.
- Locate & bring **AED** to casualty.

EVERY MINUTE COUNTS:

Survival after heart attack can be improved by administering clot-dissolving medications that clear the blocked artery, restore blood supply to the heart muscle and limit damage to the heart. These therapies are most effective if administered as soon as possible following the onset of symptoms - benefits decline with delays.

Aspirin 300mg can assist with dissolving clots in the coronary arteries and should only be withheld if the casualty in known to be anaphylactic to aspirin.

Additional clot-dissolving therapies are administered by medically trained personnel.

Asthma

Asthma is a disorder of the airways that can cause respiratory distress. **Spasm**, **inflammation** and **increased mucus** production in the airways causes breathing difficulties. Asthma attacks are triggered in sensitive airways by changes in the weather, exercise, emotional stress, pollen, dust-mite, food preservatives, smoke, fumes, colds and flu. An asthma attack can take from a few minutes to a few days to develop.

SIGNS & SYMPTOMS

Mild:
- Dry persistent cough
- Wheeze
- Breathless but speaks in sentences
- Chest tightness

Severe: (Call ambulance straight away)
- Gasping for breath
- Speaks 1-2 words per breath
- Little or no Wheeze
- Severe chest tightness
- Cyanosis (blue lips)
- Skin pale and sweaty
- Exhaustion
- Anxious/ Distressed
- Little or no improvement after using reliever
- Getting worse - using reliever > every 2 hrs

Young Children may also demonstrate:
- Severe coughing and vomiting
- Stop eating or drinking
- Restless or drowsy
- Muscles in throat and between ribs 'suck in'

FIRST AID

- Sit casualty comfortably upright.
- Calm and reassure - stay with casualty.
- Follow casualty's Asthma Action Plan or
- **Give Reliever - 4x4x4 using spacer or puffer** (see below).
- Borrow an inhaler if necessary.
- If no improvement after 4 mins, repeat.
- Call ☎ if asthma is severe OR if no improvement.
- Give oxygen if available & trained to use it.
- Keep giving **4 puffs every 4 mins** until ambulance arrives or casualty improves significantly. Shake before **each** puff.

If unconscious:
- **DRSABCD** (pg 3)

Rescue breaths may require more force due to narrowed airways. Slowly inflate with steady pressure until chest begins to rise. Allow time for chest to fall during expiration.

Reliever Medication:

Blue - grey colour.

Salbutamol puffers are the most common (eg Ventolin, Asmol, Airomir) also **Terbutaline** (eg Bricanyl - supplied in a turbuhaler).
- It is not harmful to give salbutamol to someone who does not have asthma.
- Victim's own reliever medication may be used as an alternative to salbutamol.

Using Puffer - with spacer

- Shake inhaler, remove cap and put inhaler upright into **spacer**.
- Place spacer between teeth and seal with lips.
- Administer 1 puff and ask casualty to ***breath in and out for 4 breaths*** through the spacer.
- Repeat until ***4 puffs*** have been given.
- Wait ***4 mins*** and repeat if there is no improvement.

Call ☎ if casualty does not respond to medication. Say it is an asthma emergency

If no spacer available

- Shake inhaler, remove cap. Put inhaler between teeth and seal with lips.
- Administer 1 puff as casualty inhales slowly and steadily.
- Slip inhaler from mouth. Ask casualty to ***hold breath for 4 sec*** or as long as comfortable.
- Breathe out slowly, away from inhaler.
- Repeat until ***4 puffs*** have been given.
- Wait ***4 mins*** and repeat if no improvement.

Croup/ Epiglottitis

Croup and Epiglottitis are infections of the upper airways (larynx, pharynx and trachea) and occurs in young children. Both conditions start with similar signs and symptoms but epiglottitis progresses to a life-threatening state.

SIGNS & SYMPTOMS

CROUP:

Mild
- Cold-like symptoms
- Barking cough
- Noisy breathing
- Slight temperature
- Worse at night

Severe
- **Breathing difficulties**
- **Cyanosis (blue lips)**

EPIGLOTTITIS:
- **Drools –can't swallow**
- **Quiet, doesn't cough**
- **Leans forward**
- **Won't talk**
- **High temperature**
- **Skin flushed**

FIRST AID

- **DO NOT** examine child's throat – this may cause complete blockage.
- Calm and Reassure.
- Symptoms are often worse if child is upset.
- Seek medical aid.

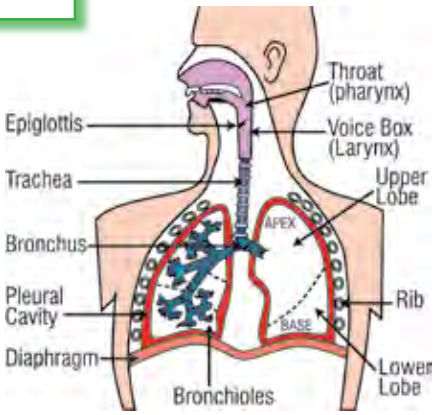
- **Call** ☎
- Comfort, reassure
- Sit upright on your lap.
- Lots of tender loving care until ambulance arrives.

Croup: Viral infection affecting upper airways in infants and children < 5 yrs. Slow onset, usually follows a cold or sore throat and lasts 3-4 days. Can also affect adults.

Epiglottitis: Bacterial infection of the epiglottis (flap above the vocal cords) causing **upper airway obstruction.** It occurs in the **4 - 7 yr** age group and has a rapid onset over 1-2 hrs. **This is an emergency and requires urgent ambulance transport to the hospital.**

Doctors find it difficult to clinically differentiate between **'Croup'** and **'Epiglottitis'** - further tests are usually required.
- Call ☎ if uncertain

Warm, moist air in a steamy bathroom may improve breathing.



Faint

Fainting is a sudden, brief loss of consciousness caused by lack of blood flow to the brain with a full, quick recovery when casualty lies flat. It often occurs in hot conditions with long periods of standing; sudden postural changes (eg from sitting to standing); pregnancy (lower blood pressure); pain or emotional stress (eg sight of blood). There could be underlying causes, which may need medical assessment.

SIGNS & SYMPTOMS
- Dizzy or light headed.
- Nausea
- Sweating
- Return of consciousness within a few seconds of lying flat.
- Pale, Cold, Clammy skin (See shock pg 14).
- Mild confusion or embarrassment.

FIRST AID
- Lie casualty flat
- Pregnant woman turn onto left side.
- Recovery position if unconscious > few secs.
- **DO NOT** give food or drink to unconscious.
- Check for other injuries.
- Advise casualty to seek medical assessment.
- Call ☎ if consciousness not regained immediately.

Seizure/ Epilepsy

A seizure is caused by abnormal electrical activity in the brain and may affect all or part of the body. Seizures of the whole body usually cause rigidity, followed by jerking movements and unconsciousness. Partial seizures may cause trance-like wandering or unusual behaviour eg repetitive fiddling with clothes & may leave person frightened or confused. A seizure may be associated with **• Hypoxia • Onset of cardiac arrest • Head Injury • Stroke • Meningitis • Fever (febrile convulsion) • Hypoglycaemia (low blood sugar) • Poisoning • Alcohol or Drug withdrawal • Low blood pressure • Epilepsy.**

SIGNS & SYMPTOMS

Generalised Seizure:

- Spasm, producing rigidity (Tonic phase - lasts a few secs). If standing, casualty will fall down.
- Jerking movements of head, arms & legs (clonic phase – lasts few mins).
- Breathing - shallow or stops temporarily.
- Dribbling from mouth. Bitten tongue may result in blood stained saliva.
- Loss of bladder or bowel control.
- Changes in conscious state eg confused, drowsy or unconsciousness.

Partial Seizure:

- Part of the body is affected and the person retains consciousness but may be frightened or confused.
- Seizure activity takes many forms.

FIRST AID

If unconscious and actively convulsing:

Follow seizure management plan if available.

- DRSABCD - protect airway.
- Call ☎
- Protect from harm – remove casualty from danger or remove dangerous objects.
- Protect head (eg with cushion/ pillow).
- Note the time seizure starts.
- Don't restrain (except to avoid injury).
- DO NOT put anything into casualty's mouth.
- Place in recovery position when practical.
- Frequently reassess casualty.
- Reassure casualty (may be dazed or drowsy).

Seizure in water is life threatening:

- Support victim so the face is out of water.
- Remove from water as soon as safe to do so.
- Call ☎

Febrile Convulsion

(Normal body temperature is approx 37°C)

Febrile convulsions are associated with a high body temperature **(>38°C)**. It is the rate of rise in temperature, not how high it gets, which causes the convulsion. They occur in 3% of all children **between the age of 6 mths and 6 yrs.**

- Protect from harm.
- After seizure stops place in recovery position.
- Remove excess clothing.

SIGNS & SYMPTOMS

(Similar to epilepsy + fever)

- Fever.
- Skin hot, flushed.
- Eyes may roll up.
- Body stiffens.
- Back and neck arches.
- Jerking of face, limbs.
- Frothing at mouth.
- Blue face and lips.
- Lethargy follows.

FIRST AID

- Manage as for 'Seizure/ Epilepsy' (pg 25).

PLUS:

- Remove excess clothing.
- Apply cold compress to forehead.
- DO NOT allow shivering to occur.
- DO NOT put in cold bath.

Diabetes

• Diabetes is an imbalance between glucose and insulin levels in the body.
• The imbalance may result in **Hypoglycaemia (Low blood sugar)** or **Hyperglycaemia (High blood sugar)**. Both conditions, if left untreated, result in altered states of consciousness which are medical emergencies.

SIGNS & SYMPTOMS - Both conditions share similar signs and symptoms:
• Appear to be drunk (Dizzy, drowsy, confused, altered level of consciousness)
• Rapid breathing • Rapid pulse • Unconscious

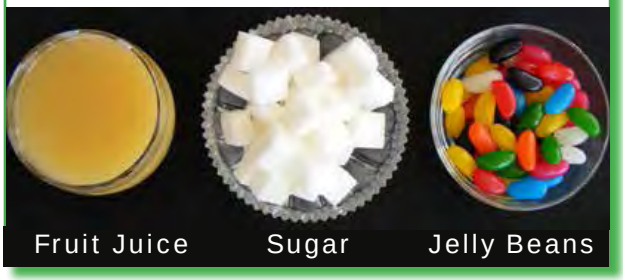
DIFFERENCES	HYPOglycaemia (LOW)	HYPERglycaemia (HIGH)
	• Pale, cold sweaty skin	• Warm, dry skin
	• **Fast progression**	• **Slow progression**
	• Hunger	• Acetone smell on breath (nail polish remover)
	• Trembling	• Thirst
	• Weakness	• Passes urine frequently
	• Seizure	• Nausea and vomiting
		• Abdominal Pain

• The most common type of diabetic emergency is Hypoglycaemia.
• Hyperglycaemia is not common, as its slow onset allows diabetics to take corrective measures.

FIRST AID
Both conditions **(Hypo and Hyperglycaemia)** are managed the same way by first aiders.

Conscious:
- Give sweet drink/ food: 5-7 jelly beans, 2-4 teaspoons of sugar or honey, glass of fruit juice (not diet or low sugar type).
- **Repeat** if casualty responds
- On recovery assist with **high carbohydrate** food: sandwich, few biscuits, pasta or rice meal.
- Call ☎ if no improvement within a few minutes of giving sugar (could be hyperglycaemia or another medical condition).

Unconscious:
- Place in recovery position
- Call ☎
- DO NOT administer insulin – could be fatal
- GIVE NOTHING by mouth



Hypoglycaemia can occur if a person with diabetes:
- Takes too much insulin
- Fails to eat adequately
- Over-exercises ie burns off sugar faster than normal
- Becomes ill – viral infection eg. diarrhoea and vomiting
- Experiences great emotional stress

The reason sugar is given to diabetics with an altered state of conciousness is that most will be **hypoglycaemic (low).** The symptoms of hypoglycaemia progress rapidly and must be addressed quickly.
If the casualty turns out to be **hyperglycaemic (high)**, the small amount of sugar given by a first aider will not significantly raise blood sugar levels and will do no harm.

Don't give diet or diabetic food/ drink which contains artificial sweetener – this doesn't correct low blood sugar.

Stroke

The blood supply to part of the brain is disrupted, resulting in damage to brain tissue. This is caused by either a blood clot blocking an artery (cerebral thrombosis) or a ruptured artery inside the brain (cerebral haemorrhage). 80% of strokes are caused by a blockage. The signs and symptoms of a "stroke" vary, depending on which part of the brain is damaged. ***Stroke is a medical emergency.***

SIGNS & SYMPTOMS

FAST (for signs of stroke)

F - Facial weakness
Can the casualty smile? Has their mouth or eye drooped?

A - Arm weakness
Can casualty raise both arms?

S - Speech
Can casualty speak clearly and understand what you say?

