







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 translated to that country's emergency number.

Local Emergency Numbers

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

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
- HLTAID006: Provide Advanced First Aid
- 22282VIC: Course in the Management of Asthma Risks and Emergencies in the Workplace
- 22099VIC: Course in First Aid Management of Anaphylaxis
- HLTHSE204D: Follow safe manual handling practices

ABC to Advanced First Aid



2nd Edition

ABC to Advanced First Aid

Clear and Simple First Aid Advice

Now Incorporates Asthma & Anaphylaxis Advanced First Aid Safe Manual Handling



International Emergency Numbers Latest Guidelines

Dr Audrey Sisman & Richard Lloyd

ABC to Advanced First Aid

2nd Edition March 2015
Published by: ABC Publications
PO Box 106 Mapleton, Qld 4560
Australia

Authors: Dr Audrey Sisman, MBChB, Richard Lloyd
ISBN: 978-0-646-50354-7

Copyright © 2015 ABC Publications
All rights reserved. Reproduction of this book, in part or entirely, without written permission is prohibited.

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


For more information about this book visit: www.abcpublications.com.au

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 to Advanced First Aid is divided into colour coded sections.

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.

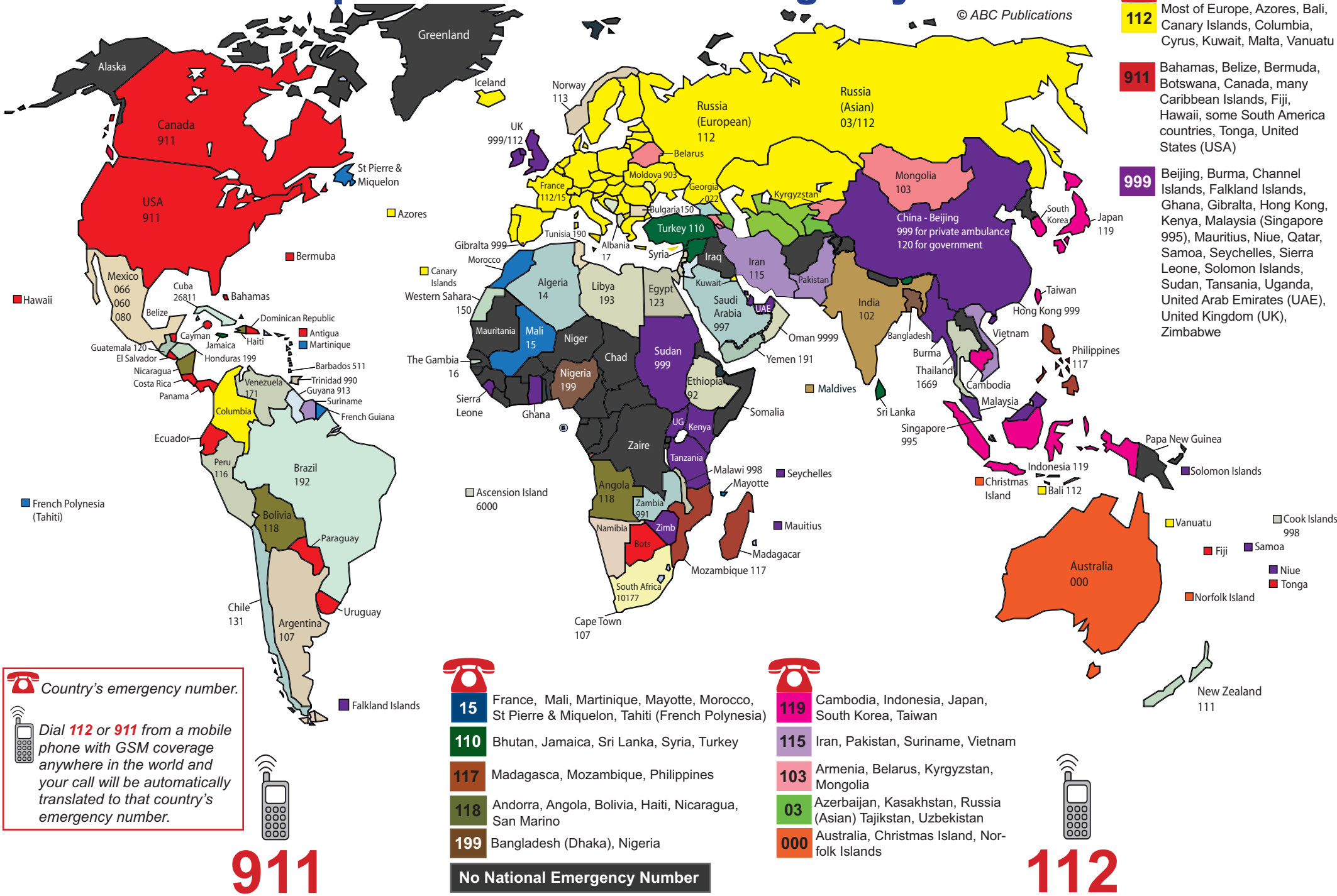
 means dial your country's emergency number.