T - Time
Time to act fast - Call ☎

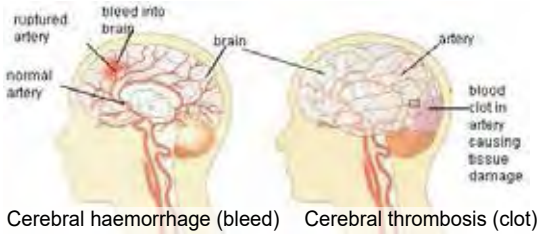
Also

- Numbness of face, arm/s or leg/s on either or both sides of body.
- Difficulty swallowing - drool
- Dizziness, loss of balance, fall
- Loss of or decreased vision or sudden blurred vision in one or both eyes
- Headache, often severe with abrupt onset: change in pattern of headaches
- Drowsiness
- Confusion or dazed state
- Altered state of consciousness

FIRST AID

- If casualty fails one of the **FAST** tests, **Call** ☎ *(even if symptons are brief and resolve quickly).*
- Nothing to eat or drink
- Reassure
- Recovery position if unconscious
- Maintain body temperature
- Give oxygen if available and trained in its use
- Monitor Vital Signs

New drugs and medical procedures can clear a blockage and restore blood supply to the brain. Rapid access to stroke care (in hospital) can significantly reduce damage to brain tissue. Early recognition of stroke and protection of the airway, contribute to reducing deaths and long term damage from stroke



Cerebral haemorrhage (bleed) Cerebral thrombosis (clot)

Symptoms of stroke may also be caused by other conditions such as epilepsy or diabetes (low blood sugar). Check blood sugar level, if trained, as this can improve the accuracy of stroke diagnosis.

Hyperventilation

Hyperventilation syndrome is the term used to describe the signs and symptoms resulting from stress-related or deliberate **over-breathing**. The increased depth and rate of breathing upsets the balance of oxygen and carbon dioxide which results in diverse symptoms and signs.

SIGNS & SYMPTOMS

- Rapid breathing
- Light-headedness
- Tingling in fingers and toes.
- Blurred vision
- Spasms in hands and fingers.
- Severe Anxiety
- Chest discomfort
- Palpitations

FIRST AID

- Calm and Reassure.
- Encourage slow regular breathing - count breaths aloud.
- Seek medical aid – exclude other medical condition.
- **DO NOT** use a bag for rebreathing.

NB. Other conditions which may present with rapid breathing:

- Asthma attack
- Heart failure
- Heart attack
- Collapsed lung
- Embolus (clot) in lung
- Diabetes
- Some poisons

Normal body temp = 37°C

Heat Induced Illness

Organs cook at 42°C

Heat Exhaustion: occurs when the body cannot lose heat fast enough. Profuse sweating occurs in an effort to lower body temperature but this leads to fluid loss and decreased blood volume (mild shock (pg 14)). If not treated quickly, it can lead to heat-stroke.

Heat Stroke: occurs when the body's normal cooling system fails and the body temperature rises to the point where internal organs (eg brain, heart, kidneys) are damaged: Blood vessels near the skin's surface dilate in an attempt to release heat, but the body is so seriously dehydrated that sweating stops (red, hot, dry skin). Consequently, the body temperature rises rapidly because the body can no longer cool itself. This is a life-threatening.

SIGNS & SYMPTOMS - Heat EXHAUSTION

- Sweating • Headache • Dizziness
- **Pale, cold, clammy skin** (see shock pg 14)
- Nausea/ vomiting • Fatigue/ malaise
- Collapse (conscious state returns to normal when lying down)
- Body temp below 40°C

SIGNS & SYMPTOMS - Heat STROKE

- **NO Sweating***
- **Hot, dry skin***
- Altered conscious state
- Unconscious
- Body temp above 40°C

FIRST AID - Heat EXHAUSTION

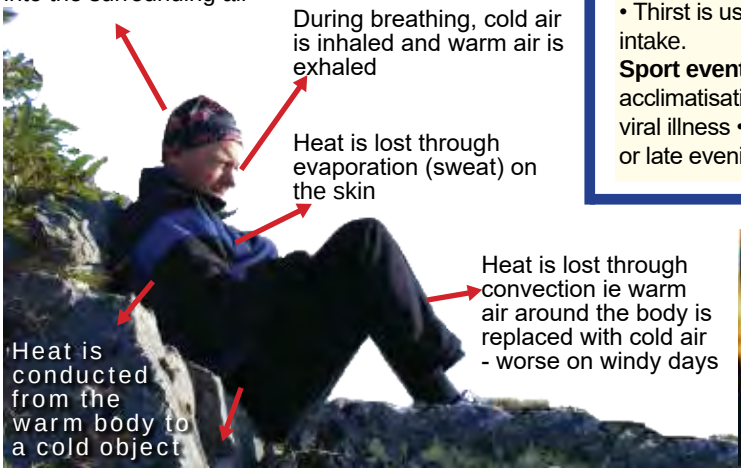
- Lie person down in a cool, shaded area.
- Loosen and remove excess clothing.
- Moisten skin with cloth or by spraying with water
- Cool by fanning
- Give water to drink if fully conscious.
- Call ☎ if not improving quickly

FIRST AID - Heat STROKE

- Call ☎
- Lie casualty down in a cool, or shaded area.
- Loosen and remove excess clothing.
- Moisten skin with cloth or spraying with water
- Apply ice packs to neck, groin and armpits

Causes of heat induced illness:
• Hot environment • Heat from exercise • Failure of cooling mechanism • Illness • Excessive physical excursion • Hot climate • High humidity • Inadequate fluid intake • Infection (particularly viral) • Unsuitable clothing • Drugs which affect heat regulation

Prevention: • Keep infants & elderly in cool areas • Provide ample oral fluids • Wear hat, loose fitting clothes outdoors • Thirst is useful guide to required fluid intake.
Sport events • Allow 6 week acclimatisation • Avoid exercise during viral illness • Plan events early morning or late evening • Provide drink stations.



Body heat can be lost quickly in high, exposed areas.

Cold Exposure

Exposure to cold conditions can lead to hypothermia (generalised cooling of the body) or frostbite (localised cold injury).

Hypothermia: is a condition where the body temperature drops **below 35°C**
Hypothermia can be mistaken for drunkenness, stroke or drug abuse.

- Suspect hypothermia when conditions are **cold, wet and windy,** especially in the young and **elderly** or individuals under the influence of **alcohol** or **drugs**.
- As the core body temperature drops, so does the metabolic rate which means the cells require less oxygen. Hypothermia protects the brain from the effects of hypoxia so resuscitation should be continued until the casualty can be rewarmed in hospital.

MILD Hypothermia
35°– 34°C
- Maximum shivering
- Pale, cool skin, blue lips
- Poor coordination
- Slurred speech
- Apathy and slow thinking
- Irritable or confused
- Memory loss

MODERATE Hypothermia
33°– 30°C
- Shivering ceases
- Muscle rigidity increases
- Consciousness clouded
- Slow breathing } hard to detect
- Slow pulse } hard to detect

SEVERE Hypothermia
<30°C
- Unconscious
- Cardiac arrhythmias
- Pupils fixed and dilated
- Appears dead
- Cardiac arrest

- DO NOT re-warm **too quickly**- can cause heart arrhythmias.
- DO NOT use **radiant heat** (eg fire or electric heater) - re-heats too quickly.
- DO NOT rub or **massage** extremities- dilates blood vessels in skin so body heat is lost.
- DO NOT give **alcohol** – dilates blood vessels in skin and impairs shivering.
- DO NOT put casualty in **hot bath** as monitoring and resuscitation if needed may be difficult.

FIRST AID
- Call ☎
- Seek **shelter** – protect from wind chill.
- Handle **gently** to avoid heart arrhythmias.
- Keep **horizontal** to avoid changes in blood supply to brain.
- Replace wet clothing with dry.
- Wrap in **blankets**/ sleeping bag or space blanket and cover head.
- Give **warm, sweet drinks** if conscious.

IF NOT SHIVERING:
- Apply **heat packs** to groins, armpits, trunk and side of neck.
- **Body-to-body** contact can be used.

IF UNCONSCIOUS:
- **DRSABCD** (pg 3) - Check breathing/ pulse for **30- 45 secs** as hypothermia slows down everything.
- If **no signs of life** – commence CPR while re-warming casualty.

Frostbite: is the freezing of body tissues and occurs in parts exposed to the cold.

SIGNS & SYMPTOMS • White, waxy skin • Skin feels hard • Pain or numbness

FIRST AID
• Seek shelter • Treat hypothermia before frostbite • Gently remove clothing from affected area • Rewarm affected area with body heat - place in armpit **(rewarming can be very painful)** • DO NOT rub or massage affected area – tiny ice crystals in tissue may cause more damage • DO NOT use radiant heat • DO NOT break blisters
• **NEVER** thaw a part if there is any chance of it being re-frozen. Thawing and refreezing results in far more tissue damage than leaving tissue frozen for a few hours.

Bites/ Stings

LAND ANIMALS	TYPE	FIRST AID
FATAL	Snakes	Pressure Immobilisation Technique (PIT) (see next page for PIT)
FATAL	Funnel web Spiders	
	Red back spiders/ others	COLD COMPRESS/ ICE PACK
	Bees	Remove bee sting ASAP
	Wasps	Move to safety
	Scorpion	
	Ants	
	Ticks	If no allergy remove tick (pg 33)

Red Back Spider

SEA CREATURES	TYPE	FIRST AID
FATAL Tropics	Sea Snakes	**Pressure Immobilisation Technique (PIT)** (see next page for PIT)
FATAL Tropics	Blue-Ringed Octopus	
FATAL Tropics	Cone Shell	
FATAL Tropics	Box Jelly Irukandji Jelly	**VINEGAR** Liberally apply vinegar for 30 secs (vinegar neutralises stinging cells) then pick off tentacles. If no vinegar available, pick off tentacles with fingers (not harmful to rescuer) rinse with SEAWATER. Do not use fresh water because it can cause stinging cells to discharge.
	Bluebottles	(Do not use vinegar for Jelly fish stings outside tropical waters).
	Fish Stings: Stingray	**HOT WATER** - Use cold compress if no pain relief with hot water
	: Stonefish	
	: Bullrouts	

Potentially Fatal Bite/ Sting:

Snakes

Funnel web Spider

Blue-Ringed Octopus

Cone Shell

SIGNS & SYMPTOMS: similar for all 4 species with death from **Respiratory Arrest** within minutes to hours.

- Painless bite • Droopy eyelids • Blurred vision • Difficulty speaking and swallowing
- Breathing difficulties • Abdominal pain • Nausea and vomiting • Headache
- Tingling/numbness around mouth • Profuse sweating • Copious salivation • Collapse

FIRST AID:

- DRSABCD (pg 3)
- Rest and reassurance
- Call ☎
- Pressure Immobilisation Technique
- Resuscitation if needed, takes priority over PIT

- DO NOT wash bite site (land animals)
- DO NOT suck venom from a bite
- DO NOT cut or incise bite site
- DO NOT use a tourniquet (pg 12)
- DO NOT kill animal – identification of species is made from venom on skin.

Bites/ Stings

(Both found in tropical waters)

Box Jellyfish

Irukandji Jellyfish

SIGNS & SYMPTOMS

- Severe **immediate skin pain**
- **Frosted pattern** of skin marks
- Collapse
- **Cardiac Arrest**
  (Anti-venom available)

SIGNS & SYMPTOMS

- **Mild sting** followed 5-40 mins later by:
- Severe **generalised pain**
- Nausea, vomiting, sweating
- Collapse /**Respiratory arrest**
  (No anti-venom)

FIRST AID

• DRSABCD • Remove casualty from water • **Call** ☎ • Reassure • AVOID rubbing sting area • Flood sting with **VINEGAR** for 30 secs • If no vinegar–pick off remnants of tentacles and rinse with seawater **(NOT freshwater)** • If unconscious, commence CPR

Non-Serious Bite/ Sticks:

Fish stings: • Sharp barb • Painful wound • Bleeding • Place wound in hot water

Red Back Spider: • Intense local pain at bite site • Not life-threatening • Apply cold pack

Bee/Wasp/ Ant/ Tick: • Localised pain at site (tick bite not painful) • Remove bee sting by scraping along skin. Do not squeeze venom sac. Move casualty to safe area • Carefully remove tick (DO NOT remove tick if casualty is anaphylactic to ticks (pg 6).
• Apply cold pack • If casualty has a history of allergy, follow anaphylaxis plan (pg 33).
• Refer casualty to hospital if stung on face or tongue.

Pressure Immobilisation Technique (PIT): This method is used to treat a variety of bites and stings: • Snake • Funnel web spider • Blue-ringed octopus • Cone shell

1. Apply a pressure bandage over the bite area (firm enough NOT to easily slide a finger between bandage and skin).
• **DO NOT** wash bite site
• Mark "X" over bite site
(If only one bandage available: start from fingers/ toes and wind as far up limb as possible covering the bite).

2. Apply a **second bandage** from fingers or toes extending upwards covering as much of limb as possible.
• Bandage over the top of pants/ shirts as undressing causes unnecessary movement
• Mark "X" over bite site

3. **Splint** the bandaged limb, including joints either side of bite site.
• Rest casualty and limb.
• **DO NOT** elevate limb.
• Bring transport to casualty
• Check circulation (pg 11)
• **DO NOT** remove bandage and splint once it has been applied.

PIT (Pressure Immobilisation Technique) slows the lymph flow and inactivates certain venoms by trapping them in the tissues.

Poisons

A **poison** is any substance which causes harm to body tissues.
A **toxin** is a poison made by a living organism (eg animal, plant, micro-organism).
A **venom** is a toxin which is injected by a fang or sting (eg snake, spider, fish).

13 11 26 - Poisons Information Centre Free Call, 24/7, Australia wide.

Poisons can be **ingested (swallowed)**, **absorbed, inhaled** or **injected**. The effect of a poison will depend on what the substance actually is and how much has been absorbed.

Ingested:

Swallowed substances can be broadly categorised into '**corrosive**' eg dish washer detergents, caustics, toilet/ bathroom cleaners and petroleums or '**non-corrosive**' eg plants, medications (tablets/ liquids) and illicit drugs. Some drugs make people drowsy or unconscious, others can cause panic or aggression others cause dangerous dehydration.

Adverse drug experience
To assist a casualty who is having an adverse drug experience ("bad trip") it is important to avoid provoking hostility and to reduce stimuli.

SIGNS & SYMPTOMS of a corrosive substance:
• Pain in the mouth/ abdomen • Burns to lips/ mouth • Nausea/ vomiting • Tight chest • Difficulty breathing • Sweating • Unconscious

FIRST AID
- Identify type and quantity of poison (from container/ bottle).
- Establish the time of poisoning.
- DO NOT induce vomiting *unless advised.*
- DO NOT give anything by mouth unless advised.
- Drinking too much water can cause serious problems

- If rescue breathing is required, wipe away any contamination from around the mouth.
- Use a resuscitation mask if available.
- DO NOT use ***Syrup of Ipecac*** to induce vomiting unless advised by Poisons Information Centre.

FOR ALL POISONING:
- DRSABCD
- What? When? How Much?
- Call Poisons Information Centre for advice or Call ☎
- Monitor Vital Signs
- Send any containers and/ or suicide notes with casualty to hospital.
- Send any vomit with casualty to hospital.

Absorbed:

Chemical splash from eg pesticide, weed killer.

FIRST AID
- DO NOT become contaminated yourself – wear gloves, goggles, protective clothing.
- Ask casualty to remove all contaminated clothing.
- Flood affected area with running water • Seek medical advice.

Inhaled:

Toxic fumes from gas, burning solids or liquids. Inhaled poisons include:
• Carbon monoxide (car exhausts) • Methane (mines, sewers) • Chlorine (pool chemicals cleaning products) • Fumes from paints • Glues • Industrial chemicals.

SIGNS & SYMPTOMS
• Breathing problems • Headache
• Nausea • Dizziness • Confusion

FIRST AID
- Move casualty to fresh air
- Loosen tight clothing
- Give oxygen if available & trained
- Call ☎

Injected:

As a result of a bite or sting (pg 30, 31) or may be injected with a needle. The most common type of drug overdose via injection are narcotics which cause respiratory depression (slow breathing), respiratory arrest (no breathing) or unconsciousness. **Seek urgent medical assistance if breathing is slow or abnormal**. The most common injection sites are: hands, feet, crease of elbow, between toes and fingers. NB. Narcotic users may be carriers of Hepatitis B, C, and/ or HIV (AIDS).

Allergy/ Anaphylaxis

Anaphylaxis is a life-threatening allergic reaction which can be triggered by **nuts** (especially peanuts), cow's milk, eggs, wheat, **insect stings/bites** (bee, wasp, ant, tick), **fish, shellfish,** and certain **drugs** (eg Penicillin). The airways rapidly swell and constrict, interfering with **breathing,** and the blood vessels widen, leading to **shock** (pg 14). Casualties need an immediate injection of adrenaline. People who know they are at risk may wear a **medical alert bracelet** and carry their own injectable adrenaline.

SIGNS & SYMPTOMS

Can be highly variable and may include:

Mild to moderate Allergic reaction:

- Swelling of lips, face, eyes
- Hives or rash (red, itchy)
- Tingling mouth
- Abdominal pain, vomiting (severe if reaction to insects)
- **Severe Allergic Reaction (Anaphylaxis):**

Mild allergy may not precede anaphylaxis

- Difficult/ noisy breathing
- Wheeze or persistent cough
- Difficulty talking/ hoarseness
- Swelling/tightness in throat
- Persistent dizziness
- Pale and floppy (young child)
- Collapse or unconsciousness

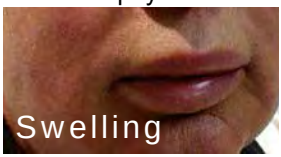
FIRST AID

- Lay casualty flat, do not stand or walk. If breathing is difficult, allow to sit
- Give adrenaline (record time adrenaline was given)
- **Call** ☎
- Administer oxygen if available
- Give asthma reliever medications for breathing difficulties (pg 23)
- Further adrenaline should be given if no improvement after 5 mins
- Collapse or unresponsive - **DRSABCD** (pg 3).

If in doubt give the autoinjector

Use adrenaline if symptoms become severe. EpiPen is an auto-injecting pen containing a measured dose of adrenaline (Epinephrine). It can take only 1- 2 mins for a mild allergic reaction to escalate to anaphylaxis.


Hives


Swelling

How to Use an EpiPen:

1.


Form fist around EpiPen and pull off blue safety-release.

2.


Push orange end hard into outer thigh so it clicks and hold for 3 seconds. Remove Epipen.

NB: When the orange needle end is withdrawn from the thigh, the needle is automatically protected.

Tick Bite Anaphylaxis:

Do not attempt to remove a tick if anaphylaxis is suspected.

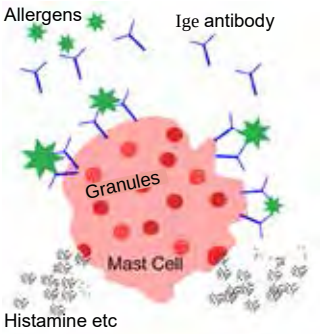
The tick must be killed where is rather than removed. However, a **tick will inject more toxin if it is disturbed**. This can be fatal in a person who is highly allergic to ticks.

NOTE: It is safe to remove a tick if the person is not susceptible to tick bites.

About Anaphylaxis

There are **two basic** categories of anaphylaxis: **Ige mediated** and **idiopathic.**

Ige mediated anaphylaxis is a result of the immune system releasing large quantities of histamine and other chemicals which causes the typical signs of anaphylaxis. Idiopathic anaphylaxis is not fully understood, but also causes severe life threatening reactions.



What does adrenaline do?

Adrenaline:

- Reverses vasodilation
- Reduces swelling
- Increases heart output
- Eases breathing difficulties
- ***Prevents mast cells from releasing chemicals***

What happens in an anaphylactic reaction?

- **The first time** an allergy prone person encounters an allergen (peanuts for example), their immune system produces large amounts of ***peanut Ige antibody.*** As a result of this their body is sensitised to peanuts.
- These Ige molecules attach themselves to mast cells.
- **The second time** this person comes into contact with peanuts, the peanut Ige antibodies trigger the mast cells to release granules of powerful chemical mediators, such as histamine and cytokines into the blood stream.
- These chemical mediators (histamine etc) cause:
  - Vasodilation (blood vessels dilate)
  - Fluid loss into tissues
  - Smooth muscle contraction
  - Increased mucus secretion
- This causes the signs and symptoms of anaphylaxis:
  - Redness, rashes and welts
  - Swelling, chest tightness and breathing difficulties
  - Shock
  - Cardiac arrest

Give Adrenaline Early

- If the mast cell response is slowed down *quickly*, with ***early*** use of adrenaline, the amount of histamine and mediators released by the mast cells is greatly restricted, to the point where adrenaline can effectively reverse the effects these chemicals have.
- The combined effects of vasodilation and oedema (fluid leaking into the tissues) can result in severe shock leading to cardiac arrest if administration of adrenaline is delayed.
- The first signs of mild and severe anaphylaxis can look the same.
- It is very important to give the adrenaline autoinjector if symptoms and signs of the casualty suggest anaphylaxis.
- If in doubt - give the autoinjector.
- The reaction can return when the effects of adrenaline wear off after about 20 minutes

What is an Autoinjector? Autoinjectors contain a pre-measured dose of medication. When activated, a spring fires a needle and a measured dose of medication is pushed out. **An Autoinjector can only be used once. EpiPen is a brand** of an adrenaline autoinjector. It contains adrenaline. Take care to **read the instructions!** It is much better to take a few seconds to read the instructions and administer the medication correctly than to rush and make mistakes in a panic. In the past rescuers have injected themselves. Don't make the same mistake.

Read the instructions first.

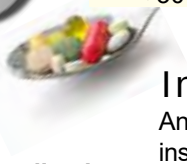
Allergy/Anaphylaxis Facts

Anaphylaxis is the most severe form of allergic reaction. Anaphylaxis can cause symptoms such as swelling of the tongue and throat which can lead to breathing difficulties. Many substances can cause anaphylaxis, but the most common are **Food**, **Medicine** and **Insects**. **Anaphylaxis is a medical emergency.**

Causes of death from anaphylaxis:
- 60% medications
- 20% insects
- 10% unknown
- 5% food
- 5% other (latex, hair dye, etc)

Anaphylaxis Facts - Australia:
- Allergies in Australia are very common, affecting about 1 in 5 people.
- Death from anaphylaxis is rare.
- About 12 die each year from anaphylaxis
- Most allergic reactions are NOT life threatening but...
- IF anaphylaxis is unmanaged then death usually occurs very soon after contact with the trigger.
- < 5 min after injected medication
  < 15 min after insect stings
  < 30 min after food

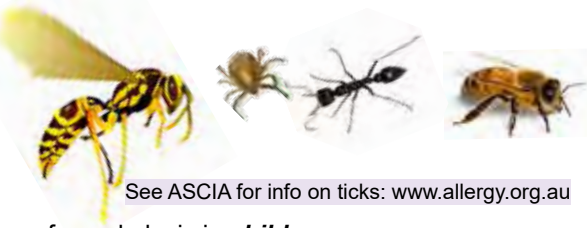
Medications:



Anaesthetics and injected medications such as antibiotics are the most common drugs to cause anaphylaxis. Some over-the-counter medications such as aspirin and anti-inflammatories (NSAIDS) can cause anaphylaxis. Some alternative and complementary medicines are based on bee products and flowers that are known allergens.

Insect stings/ticks:

Ants, Bees and Wasps are the most likely insects to cause anaphylaxis. Ticks also cause anaphylaxis in some people; most reactions to tick occur when attempting to remove the tick (pg 6).



See ASCIA for info on ticks: www.allergy.org.au

Food:

Food is the most common cause of anaphylaxis in ***children.***

Any food can cause anaphylaxis but just 8 foods are responsible for 90% of food allergy:
• Peanuts • Dairy • Sea Food • Wheat
• Soy • Shell Fish • Tree Nuts • Eggs

What does all this mean? Most allergic reactions do not cause death. However, anaphylaxis is ***life threatening***, can develop very rapidly and requires immediate treatment with adrenaline. First Aiders and carers must learn to identify signs of anaphylaxis and be prepared to act quickly.

ASCIA has Action Plans and many other resources: www.allergy.org.au

Anaphylaxis Action Plans

ASCIA (Australian Society of Clinical Immunology and Allergy) is a professional medical organisation, comprised mostly of scientists and specialist doctors in the field of allergy and immunology.

ASCIA provide useful information and resources about Allergy and Anaphylaxis and also produce ASCIA ***Anaphylaxis Action Plans***. Action plans provide important information to help all stakeholders reduce the risks of anaphylaxis.

Personal Action Plans: should be stored with medication and contain the following information:

- Individual's details - name, age
- Emergency contact details
- Extra instructions
- General signs and symptoms
- Doctor's signature - this is a medical document
- Instructions for using EpiPen

Action Plans must be supplied to **child care centres and schools** by the parents* of a child who is diagnosed with Anaphylaxis.

In a workplace, although it is not compulsory to provide an action plan in a workplace environment it is strongly recommended and employers should encourage workers to inform first aiders and co-workers about anaphylaxis and other life-threatening conditions so co-workers including first aiders can respond better in an emergency.

Child details Date of birth

Child photo

What child is Allergic to

Parent/carer Details

Signed by Doctor

Instructions printed on plan and on autoinjector
The mid-outer thigh is the BEST site for FASTEST absorption of medication.

A copy of the Action Plan should be stored with medication.

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

ACTION PLAN FOR
Anaphylaxis

For use with EpiPen® adrenaline autoinjectors

Name: _____
Date of birth: _____

Photo

Confirmed allergens:

Family/emergency contact name(s):
_____
_____
Work Ph: _____
Home Ph: _____
Mobile Ph: _____

Plan prepared by:
Dr: _____
I hereby authorise medications specified on this plan to be administered according to the plan.
Signed:
_____
Date: _____
Date of next review: _____

How to give EpiPen®

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

2 PLACE ORANGE END against outer mid-thigh (with or without clothing).

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

Instructions are also on the device label and at: www.allergy.org.au/anaphylaxis

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. Do not remove ticks.
- Stay with person and call for help.
- Locate EpiPen® or EpiPen® Jr adrenaline autoinjector.
- Give other medications (if prescribed).....
- Phone family/emergency contact.