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 Report Form** and **Workplace Casualty Report Form** which can be torn out and used in a first aid incident.



World Map of International Emergency Numbers



Contents

Essential First Aid

Unconsciousness	2
DRSABCD	4
CPR	5
Choking	6
Drowning	7
Soft Tissue Injury & Fracture	8

Trauma

Upper Limb Injury	9
Lower Limb Injury	10
Lower Limb Injury	11
Bleeding.....	12
Shock.....	14
Crush Injury	14
Burns	15
Electric Shock.....	16
Multiple Casualties/ Prioritising.....	16
Chest	17
Abdomen	18
Eye	19
Head Injury	20
Spinal Injury.....	21
Heart Conditions.....	22

Medical emergencies

Asthma	23
Croup/ Epiglottitis	24
Faint.....	24
Seizure/ Epilepsy.....	25
Febrile Convulsion.....	25
Diabetes	26
Stroke	27
Hyperventilation.....	27
Heat Exposure.....	28
Cold Exposure	29
Bites/ Stings.....	30
Poisons.....	32
Allergy/ Anaphylaxis	33
Why Asthma is Dangerous	34
Asthma Medications & Devices	34

Asthma & Anaphylaxis

Asthma in the workplace	35
Exercise Induced Asthma (EIA).....	35
Allergy/Anaphylaxis Facts	36
About Anaphylaxis	37
Manage Anaphylaxis Risks.....	38

Risk Assessment

Anaphylaxis Action Plans	39
Assess Hazards and Minimise Risk	40
Risk Assessment Matrix	40
Risk Rating Table.....	41
Asthma Risk Assessment	42
Asthma Action Plans.....	43

Education & Child Care

Communication Plans.....	45
Normal clinical values for children	46
AED* for child care	46
Understanding Child Care Law.....	47
Casualty Assessment	48

Advanced First Aid

Temperatures.....	49
Hazardous substances	49
Childbirth	50
Substance Misuse	52
Capabilities of Emergency Services	54
Administration of Medication	54
Principles of First Aid	55
Legal Issues	55

General First Aid

Communication.....	56
Record Keeping.....	56
Self-help/ Evaluation.....	56
Needle Stick Injury.....	57
Infection Control	57
First Aid Kits.....	57
Workplace Health and Safety	58
Safe Work Practices	58

Manual Handling

Lift and lower procedure	59
Reducing Risk	60
Return to work	60

Forms

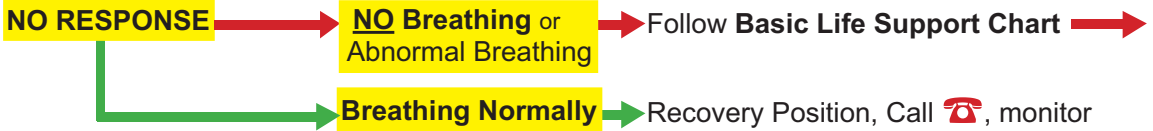
Asthma/Anaphylaxis Management Plan.....	61
Risk Assessment Form.....	62
First Aid Incident Report Form.....	63

**World Map with
Emergency Numbers**



Inside Back Cover

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



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

Causes of an unresponsive (unconscious), breathing state:

- A - Alcohol
- E - Epilepsy (pg 25)
- I - Insulin (Diabetes pg 26)
- O - Overdose (Poisons pg 32)
- U - Uraemia (renal failure)
- T - Trauma (head/spinal pg 20, 21)
- I - Infections (meningitis)
- P - Pretending
- S - Stroke (pg 27)

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.

(An unconscious, breathing woman in advanced pregnancy should be 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.