Mild to moderate allergic reactions may not always occur before anaphylaxis

Watch for ANY ONE of the following signs of anaphylaxis

ANAPHYLAXIS (SEVERE ALLERGIC REACTION)

- Difficult/noisy breathing
- Swelling of tongue
- Swelling/tightness in throat
- Difficulty talking and/or hoarse voice
- Wheeze or persistent cough
- 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 breathing is difficult allow them to sit.**
2 **Give EpiPen® or EpiPen® Jr adrenaline autoinjector.**
3 **Phone ambulance*: 000 (AU) or 111 (NZ).**
4 **Phone family/emergency contact.**
5 **Further adrenaline doses may be given if no response after 5 minutes, if another adrenaline autoinjector is available.**

If in doubt, give adrenaline autoinjector
Commence CPR at any time if person is unresponsive and not breathing normally.
EpiPen® is generally prescribed for adults and children over 5 years.
EpiPen® Jr is generally prescribed for children aged 1-5 years.
*Medical observation in hospital for at least 4 hours is recommended after anaphylaxis.

IF UNCERTAIN WHETHER IT IS ANAPHYLAXIS OR ASTHMA
- Give adrenaline autoinjector FIRST, then asthma reliever.
- If someone with known food or insect allergy suddenly develops severe asthma like symptoms, give adrenaline autoinjector FIRST, then asthma reliever.

Asthma: Y ☐ N ☐ Medication: _____

This is a sample Anaphylaxis action plan for Epipen.

Recognise mild allergic reaction

Don't remove ticks

What to do for mild reaction

Recognise anaphylaxis

What to do for anaphylaxis

If in doubt... give the autoinjector

** Throughout this book the word parent includes legal guardian*

For privacy, in schools and child care centres, Action Plans should be displayed discreetly to enable rescuers to recognise individuals and their set of signs and symptoms. In other workplaces, discuss privacy considerations with personnel concerned.

Manage Anaphylaxis Risks

There are four sectors that need to consider the risks of anaphylaxis.

1. **Children in Care -** This includes, Long Day Care, Kindergarten, Pre-school, Out-Of-School-Hours Care (OOSH), Family Day Care.
2. **Schools -** Primary and Secondary
3. **Workplaces** - All workplaces, including the workers in child care employment.
4. **Voluntary Organisations -** especially those working with minors**.** This includes Sporting Clubs, Youth Groups eg Church Group, Scouts/Guides, Bike Clubs etc.

Each of these sectors should have an ***Anaphylaxis Policy*** which includes a ***Risk Assessment***, ***Management Plan*** and ***Communication Plan.***
For the Child Care sector there are stringent legal requirements that impose obligations on the child care centres, employees and parents.

A ***Risk Assessment*** (Pg 10) should be part of the planning for every activity.
If plans and policies are in place, risks can be minimised.
For example a child playing sport known to have anaphylaxis to wasp stings could have an anaphylactic reaction during a sporting activity (see example below):

Example:

- Billy was a member of a local football club and known to be allergic to wasps.
- While playing football away from the home ground, some wasps were attracted to a plate of cut up oranges.
- Billy was stung on the hand when he ate one of the pieces of orange.
- Billy's adrenaline autoinjector was in his sports bag, in the dressing room.
- An ambulance was called, and Billy was rushed to hospital.
- The subsequent investigation revealed the football club anaphylaxis policy helped Billy survive.

- Billy's club knew he was anaphylactic from questions on the ***club registration form.***
- The ***club policy*** encouraged members to ***let people know*** so Billy's team mates knew about his anaphylaxis and they all knew where his autoinjector was located.
- A ***communication plan*** was developed which included an ***awareness program.***
- ***Information posters*** for conditions like anaphylaxis, asthma, epilepsy and diabetes were on the clubroom notice boards and articles were printed in the ***club newsletter.***
- The communication plan made sure the coach, the trainers and the first aiders were all aware that Billy was anaphylactic and they were all properly trained.
- The policy required that an ***anaphylaxis trained person*** was present at every activity.

Organisations should:

- Conduct a ***Risk Assessment***.
- Develop a ***Policy***
- Have ***Communication Plan*** and ***Management Plan*** in place.

Voluntary Organisations - Duty-of-Care

Generally, voluntary organisations have a duty-of-care when running activities.
When a duty-of-care relationship exists there is responsibility to do:

1. What a ***reasonable*** person would do
2. In ***similar*** circumstances
3. With the same level of ***training***

A sample Risk Assessment Plan is available from www.acecqa.gov.au

Assess Hazards and Minimise Risk

Hazard Assessment is required for child care and most other workplaces. Use the matrix to evaluate the consequence of hazards, then develop strategies to reduce the level of risk.

Risk Assessment Matrix		Consequence (C)				
Hazard (eg Anaphylaxis)		1=Slight	2=Minor	3=Moderate	4=Major	5=Severe
		No treatment	1st aid 1 or 2	1st aid >2	Hospital 1 or 2	Death or Hospital >2
Likelihood (L)	**5 = Almost certain** Is expected during activity	LOW	MEDIUM	HIGH	VERY HIGH	VERY HIGH
	4 = Very Likely Expected more often than not	LOW	MEDIUM	HIGH	VERY HIGH	VERY HIGH
	3 = Likely Will occur on occasion	LOW	MEDIUM	HIGH	HIGH	VERY HIGH
	2 = Unlikely May occur but more likely not to	LOW	LOW	MEDIUM	HIGH	HIGH
	1 = Very Unlikely Practically impossible to occur	LOW	LOW	LOW	LOW	LOW

Risk Assessment Table for Anaphylaxis				Risk Rating		
How to Use this Table: 1. Check 'Likelihood' score *(refer Matrix above)* **2. Check 'Consequence' score** *(refer Matrix above)* **3. Read 'Risk'** from *Risk Rating Matrix*						
No.	**Type**	**Activity**	**Hazard**	**Likelihood**	**Consequence**	**Risk**
#1	Child Day Care Centre	**BYO Lunches**	Children share lunches. Possible contamination.	3	5	VH
2		Cooking activity	Exposure to allergen. "Hidden" ingredient. Accidental cross contamination of ingredients	3	5	VH
3		Excursion	Exposure to trigger, communication difficulties, separation of child from medication.	4	5	VH
4	Other workplace	Catering for function	Accidental cross contamination of food platter, supplied by caterers for in-service training	3	3	H
#5		**Outdoor worker working alone**	Worker allergic to Jack Jumper Ant (JJA) works alone as a meter reader	2	5	H
6		Power line tree clearing	Worker allergic to bees	2	5	H

Risk Rating Matrix: *A risk rating matrix can be customised to meet needs of an organisation*		
Risk rating & Action	VERY HIGH	Activity **must not proceed** while any risk is rated **VERY HIGH**
	HIGH	Activity can only proceed while any risk is rated HIGH with risk solution approved and signed by Safety Officer and Management (Principal)
	MEDIUM	Risk management plan must be in place before activity begins
	LOW	No further action required

How to use the Template to Complete Risk Assessment:

Below are two worked examples of risk assessment. One example in a child care setting and one in another workplace.

 # 1 Sharing lunch: for an anaphylactic child who is allergic to food (eg egg products). After the "strategy" is put in place the residual risk is MEDIUM. The *Risk Rating Table* (above) shows a MEDIUM risk activity can proceed provided the risk management plan is in place.

 # 5 Working alone outdoors: Although it is unlikely that the worker will get stung, the consequence could be death. The residual risk is still HIGH. The *Risk Rating Table* (above) shows that HIGH risk "strategy" can proceed but must be approved by the safety officer and manager, to ensure all practicable steps have been taken to control the risk.

	Residual Risk			Person responsible	
Strategy **In schools and child care, strategies must be developed in consultation with parents.** **Each workplace should develop a set of strategies that is suitable for that workplace**	**Likelihood**	**Consequence**	**Risk**	**Name**	**Done**
Develop and implement "No Sharing" policy. Eat inside under supervision of staff trained in first aid. Autoinjector in room. Individual Anaphylaxis Plan in room. Send info in newsletter.	2	3	M	Room Coordinator	
Prior notification of activity. Plan menu in consultation with parents to determine safe ingredients/brands. Separate utensils for different foods. Correct labelling & storage of ingredients. Develop and initiate cleaning policy. Invite parents to assist.	1	3	L	Activity Coordinator	
Advise all workers of child's allergy. Ensure medication and copy of emergency action plan is with child. Take mobile phone on activity. Ensure first aider with anaphylaxis training is immediately available. Approved by Parent and Manager.	2	5	H	Activity Coordinator/ Manager	
Use only approved caterer. Advise caterers to prepare food separately, supplied on labelled platters. Nominate person to receive food. Advise all participants of risk and precautions.	2	4	H	Activity Coordinator/ Safety Officer	
Uniform protects ankles. Inspect meters before approaching. Carry mobile phone / radio as required. Establish monitored default SMS reporting. Utilise GPS monitoring. Carry medication on person. Wear medi-alert.	2	5	H	Safety Officer Supervisor	
Advise all co-workers. Medication immediately available. Advise first aiders and supervisor. Isolate worker if bees present. Establish alternative communication path if required.	2	5	H	Safety Officer Manager	

About Asthma

Asthma is a long-term lung condition. People with asthma have sensitive airways in their lungs which react to triggers, causing a 'flare-up'. In a flare-up, the muscles around the airway squeeze tight, the airways swell and become narrow and there is more mucus. These things make it harder to breathe. ***(See also pg 23 - First aid management of asthma).***

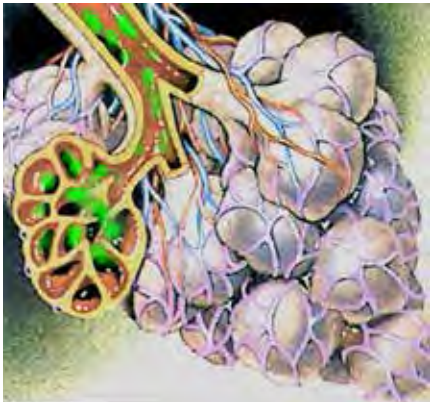
1 in 9 Australians have asthma – around 2.5 million. The rate of asthma among Indigenous Australians is almost twice as high as that of non-Indigenous Australians.

There are about 40,000 hospitalisations of asthma per year and 420 deaths per year due to asthma.

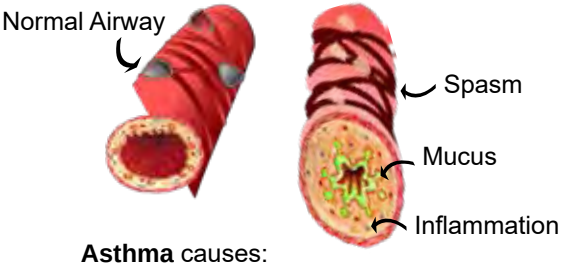
Why Asthma is Dangerous

Many people perceive asthma as dangerous because the casualty cannot get sufficient oxygen. The shortage of oxygen is serious. However, what is more dangerous is the toxic effect of acidosis which is caused by carbon dioxide building up in the blood stream. Acidosis can only be managed in hospital with advanced medical management. At this stage more oxygen will not "undo" the effects of the high carbon dioxide levels.

When a person's asthma can't be controlled with reliever medication it is critical that they receive urgent hospital care before carbon dioxide levels build to a critical or even irreversible level.

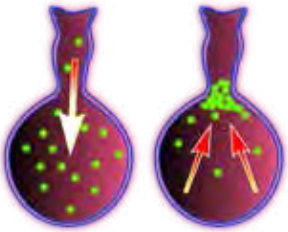


During an asthma attack, when a person exhales, the extra mucus forms a plug, trapping carbon dioxide in the lungs. This is the main reason asthmatics can't go SCUBA diving.



Asthma causes:

1. Inflammation of the bronchioles
2. Extra mucus in the lungs and
3. Spasm (contraction) of the muscles around the bronchioles



Inhalation **Exhalation**

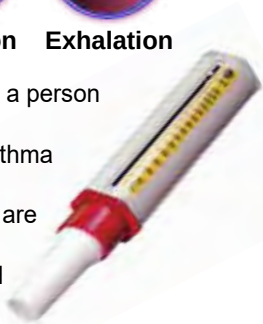
Peak Flow Monitoring

A peak flow meter is a portable, handheld device used to measure how fast a person can breathe out (exhale).

Measuring Peak Expiratory Flow (PEF) is an important part of managing asthma symptoms and preventing a flare-up in known asthmatics.

Keeping track of PEF readings, is one way of knowing if asthma symptoms are in control or worsening.

Peak flow readings must be measured regularly (usually every morning and night) on the same meter to be useful. There isn't a single 'normal' score; rather it's about working out what's normal for that person and then tracking if there are any changes.



Peak flow monitoring is not recommended for children under 12 yrs.

Asthma Medications

Asthma Medications fall into two broad categories - ***Relievers*** & ***Preventers.***
Inhaler medication comes in either **aerosol** or **powdered** form:
Puffers (MDIs) and Autohalers deliver aerosol medication.
Turbuhalers, Accuhalers and Elliptas deliver powdered medication.
Aerosol medications (Puffers and Autohalers) need *shaken* before use where as powdered medications do not.

RELIEVERS are bronchodilators. They primarily relax the muscles that wrap around the airway tubes (bronchioles). Relievers usually provide *fast acting, short term relief*. Relievers are used when a person is having an asthma attack. Relievers are coloured blue/grey.

PREVENTERS work on the underlying cause of asthma to reduce the sensitivity of the immune system so the body does not react to the asthma triggers. Preventers are slow acting and may take weeks to take full effect. Preventers DO NOT reduce the effects of an asthma attack - they make an asthma attack less likely. When a person is having an asthma attack, a preventer will NOT help them breathe easier. Preventers are coloured brown/orange.


Airomir Puffer


Airomir Autohaler


Asmol Puffer


Ventolin Puffer


Bricanyl Turbuhaler

EMERGENCY

Blue, Blue/Grey

Relievers

Metered Dose Inhaler = "puffer"

Names	Salbutamol brands are Ventolin, Airomir, Asmol. Terbutaline brand is Bricanyl.
Speed	Fast acting.
Purpose	Relax airway muscles.
Device	Ventolin, Asmol & Airomir Puffer; Airomir Autohaler; Bricanyl Turbuhaler

NOT **FOR EMERGENCY**

Orange, Brown

Preventers

Names	Brands include: Flixotide, Pulmicort, Qvar, Alvesco, Tilade, Intal Forte, Singulair
Speed	Slow acting. Can take weeks for full effect.
Purpose	Reduces the sensitivity to asthma triggers.
Device	Puffer, Accuhaler, Turbuhaler,Tablet.


Flixotide Accuhaler


Pulmicort Turbuhaler

Green

Symptom Controllers

Names	Oxis and Serevent
Speed	Slower acting than relievers. About 30 minutes.
Purpose	Relax airway muscles. Lasts up to 12 hours.
Device	Turbuhaler, Accuhaler


Qvar Autohaler


Alvesco Puffer

Purple

Combination Medication Preventer plus a Symptom Controller

Name	Seretide
Speed	Slower acting
Purpose	Prevention plus control of symptoms
Device	Accuhaler or MDI (Puffer). Taken twice a day.


Seretide Accuhaler


Seretide Puffer

Adult use only

Red & White

Combination Medication Can be used in emergency for ADULTS

Name	Symbicort
Speed	Reliever is fast acting
Purpose	Prevention plus control of symptoms
Device	Turbuhaler* or MDI (Puffer).
CAUTION	Symbicort may be used for casualties over 12, when prescribed. ***Max 6 doses at a time. Max 12 doses per day of Symbicort#.***


Symbicort Puffer


Symbicort Turbuhaler

Asthma Inhaler Devices

Medicine for asthma is most commonly taken through an inhaler, which gets the medicine straight into the lungs where it is needed. There are five major types of inhaler devices:

Puffer, Ellipta, Autohaler, Accuhaler,Turbuhaler.

All devices function differently but in all cases the user must:

- Exhale fully before inhaling the medication, then
- Hold the breath for 5 secs, then
- Exhale slowly through the mouth (away from inhaler).

This technique allows for max absorption of medication through the lungs.

Reliever & Preventer Puffers

Puffer

A puffer, or MDI (Metered Dose Inhaler), is the most common type of inhaler. A puffer delivers medication in aerosol form and must be ***shaken*** before given. There is no dose counter on the puffer, so it's important to keep track of how many times it's used. Using a puffer requires the operator to coordinate pressing down on the cylinder to release the medication while inhaling at the same time. This can be difficult for some, especially children, which is why spacer devices are recommended with puffers. Using a spacer with a puffer makes it easier to take the medicine, and also gets more of the medicine into the lungs.

Refer pg 23, on how to use reliever with puffer & spacer in emergency.

Generally, using a spacer with a puffer achieves better results.

Able Spacer with Ventolin puffer

Volumatic Spacer

Spacers:

- Help medication to reach the lungs.
- Protect the throat from irritation.
- Help coordinate breath with puff.

Spacers are for single person use only. *Once used from a first aid kit they need to be replaced*. A used spacer can be given to casualty. ***Personal spacers*** should be washed every month. Use warm soapy water; air dry; do not rinse.

Spacer with Mask for Child

Spacers can only be used with MDI's - other devices work differently (see below).

Ellipta

The Ellipta is a breath-activated device, which means the medication is released when inhaled. The Ellipta delivers preventative and combination medication in a powdered form.

To use the Ellipta, hold it in 1 hand. Slide the cover down with the other hand until the Ellipta clicks. This opens the Ellipta so the mouthpiece is visible and also loads the medicine. The inhaler is now ready to use.

Asthma Inhaler Devices

Autohaler

An autohaler delivers medication in aerosol form and works automatically when starting to inhale. This means there is no need to get the timing right, unlike using a puffer. There is no dose counter on the autohaler, so it's important to keep track of how many times it's used.

1.Take the cover off mouthpiece.

2. Shake autoinhaler well.

3. Hold upright and push lever up until it clicks into place.

4. Inhale slowly & deeply. The autohaler will release medication automatically.

Accuhaler

An accuhaler is a circular plastic inhaler which delivers medication in a powdered form.
There are 60 doses of medication and a dose counter on the side of the accuhaler indicates how many doses remain.The last 5 show up red.
Accuhalers need a strong in breath to operate so are not suitable for young children.

1. Open the accuhaler by pushing the thumb grip around until it clicks.

2. Slide the lever down until it clicks. The medicine is now loaded.

3. Place mouth over the mouthpiece and breathe in strongly through mouth.

Turbuhaler

A Turbuhaler is a white cylinder with a coloured base. It is used to deliver medicines in powder form. It has a dose counter window to see when nearly empty. The last 20 doses appear in red.

1. Unscrew the cover

2. Hold upright.Twist base as far to the right as it will go, then twist to the left until a click is heard.The click means the medicine is ready.

3. Inhale strongly through mouth.

NB.The rattling heard when the turbuhaler is shaken is the drying agent built into the coloured base. It is not the medication. The rattling noise can be heard even when the turbuhaler is empty.
The powdered medicine will be lost if after hearing the click (medicine loaded), the turbuhaler is • Shaken • Turned upside down • Dropped • Blown into.

Asthma Risk Assessment

*PPE = Personal Protective Equipment

Below are working examples of *Risk Management* and *Risk Assessment Strategies* for asthma. The Risk Assessment Table at the bottom extends across two pages and demostrates how a child care centre and workplace can manage identified asthma triggers.

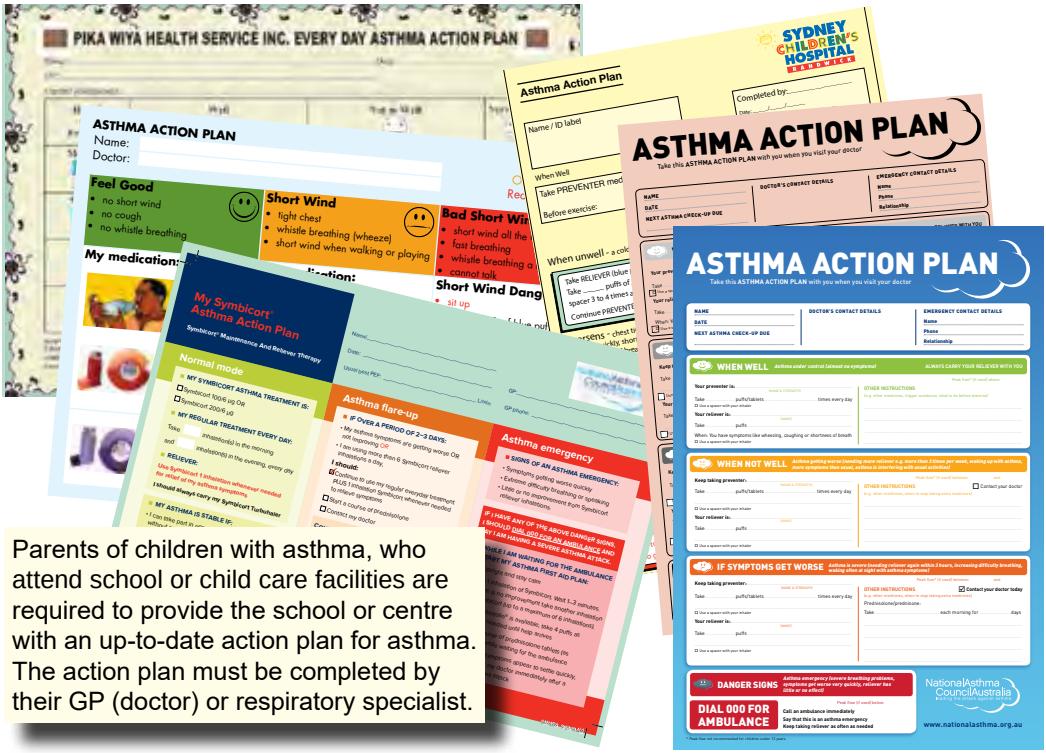
Child Care Centre: has three children with asthma enrolled. The asthma management plans supplied to the centre identify triggers: grass pollens; hair spray, cosmetics and food additives (MSG, sulphites and salicylates). **Workplace:** A factory worker reports asthma being triggered by the floor sanding. The residual risk is HIGH. The risk rating table indicates that the safety officer and management must both approve the strategies before work can proceed.

Common Asthma Triggers	Possible Risk Management Strategies
• **Pollens** from grasses, trees, shrubs	Consider removing problem plants around schools, child care centres and work places.
• **Weather Changes** especially sudden cold changes; moving from hot to cold.	Careful planning of night time activities, camps, working overtime, plan for unexpected delays. Preheat rooms.
• **Moulds** are affected by wind rain and temperatures. Can be present in garden mulches and wood chips.	PPE* when gardening, potting or working with mulches. Scheduled cleaning of bathrooms, commercial laundries; use nontoxic cleaners.
• **Animal dander and saliva** 	Consult with parents before introducing a "pet" day. Cats, dogs, horses, rodents, even insects, can trigger asthma.
• **Chemicals & cosmetics**	Develop a dress code policy. Avoid highly scented deodorant. Include cleaning staff in communication plan.
• **Foods & Additives**	Have a food policy. Check ALL ingredients, for identified triggers. Alert cooking staff, catering suppliers.
• **Dust & Dust Mites**	Schedule cleaning to reduce dust levels during open times. Vacuum frequently. Use damp cloth for dusting.
• **Exercise** is a common asthma trigger and affects about 50% of people with asthma.	Allow time for warm up AND warm down. Aim to control asthma rather than avoid exercise.

Risk Assessment Table for Asthma				Risk Rating		
No.	**Type**	**Activity, infrastructure or environment**	**Hazard**	**Likelihood**	**Consequence**	**Risk**
1	Child Care	Lawn Mowing	Grass pollens known trigger	4	3	H
2		Hair spray, cosmetics, deodorant, perfumes	Child care workers trigger asthma in sensitive children	3	2	M
3		MSG, sulphites, salicylates	Snack foods and lunches may contain ingredients that trigger asthma	4	3	H
4	Workplace	Employees triggered by dust	Cleaning and vacuuming disturb dust.	4	4	VH
5		Sanding timber floors	Occupational asthma caused by wood dust	5	4	VH

Asthma Action Plans

Asthma Management Plans and Asthma Action Plans are an integral part of an asthma policy and communication plan. There are a great variety of Asthma Action Plans available.
A sample of some of the range is presented here.



Parents of children with asthma, who attend school or child care facilities are required to provide the school or centre with an up-to-date action plan for asthma. The action plan must be completed by their GP (doctor) or respiratory specialist.

	Residual Risk			Person responsible	
Strategy **In schools and child care facilities, strategies must be developed in consultation with parents**	**Likelihood**	**Consequence**	**Risk**	**Name**	**Done**
Arrange for gardening to be conducted on weekends.	2	3	M	Manager	
Perfume and cosmetics policy. Communication plan to ensure all stakeholders notified.	1	2	L	Manager	
Food policy, no sharing policy. Treat alternatives provided by parents. Communication plan.	2	5	H	Coordinator/ Manager	
Communicate with cleaners. Arrange cleaning to be done after work. Budget for carpet replacement with alternative coverings.	2	4	H	Manager/ Safety Officer	
Dust extraction system. PPE. Positive pressure masks.	2	4	H	Safety Officer Supervisor	

Exercise Induced Bronchoconstriction (EIB)

Exercise Induced Bronchoconstriction (EIB), previously called Exercise Induced Asthma (EIA), is the temporary narrowing of the lower airways, occurring after vigorous exercise.
EIB may occur in people with asthma or in people without asthma.
In people with asthma who experience EIB, exercise is an asthma trigger.
NB. Not everybody that has asthma has EIB and some people with EIB may not have asthma.