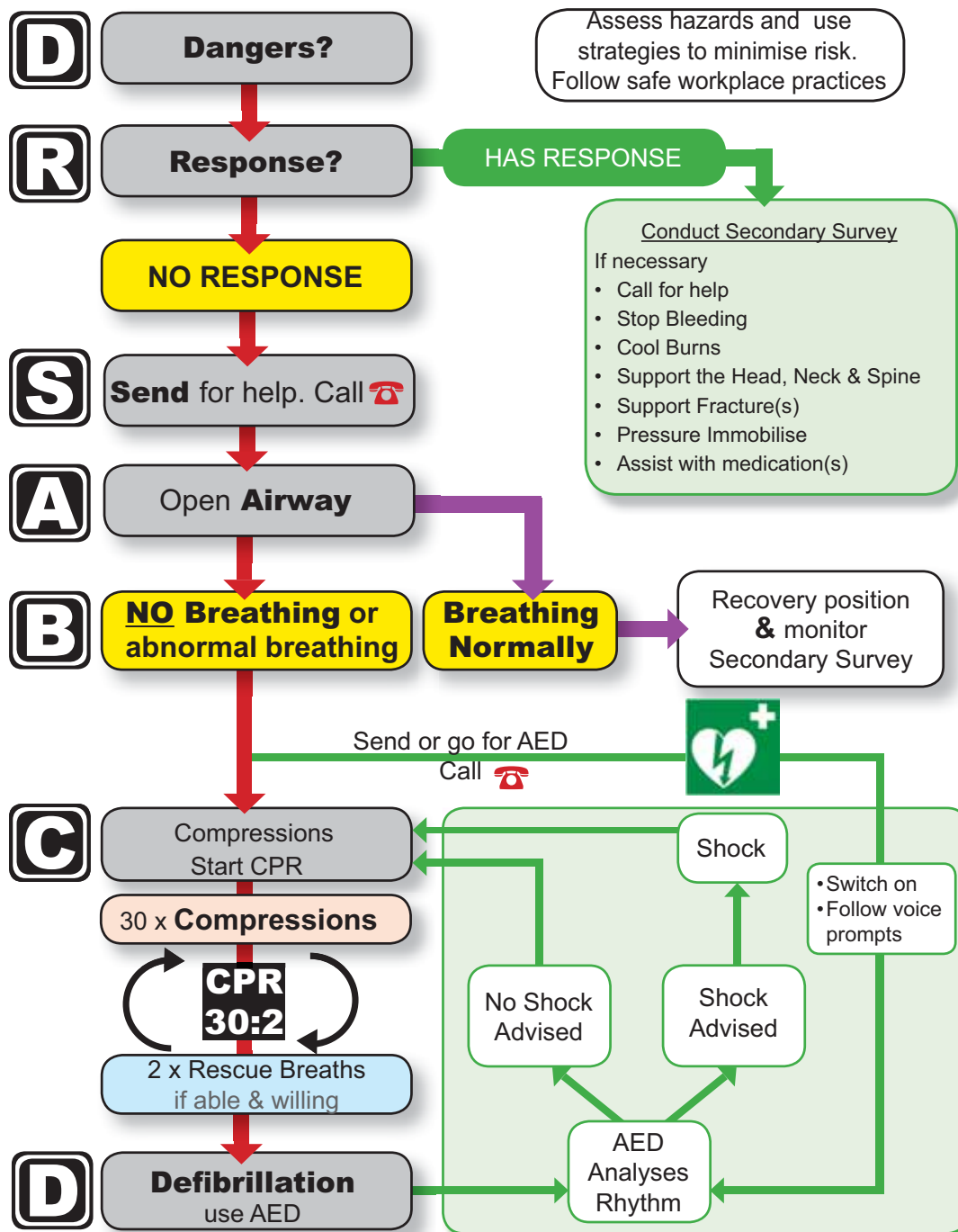


Step 3

- 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

© ABC Publications



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 (see pg 57)**
- **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.

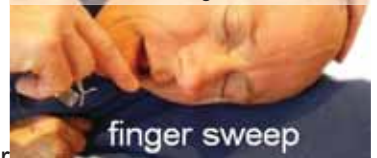
Airway

- 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.

To clear foreign material



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, 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 = 100 per 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 a rate of 100 per 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 the 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
- If unwilling or unable to give RB: just do compressions.
- Obviously pregnant - put padding under right hip.

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



- Use AED when casualty is unconscious & not breathing normally.
- When there are 2 rescuers, continue CPR while one rescuer organises and attaches AED pads:
- Switch on AED & follow voice prompts of the AED.
- Place pads on bare, dry chest - remove clothing, jewellery, medication patches, wipe chest dry, avoid piercings and pace-makers, remove chest hair with razor or scissors.
- **Do not use an AED on infants** (< 12 months)
- **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.

For first aid purposes:

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

Children **under 8**, use with child pads *if available*, otherwise use adult pads. If pads touch each other, position one pad on the front and the other pad on the back of the chest. Check manufactures instructions. Choose appropriate AEDs for child care. (pg 46)

NB. No harm to rescuers has occurred while using an AED in the wet

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

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.



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.

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.

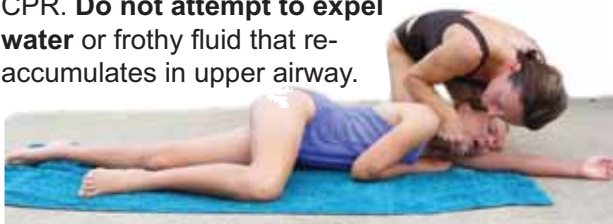
SIGNS & SYMPTOMS

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

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.



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.

- **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.

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 **Hypothermia** (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.

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

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.

FIRST AID

- Control external bleeding or cover wound (pg 12)
- 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.

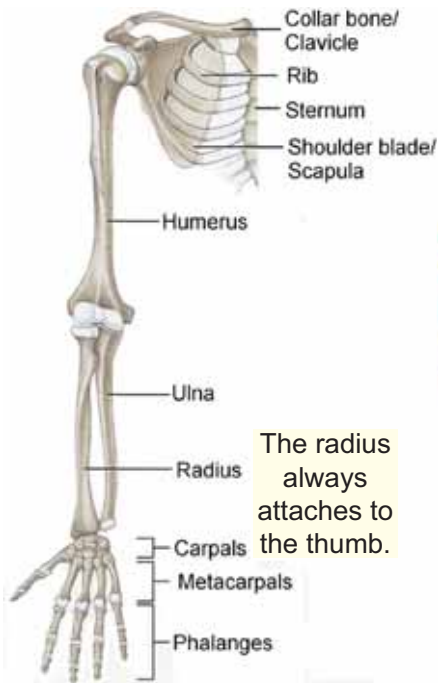
Open Fracture: Risk of blood loss and infection.

Breathing difficulty

- Monitor Vital Signs (pg 48, 49)



means call your country's emergency number



Arm Slings:
Use a triangular bandage or improvise.



Elevation Sling



Arm Sling



Collar & Cuff Sling

Upper Limb Injury

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.

Fractured humerus:
Notice deformity



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

Pain in:

Could be:

Management:

Shoulder

- Fractured clavicle
- Dislocated shoulder
- Fractured upper humerus
- Sprain/ strain

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

• 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)

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 (pg 48, 49)

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.

Hip Injury



Thigh Injury

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 14) 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



Ankle Injury

R.I.C.E.R.

Support knee in position of comfort. Do not try to straighten knee if painful.



Knee Injury



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

Fracture site.



Position splint underneath limb to support & immobilise fracture.

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	<ul style="list-style-type: none"> • Fractured Pelvis • Fractured neck of femur • Dislocated head of femur • Sprain/strain 	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Fractured femur • Strain: front of thigh (quadriceps) • Strain: back (hamstrings) 	
Knee	<ul style="list-style-type: none"> • Fractured patella • Dislocated patella • Cartilage tear • Sprain 	
Lower Leg/Ankle	<ul style="list-style-type: none"> • Fractured tibia • Fractured fibula • Dislocation • Sprain/ strain 	
Foot	<ul style="list-style-type: none"> • Fractured tarsal/metatarsal/phalange • Dislocation • Sprain/ strain 	

Bleeding (haemorrhage) can be external and obvious or internal (within the body) and often not seen.

Bleeding is classified according to the type of blood vessel damaged:

- Arterial Bleed - damaged artery; bright red blood; spurting
- Venous Bleed - damaged vein; dark red blood; flowing
- Capillary - tiny blood vessels; bright red blood; oozing

Types of wounds associated with bleeding are:

- Abrasion • Incision • Laceration • Puncture • Embedded object • Tear • Amputation


Minor Skin Injuries: Wash your hands with soap and water before and after.

- Wash dirt away from the wound with clean water.
- Use antiseptic to kill surface bacteria, and rinse off after 5 mins because antiseptics can interfere with the natural healing process.
- Cover with non-stick dressing if necessary

Major External Bleeding:

- The aim is to reduce blood loss from the casualty.
- Direct, sustained pressure is the fastest, easiest, most effective way to stop bleeding.
- Apply direct or indirect pressure on or near the wound as appropriate.