Cause of Exercise Induced Bronchoconstriction:

Nasal breathing filters, warms and humidifies inhaled air. Increased mouth breathing during heavy exercise leads to cooler, drier air entering the lungs which causes breathing difficulties. Other environmental triggers which may contribute to EIB is air pollution, irritants, pollens and viruses. Symptoms of EIB may include: cough, wheeze, a feeling of tightness or discomfort in the chest, breathlessness and/or excessive mucus production. These symptoms often appear or get worse ***5-10 minutes after exercise*** and therefore may not affect performance whilst exercising. Some people will have a ***refractory period*** following exercise which means once recovered from one episode of EIB another episode of EIB may not follow for 2-3 hours after exercising again.

EIB is one of the first symptoms to appear in people with asthma who are not being treated adequately. Exercise is one trigger that should not be avoided. Therefore it is important to manage EIB so people with asthma can continue to participate in most sports.

How to Manage EIB:

• See your doctor • Take prescribed medication • Warm-up before exercise • Warm-down after exercise • Avoid environmental allergens or • Wear a mask • Train in warm, humid envionment • Breathe through nose • Quit smoking • Take reliever 5-20 minutes before exercise.

Tips for coaches: • Use the "2 Strikes - You Are Out" rule (*If symptoms occur during a match: Stop playing & take reliever. Resume activity if symptom free. If symptoms recur: take reliever, do not play again on same day.*) • Get whole team to warm-up / warm-down • Asthma training for coaches and first aiders • Display asthma posters and brochures in club rooms • Check with Australian Sports Anti-Doping Authority (ASADA) for info on banned medications.

Australian Sports Anti-Doping Authority (ASADA) 13 000 ASADA (1300 027 232)

Occupational Asthma (Asthma in the Workplace)

Occupational Asthma has become one of the most prevalent occupational lung diseases.
Irritants may include: • **Flour** • **Dust:** (cooks, bakers, farmers) • **Sawdust**: (builders, carpenters) • **Animals**: (vets, lab technicians) • **Detergents**: (cleaners) • **Resins** • **Solvents** • **Solder**: (repairers, builders, electricians, spray painters).

Managing Occupational Asthma:

The primary prevention should be focused on removing or reducing exposure at source. However, this isn't always possible and other proptocols can be implimented:
• PPE (Personal Protective Equipment) • Re-deploy workers to lower risk area or duties • Emergency Asthma Kit available at first aid station • Keep air filters clean • Seek less toxic alternatives • Provide emergency asthma management training to staff.

Asthma in Aged Care

Assisting people with asthma who have special needs and circumstances:
- **Wheelchairs**: Keep person in wheelchair; upright as possible.
- **In-bed asthma episode**: Raise the bed head or use pillows or cushions to support upright.
- **In shower or bath**: Maintain client in bath or shower (on seat if possible) in supported sitting position. Empty the bath water. Keep client warm. Preserve client's dignity - cover.
- **Communication difficulty**: Use communication aids to reassure and to give explanations.
- **Intellectual disability**: Develop and maintain regular routines.

Normal Clinical Values for Children

Generally children and infants have different heart rates and respiration rates from adults. These differences vary, depending on many conditions.

In adults it is generally accepted that:

- Normal heart rate/pulse (at rest) = **72/min**
- Normal breathing rate = **15/min**
- Normal temperature = **37ºC**

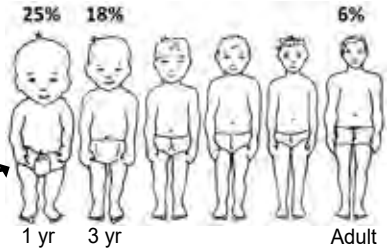
	Adults	12-5 y	5-1 y	<1 y
Pulse/min	60-100	80-120	95-150	100-180
Breaths/min	12-20	20-25	25-35	30-40
Temp ºC	36-37	36-37	36-37	36-37

Table shows approximate range of normal clinical values by age

Children and babies usually have the same temperature (37ºC) as adults.

Heart rate (pulse) and breathing rates are fastest in infants and younger children and slow down as the child gets older.

There are a number of other differences between smaller children and adults:



- Proportionally, an infant's **head is much larger** than an adult's. A baby's head is nearly 25% of total body surface area, while an adult head is only 6%. A burn to an infant's face is therefore more serious than a burn to an adult's face.
- Infants skull **bones are not fully knitted together**, which can make infants more vulnerable to head injury.
- **Cartilage in the trachea is not fully developed** at birth which means the airway is very soft and pliable and very easy to obstruct.
- Infants do not have fully developed **temperature regulatory systems** which means infants are more susceptible to hypothermia and hyperthermia.
- Children can become dehydrated very quickly, especially if vomiting or have episodes of diarrhoea.

Defibrillator (AED) for Child Care

Over 8: Use adult pads on a casualty who is unconscious and not breathing normally.

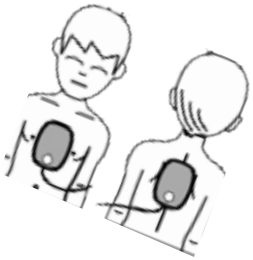
Under 8: When using an AED on those under 8 years, ideally use paediatric pads and an AED with a paediatric capability. However, if these are unavailable then it is reasonable to proceed with standard adult AED pads.

Many manufacturers recommend placing one paediatric pad on the front of the chest (over the heart) and the other one in the centre of the back.

Pads can also be placed as per adult positioning, provided the pads do not touch each other. Defibs with paediatric capability, automatically adjust the size of the shock to the size of the casualty.

Many AEDs will provide prompts and feedback if CPR is indicated, even if no shock is required or delivered. Check manufacture's instructions.

Care should be taken when purchasing an AED for an education or care setting to select a device that is suitable for the age group.



* AED = Automated External Defibrillator (pg 5)

Understanding Child Care Law

The **Australian Commonwealth Government** makes laws that apply to the whole of Australia (eg taxation law).

State Governments make laws that apply to individual States (eg health or education).

Local Governments make laws that apply to council only (eg use of incinerators).

The **Australian constitution** prohibits the Commonwealth government from passing laws about things not authorised in The Constitution.

Education and health are matters for State legislation.

National Child Care Regulations

National Child Care Regulations apply to • Child Care Centres • Long Day Care • Family Day Care • Pre-School • Out of School Hour Care (OOSH) but **NOT Schools**. ***Regulations for schools are the responsibility of each State Education Department.***

Both Commonwealth and State Governments recognise the need to have uniform child care regulations across Australia. The Commonwealth Government does not have legal jurisdiction to create this legislation so instead the States uses ***The Council of Australasian Governments*** **(COAG)** in cooperative action to pass the same legislation in each of their States. In addition, ***The Australian Children's Education and Care Quality Authority*** **(ACECQA)** was created to coordinate implimentation of National Child Care Legislation. However, because National Laws are not one single act of the Commonwealth Government but are the same legislation passed separately in each State, there can sometimes be a conflict in National Law (eg who can administer an adrenaline autoinjector). So even though National Child Care Regulations are intended to be the same across Australia they may vary from State to State, therefore it's important to check the law in your State.

WHO is COAG?
The Council of Australian Governments (COAG) was created to oversee policy reforms which require cooperative action by Australian Governments.
COAG created the NQF (National Quality Framework) and ACECQA to introduce National Child Care Law and Regulations.

WHO is ACECQA? ***The Australian Children's Education and Care Quality Authority*** (ACECQA) was created by COAG to provide national leadership in promoting continuous improvement in early childhood education and care and school age care in Australia.

National Child Care Legislation

Child care first aiders should be aware of the regulations that affect first aid and medications in child care settings. These are regulations 90 to 95.

90 Medical Conditions Policy:

This regulation requires education and care services to have a written policy about medical conditions.

91 Medical conditions policy must be provided to parents:

This policy is very important for children with medical conditions such as asthma, diabetes and anaphylaxis.

92 Medication Record:

This regulation is about medication records which must record the following details:
• Authorisation to administer • Medication • Dosage • Name of child • Method • Time and Date • Name of who administered • Other person's name • Signatures

93 Administration of medication:

Medication must be authorised and must be recorded. In an emergency, medication can be authorised verbally by a parent or if unable to be contacted, by a GP or emergency service.

94 Exception to authorisation requirement - anaphylaxis or asthma emergency:

Medication may be administered to a child without an authorisation in case of **anaphylaxis** or **asthma emergency**. In such cases, notify parent and emergency services as soon as practicable.

95 Procedure for administration of medication:

Medication must be: • Administered from it's original container • With child's name written on it • "in date" • Instructions must be followed • The dosage of the medication and • The identity of the child must be checked by another person (*Family Day Care do not need to check with another person*).

Regulations, Codes and Procedures

First Aiders in the workplace need to have knowledge of and comply with, State and Territory **regulations**, first aid **codes of practice** (also called compliance codes) and **workplace procedures**. Often workplace procedures will provide guidelines on how to comply.

Regulations: control a wide range of activities in the workplace such as -

- Qualifications required • Electrical safety • Storage and transport of dangerous goods
- Food safety • Transport including school busses • Fire safety

Codes of Practice: There are many Codes of Practice/ Compliance Codes covering a wide range of workplace health and safety issues. They give approved methods of how to comply with regulations. For example, the compliance code for first aid lists what to put into in a workplace first aid kit and explains how many first aiders are required in a particular workplace. The first aid compliance code also describes how to conduct a hazard assessment.

Workplace Policy & Procedures (P&P): are instructions written by an employer on how to perform tasks safely. Some examples of tasks that should have a P&P include:

- Cleaning a coolroom • Unloading a delivery vehicle • Using tools eg chain saw
- Cleaning an asthma spacer • Changing a nappy • Preparing for an excursion

Communication Plans

A **Communication Plan** is an essential part of managing anaphylaxis or asthma.
Risks to identify:

- Who needs to know (the stakeholders)
- The roles of each of the stakeholders
- What information is needed
- How the information will be distributed
- Where medication will be located

A ***Card System*** can assist children to summon help. The colour of the card, visible from a distance, is sufficient to alert staff.
Medical Alerts communicate to rescuers.

Privacy

Privacy is important. Personal information must be stored securely. The information can only be revealed to authorised people. The communication plan should explain who has access to this information.
In a school this would include teachers for example.
In a workplace this would include first aiders and supervisors.
A workplace must provide opportunity for new employees to reveal life threatening conditions during the induction process. The employer must act on the information when it is supplied.
An employee may choose NOT to reveal anaphylaxis, asthma or other medical conditions.
This will be more likely to happen if an employee senses they will be teased or bullied about their condition.
A communication plan should explore ways to encourage employees to inform key people about medical conditions and explain the benefits of sharing vital information with co-workers.
When co-workers know how to use an autoinjector, and know where it is located, they can respond to an emergency more efficiently.
Use notice boards and newsletters to raise awareness about medical conditions in the school, club house or workplace. Employees are more willing to reveal important edicalinformation if they feel the information will be used respectfully, in a supportive environment.

Permission

Always seek permission from an employee before passing on medical information that has been provided in confidence. This should be done in writing and to explain **how** the information will be circulated, **why** the information will be circulated and **who** the information will be provided to. This information can be included on the medical form, at commencement of employment.

Stakeholders:

In an ***office*** environment the stakeholders include:

- First Aiders
- Employers
- Co-workers
- Managers / supervisors
- Caterers

In a ***school setting*** stakeholders include:

- Carers & Parents
- First Aid Officers
- Teachers (also Relief & Temporary) and Teacher's Aids
- Speciality teachers including Sport, Drama, Music, Cooking and Teachers on Yard Duty
- Food industry staff including canteen and caterers
- Administration, cleaning staff, Maintenance and Bus Drivers
- Outdoor Education Staff
- School Camp Providers
- Volunteers
- Other students

In a ***factory*** the stakeholders include:

- Management
- Union representatives
- First Aid Officers & Safety Officers
- Health & Safety representatives
- Canteen staff / Catering contractors
- Co-workers / Supervisors

Principles of First Aid

What is First Aid? It's the immediate care of an injured or suddenly sick casualty until more advanced care arrives.

The aims of first aid are to:

- **Preserve life** – This includes the life of rescuer, bystander and casualty.
- **Protect from further harm** – Ensure the scene is safe and avoid harmful intervention.
- **Prevent condition worsening** – Provide appropriate treatment.
- **Promote recovery** – Act quickly, provide comfort and reassurance, get help, call ☎.

Helping at an emergency may involve:

• Phoning for help • Comforting casualty or family • Keeping order at an emergency scene • Administering first aid

There are many ways you can help, but first you must decide to act.

Reasons why people do not help:

• Fear of doing something wrong • Fear of disease transmission • Uncertainty about the casualty • Nature of injury or illness (blood, vomit, burnt skin can be unpleasant) • Presence of bystanders (embarrassed to come forward or take responsibility)

You may need to compose yourself before acting. Do not panic – a calm and controlled first aider gives everyone confidence. If you follow basic first aid procedures, you should deliver appropriate care, even if you don't know what the underlying problem is. Remember, at an emergency scene, your help is needed.

Getting Help:

Call ☎ for ambulance, fire or police. If ☎ from a mobile phone fails, call '112'.

If you ask for 'ambulance' a call taker will ask you the following: • What is the exact location of the incident? • What is the phone number from which you are calling? • Caller's name • What has happened? • How many casualties? • Condition of the casualty(s)

Stay calm and respond clearly. The call taker will provide you with first aid instructions and dispatch the ambulance and paramedics. DO NOT hang-up until you are told to do so or the operator hangs up first. If a bystander is making the ☎ call, ensure they confirm with you that the call has been made and that the location is exact.

Legal Issues

No **'Good Samaritan'** or volunteer in Australia has ever been successfully sued for the consequences of rendering assistance to a person in need. A 'Good Samaritan' is a person acting in 'good faith' without the expectation of financial or other reward. **Duty of care:** In a workplace there is an automatic duty of care to provide help to staff and customers, which means you are required to provide help to your best ability at your work place. In the community, you are usually under no legal obligation to provide first aid. **Consent:** Where possible, always gain consent from the casualty before providing first aid. If the casualty refuses help, you must respect that decision. When the casualty is a child, if feasible seek permission from the parent/ guardian. If the parent/guardian is not present immediate first aid should be given. In a child care situation, parents must notify the centre if the child has any medical conditions and also provide medications and instructions. Consent forms are signed at enrolment. In an emergency, parents or a doctor can also provide authorisation over the phone. *(see also reg 94 on pg <?>)* **Confidentiality:** Personal information about the health of a casualty is confidential. This information includes details of medical conditions and treatment provided. First aiders should only disclose personal information when handing-over to medical assistance eg paramedics. **Currency requirements** for first aid skills & knowledge varies between jurisdictions. A first aid certificate is a statement that the candidate was assessed as competent on a given date. The accepted industry standard is that certificates are valid evidence of competency for **3 years for first aid and 1 year for CPR**. Some industries require employees to renew certificates more frequently.

Communication

The role of the first aider depends on gaining and honouring the trust of casualties. Maintaining trust requires attentiveness to body language, quality of listening and finding culturally appropriate ways of communicating that are courteous and clear. It may sometimes be necessary to communicate through verbal and non-verbal communication and you may need to identify issues that may cause conflict or misunderstanding. The first aider also needs to maintain respect for privacy and dignity and pay careful attention to client consent and confidentiality.

Reports

Workplaces and child care centres have legal duty to complete incident reports. While waiting for help and if time permits, make a brief written report to accompany the casualty to hospital. This will reduce time spent at the scene for ambulance crew and further assist medical and nursing staff with initial casualty management. A report can be written on a spare piece of paper and should include the following:

- **Date, time, location of incident**
- **Casualty details** - Name, DOB, Address.
- Contact person for casualty - Family member, friend.
- **What happened** - Brief description of injury or illness.
- **First aid action taken** – What you did to help the casualty.
- **Other health problems** – Diabetes, epilepsy, asthma, heart problems, operations.
- **Medications/ allergies** – Current tablets, medicines.
- **When casualty last ate or drank** – Tea, coffee, water, food.
- **Observations of Vital Signs** - Conscious state, pulse, breathing, skin state, pupils.
- **First aider's name/ phone number** in case medical staff need any further information.

The back inside page contains a 'First Aid Report Form,' which can be torn off and used at a first aid incident.

Record Keeping

Workplaces and child care centres have legal duty to complete incident reports. It is important to use the correct documentation and record keeping used in first aid situations. Every organisation also has its own procedures and documentation so familiarize yourself with the correct process.

All documentation must be legible and accurate and must contain a description of the illness or injury and any treatment given. Thorough and accurate medical records are essential in any court case or workers compensation issue.

In addition: • Write in pen (not pencil) • Never use correction fluid – cross out and initial any changes • Sign and date the form • Keep records strictly confidential and store in a locked cabinet • Ensure electronic records are password protected.

Self-help/ Evaluation

Each person reacts differently to traumatic events and in some instances strong emotions may affect well being and work performance. Symptoms may appear immediately or sometimes months later after an event and may develop into chronic illness.

There is no right or wrong way to feel after an event. It is important for all people who have been involved in an incident take part in a debrief. Workplaces must provide opportunity for debriefing after an incident. In a community setting speaking to an understanding friend, counsellor or medical professional may be beneficial in assisting you to cope with the situation. In addition, seeking feedback from medical personnel about your first aid performance may assist with self-improvement and prepare you better for any future events.

Some Reactions/ Symptoms • Crying for no apparent reason • Difficulty making decisions • Difficulty sleeping • Disbelief • Irritability • Disorientation • Apathy • Sadness • Depression • Excessive drinking or drug use • Extreme hunger or lack of appetite • Fear/anxiety about the future • Feeling powerless • Flashbacks • Headaches • Stomach problems • Heart palpitations • Muscle aches • Stiff neck

Needle Stick Injury

Needle stick injury causes a penetrating wound that usually does not bleed much. The risk of infection is higher because the wound is not flushed by bleeding.

Common causes of needle stick type injury are:

- Syringes • Fish hooks
- Nails • Tools eg screw driver

Reduce the risk of needle stick injury:

- Never bend, snap or re-cap used needles
- Place used needles into a sharps container
- Follow workplace procedures when using tools
- Use personal protective equipment (PPE) provided by workplace
- Hepatitis B vaccination for workers who regularly come in contact with blood/ body fluids

NB. Disposable gloves will not protect against needle stick injury.

FIRST AID

- Hold wound under runninng water.
- Wash wound with soap.
- DO NOT scrub or suck wound.
- Place syringe in plastic drink bottle or sharps container.
- Take syringe to hospital for analysis.

Infection Control

Minimise the risk of cross infection to yourself, casualty and bystanders with good hygiene and use of **standard precautions to control infection:**

Prior to treatment:

- Wash hands with soap and water, or rinse with antiseptic.
- Cover cuts on your hands with a waterproof dressing before putting on gloves.
- Wear disposable gloves.
- Do not touch any unclean object when wearing gloves
- Use a plastic apron and eye protection.
- Cover any adjacent areas likely to produce infection.

During treatment:

- Use a face shield/ mask, if available when performing resuscitation.
- DO NOT cough, sneeze or breath over a wound.
- Avoid contact with body fluids.
- DO NOT treat more than one casualty without washing hands and changing gloves.

After treatment:

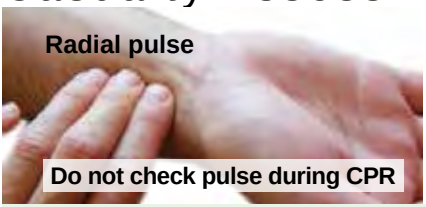
- Clean up the casualty, yourself and immediate vicinity.
- Safely dispose of used dressings, bandages and disposable gloves
- Wash hands thoroughly with soap and water, even if gloves were used.
- Restock first aid kit.

First Aid Kits

- Locate first aid kits in workplaces, vehicles and in the home in a clean, dry, dust-free location.
- Make sure first aid kits are **accessible** and signage clearly indicates their location.
- **Check** kits regularly for completeness and valid dates.
- Contents will **vary** depending on the number of employees, and the **industry** you work in. High risk industries may need extra modules.
- List **first aid officers** in workplace kits.
- Under **State and Territory legislation** first aid kits are required in all workplaces.
- First aid Codes of Practice (or Compliance Codes) indicate contents for first aid kits.

Contents for workplace first aid kit from WorkSafe Vic Compliance code	
Basic first aid notes	1
Book for recording first aid provided	1
Disposable gloves	2
Individually wrapped sterile adhesive strips	10
Large sterile wound dressings	1
Medium sterile wound dressings	1
Non-allergenic tape	1
Plastic bags for disposal	2
Resuscitation mask or shield	1
Rubber thread or crepe bandage	2
Safety pins	5
Scissors	1
Small sterile wound dressings	1
Sterile coverings for serious wounds	1
Sterile eye pads (packet)	2
Sterile saline solution 15 mls	2
Triangular bandages	2
Tweezers	1
Also contact details for First Aid Officers & emergency services	

Casualty Assessment



When dealing with a person who is ill or injured, you need a clear **Plan of Action:**

1. Start with a Primary Survey (DRSABCD) (pg3) which enables identification and management of life-threatening conditions.
2. If there are no life-threatening conditions which require immediate first aid (severe bleeding, no response) then proceed to **Secondary Survey.**

Secondary Survey:

is a systematic check of the casualty involving Questions • Examination • Clue Finding to help identify problems that have been missed.

- If the casualty is unconscious, the secondary survey is conducted in the recovery position. You may need to look for external clues and ask bystanders some questions.
- If the casualty is conscious start with questions followed by examination. Remember to introduce yourself, ask for consent to help and ask their name.

Questions:

- What happened? Where are you?
- Do you feel pain or numbness anywhere? Describe pain from 1 to 10; 10 being the worst pain
- Can you move your arms and legs?
- Do you have any medical conditions or take any medications?
- Do you have any allergies?
- When did you last eat?
- (Bystanders may be helpful)

External Clues:

Medical Alert: Bracelet or necklace often worn by people with medical conditions such as diabetes or anaphylaxis.

Medications: In their hands or nearby.

Look for clues that suggest what happened: eg fallen from ladder, hit by object, broken glass, containers of poison.

Examination

Vital Signs: indicate body function and provide a guide to the casualty's condition and response to treatment. The specific vital signs monitored will depend on needs of the victim and level of training of the rescuer.

- **Conscious State:** There are 3 broad levels – •Conscious •Altered consciousness •Unconscious
  Altered consciousness = uncooperative, aggressive, confused, drowsy.
- **Pulse:** The carotid pulse in the neck is the best pulse to check. Feel for rate, rhythm, force, irregularities.
  Normal pulse rates: Adults: 60-80 /min
  Children: 80-100/min
- **Breathing:** Look, listen and/or feel for breathing rate, depth and other noises eg wheezing, noisy breathing.
  Normal breathing rates: Adults 16-20 breaths/min
  Children: 25-40 breaths/min
  (Check pulse/ breathing for **15 secs then x by 4** to get rate/min. Use a watch if possible)
- **Skin State:** Look at face and lips.
- Red, hot skin – fever, heat exhaustion, allergy
  Cool, pale, sweaty – shock, faint, pain, anxiety
  Blue lips (cyanosis) – airway obstruction, asthma, flail chest, collapsed lung, heart failure, hypothermia
- **Pupils:** Unequal, reactive to light
- **Temperature** (see next page).

Head to Toe:

- Seek consent from a conscious casualty first.
- Look & feel for bruises, cuts, deformities and painful areas.
- Start from the head and work down.
- Explain to casualty what you are about to do at each stage eg "I'm just going to check your arm". Ask for feedback eg "Does it hurt when I move your arm?"

First Aid Incident Report Form

(Complete this form as best as you can and give copy to paramedic and keep record in accordance with WHS procedures)

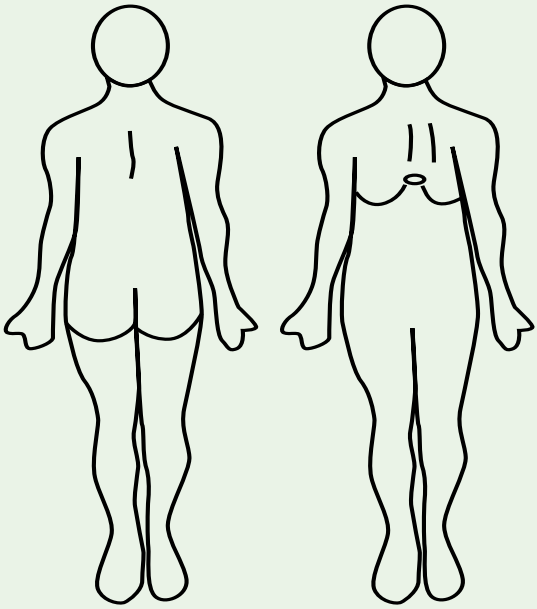
Date: / / Time:	Location:	
Casualty Details:		
Name:	DOB: / /	M / F
Home Address:		
	Postcode:	
Family Contact Name:	Phone	Notified ☐ yes
Work department:	Supervisor name:	Notified ☐ yes
	Management::	Notified ☐ yes
	Work safe:	Notified ☐ yes
What Happened (a brief description):		
First Aid Action Taken:		
Ambulance called: ☐ yes Time:	Referred to:	
Known health issues	Current Medications:	
Diabetes ☐ yes		
Epilepsy ☐ yes	Known Allergies:	
Asthma ☐ yes		
Anaphylaxis ☐ yes	Last ate or drank: What?	
Heart ☐ yes	When?	
Other	Medications given	
	What / Time / Dose	

Casualty Examination: mark location of injuries on diagram and briefly describe injury eg cut, bruise, pain, swelling, burn.

Verbal Secondary Survey

W-H-A-M-M-M-E-D

What happened
Hurt - where does it hurt
Allergy
Medications
Medical conditions - alerts
Move your arms and legs
Eat or drink last
Document the answers



Observations of Vital Signs:

Time					
Conscious State Fully Conscious Drowsy Unconscious					
Pulse rate: description:					
Breathing rate: description:					
Skin State Colour: Temp: Dry/Clammy:					
Pupils  R L					

First Aider's Details:
(In case the hospital needs to contact you for more information regarding the incident).

Name:(Print)_____

Phone: _____ Signature: _____

Asthma/Anaphylaxis Management Plan

School/Employer:			
Phone:			
Student/Employee name:			
Date of birth		Age:	Year level/Department:
Severely allergic to:			
Other health/medical conditions:			
Storage Location of Medication:			
Parent/carer/next-of-kin information 1		Parent/carer/next-of-kin information 2	
Name:		Name:	
Relationship:		Relationship:	
Home phone:		Hor	
Work phone:		Wo	
Mobile:			
Address:		A	
Other emergency contacts (if above unavailable):			
Medical practitioner contact:		Phone:	
Emergency care to be provided at school/work:		Refer to action plan. Other:	
General use autoinjector storage:			
The anaphylaxis management plan has been put together with my knowledge and input			
Communication plan actioned:			Review date:
Signature of parent/employee:			Date:
Signature of principal/supervisor:			Date:

This management plan can be adapted to a workplace and should include:

- Location of workplace
- Type of work undertaken
- Layout of workplace
- Location of medication
- Availability of emergency assistance
- Likelihood of working alone

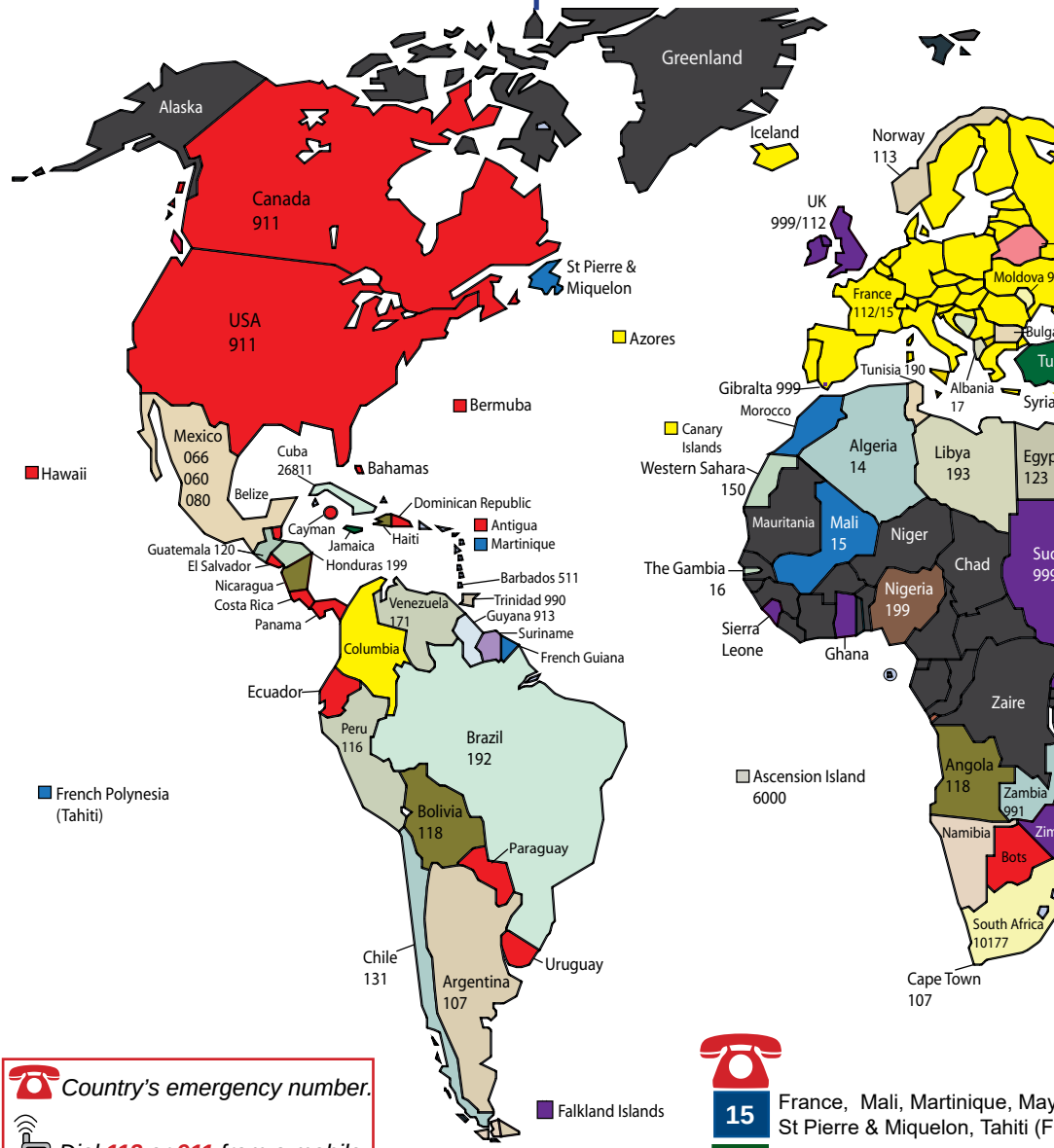
RISK	STRATEGY - *remove the risk if possible: otherwise reduce the risk*	WHO
Music	Music teacher to be aware, there should be no sharing of wind instruments. e.g. recorders. Speak with the parent about providing the child's own instrument.	Music teacher
Canteen	• Staff (or volunteers) trained to prevent cross contamination of 'safe' foods • Child having distinguishable lunch order bag • Restriction on who serves the child when they go to the canteen • Photos of the "at risk" children in the canteen • Encourage parents of child to view products available • Display posters / School Canteen Discussion Guide. www.allergyfacts.org.au	Canteen manager
Sunscreen	• Parents of children at risk of anaphylaxis should be informed that sunscreen is offered to children. They may want to provide their own.	Principal
Excursions	• Plan an emergency response procedure prior to the event. • Outline the roles of teachers / helpers if an anaphylactic reaction occurs. • Distribute laminated cards to all attending teachers, detailing the following: Location of event, Map reference, Nearest cross street. • Procedure for calling ambulance advise: allergic reaction; requires adrenaline. • Prior to event, check that mobile phone reception is available and if not, consider other form of emergency communication eg radio.	Excursion planner

Risk Assessment Form

USE WITH RISK ASSESSMENT MATRIX (pg 10)		Risk Rating *use matrix*			Elimination / Control Measures	Residual Risk *use matrix*			Person Responsible	
Activity *Enter the activity or location*	**Hazard** *Describe what could go wrong*	Likelihood	Consequence	Risk	**Strategy** *Explain steps to remove the risk or reduce the risk to an acceptable level. In schools and child care centres strategies must be developed in consultation with parents*	Likelihood	Consequence	Risk	**Name**	**Date**

Plan prepared by:		Signature:		Date:	
In consultation with:		Position:			
Communicated to:		Comments:			
Venue and safety information reviewed: yes no					
Attached: yes no		Review this risk assessment annually or after an incident or significant change.			

World Map of Internationa



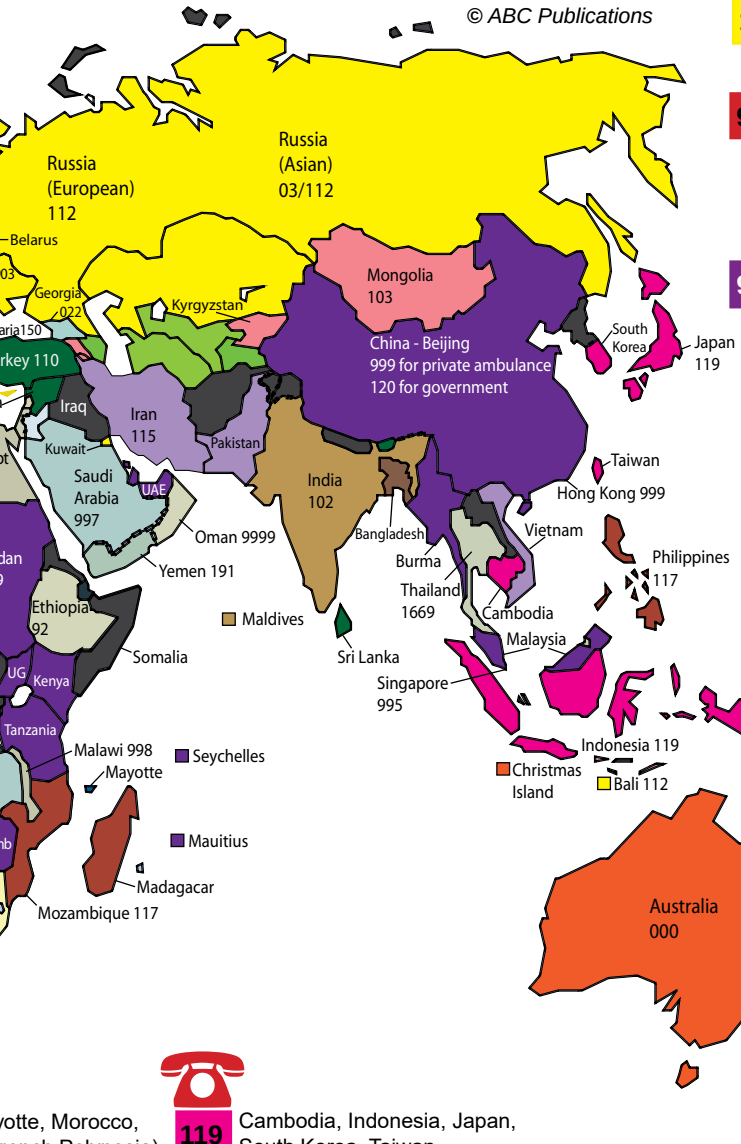
Country's emergency number.

*Dial **112** or **911** from a mobile phone with GSM coverage anywhere in the world and your call will be automatically directed to that country's emergency number.*

911

15	France, Mali, Martinique, May St Pierre & Miquelon, Tahiti (F
110	Bhutan, Jamaica, Sri Lanka, S
117	Madagasca, Mozambique, Phi
118	Andorra, Angola, Bolivia, Haiti San Marino
199	Bangladesh (Dhaka), Nigeria
No National Emergency Num	

l Emergency Numbers



112 Most of Europe, Azores, Bali, Canary Islands, Columbia, Cyrus, Kuwait, Malta, Vanuatu

911 Bahamas, Belize, Bermuda, Botswana, Canada, many Caribbean Islands, Fiji, Hawaii, some South America countries, Tonga, United States (USA)

999 Beijing, Burma, Channel Islands, Falkland Islands, Ghana, Gibralta, Hong Kong, Kenya, Malaysia (Singapore 995), Mauritius, Niue, Qatar, Samoa, Seychelles, Sierra Leone, Solomon Islands, Sudan, Tansania, Uganda, United Arab Emirates (UAE), United Kingdom (UK), Zimbabwe

yotte, Morocco,
rench Polynesia)

Syria, Turkey

ilippines

, Nicaragua,

119 Cambodia, Indonesia, Japan, South Korea, Taiwan

115 Iran, Pakistan, Suriname, Vietnam

103 Armenia, Belarus, Kyrgyzstan, Mongolia

03 Azerbaijan, Kasakhstan, Russia (Asian) Tajikstan, Uzbekistan

000 Australia, Christmas Island, Norfolk Islands

nber

112

Emergency Numbers

	Country		
	Australia		
	000		
	112		
	13 11 26		
Embassy 			
Travel Agent			

Dial **'112'** or **'911'** from a mobile phone with GSM coverage anywhere in the world and your call will be automatically directed to that country's emergency number.

Local Emergency Numbers

	Phone	Notes
DOCTOR		
DENTIST		
HOSPITAL		
PHARMACY		
POLICE		
TAXI		
ELECTRICAL		
GAS		
WATER		
VEHICLE BREAKDOWN		

ABC of First Aid Asthma & Anaphylaxis

ABC of First Aid Asthma & Anaphylaxis is divided into seven main colour coded sections:

1. ***Essential First Aid***
2. ***Trauma***
3. ***Medical Emergencies***
4. ***Anaphylaxis***
5. ***Asthma***
6. ***Education & Childcare***
7. ***General First Aid***

In conjunction with an approved first aid course, this book will assist you learn the skills to handle most emergency situations.

This book incorporates the latest guidelines and is written for Australian conditions.

For training purposes, this book satisfies the Australian Health Training Package competency units:

HLTAID001: Provide CPR
HLTAID002: Provide Basic Emergency Life Support
HLTAID003: Provide First Aid
HLTAID004: Provide an Emergency First Aid Response in an Education and Care Setting

22282VIC: Course in the Management of Asthma Risks & Emergencies in the Workplace
22300VIC: Course in First Aid Management of Anaphylaxis

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