FIRST AID

- Check for Dangers to self, casualty & bystanders.
- Use disposable gloves if available.
- **Direct Pressure Method:**
- Quickly check for embedded objects (pg 13)
- Identify the bleeding point and apply firm direct pressure until bleeding stops.
- Maintain pressure over the wound using hands or pad (sterile dressing, tea towel or handkerchief).
- Bandage firmly to hold pressure pad in place.
- **If bleeding continues** - apply another pad and a tighter bandage.
- Elevate bleeding part, restrict movement, immobilise the part, advise casualty to rest
- Call 
- Reassure casualty.
- Monitor vital signs (pg 48, 49)
- Give oxygen if available.
- DO NOT give casualty food, alcohol, medication.
- **If major bleeding continues** - remove all pads to locate a bleeding point, then apply a more direct pressure over the bleeding point.
- Treat for shock (pg 14) if required.



Direct Pressure and Elevation


TOURNIQUET: Used to control life-threatening bleeding (eg traumatic amputation of a limb).

- Use as a **LAST RESORT**.
- Use a wide bandage (>5 cm wide).
- Apply **high** above wound.
- Ensure tourniquet is clearly visible.
- Tighten until bleeding stops.
- Note the time of application; write time of application on casualty.
- Continue to maintain direct pressure over wound.
- DO NOT apply tourniquet over a joint or wound.
- DO NOT remove tourniquet until casualty receives specialist care.

Embedded Object: eg knife, glass, stick or metal.

Bleeding


FIRST AID

- DO NOT remove the object - it could be plugging the wound.
- Build up padding around 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.
- Elevate, immobilise, restrict movement of the limb.
- Advise casualty to remain at rest.
- Call 

For needle stick injury see pg 57



Internal Bleeding: Signs, symptoms and management as for Shock (pg 14)

- Suspect internal bleeding if a **large blunt force** is involved - road traffic accident, fall from a height; or a history of **stomach ulcers**, early pregnancy (**ectopic pregnancy**) or **penetrating injury**.
- Internal bleeding may be concealed or revealed.
- If a casualty is coughing up frothy blood, allow casualty to adopt position of comfort – normally half-sitting.
- First aiders can't control internal bleeding but early recognition and calling  can save lives.

Concealed:

Spleen, liver, pancreas, brain (no bleeding visible).

Revealed:

Lungs – Cough up frothy pink sputum.

Stomach – Vomit brown coffee grounds or red blood.

Kidneys/ Bladder – Blood stained urine.

Bowels – Rectal bleeding: bright red or black and “tarry”.

Uterus - Vaginal bleeding.

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 (longer may be required after exercise, hot weather or if casualty has high blood pressure or takes aspirin or warfarin tablets - maintain pressure for at least 20 minutes).
- 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).
- 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 | } | bleeding |
| • Major or multiple fractures | | |
| • Severe burns or scalds | } | fluid loss |
| • Severe diarrhoea and vomiting | | |
| • Heat stroke | | |
| • 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 12)
- Call ☎
- Place casualty in position of comfort, ideally lying down
- Administer oxygen if available
- Maintain body temperature
- Reassure
- Monitor vital signs (pg 48, 49).
- 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 or by prolonged pressure to a part of the body due to their own body weight in an immobile victim (eg stroke). Crush Syndrome results from a disruption of the body's chemistry and can lead to kidney, heart and other problems

FIRST AID

- DRSABCD - ensure your own safety.
- Call ☎
- If safe - remove crushing force as soon as possible.
- Control external bleeding (pg 12).
- DO NOT use a tourniquet (pg 12) for a crush injury.
- Manage other injuries.
- Comfort and reassure.
- Monitor vital signs (pg 48, 49)

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 arm (but not a hand or foot).
- The risk is directly related to the length of time the limb is compressed.
- It is recommended to remove the crushing force as soon as safe and possible no matter how long they have been trapped



Burns

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

FIRST AID

- DRSABCD
- Cool affected area with water for as long as necessary - usually 20 mins.
- Remove rings, watches, jewellery from affected area.
- Cut off contaminated clothing – do not remove clothing contaminated with chemicals over the head or face.
- Elevate burnt limb if possible.
- Cover burnt area with a loose, non-stick dressing (sterile non-adherent dressing, plastic cling wrap, wet handkerchief, sheet, pillow case).
- DO NOT allow shivering to occur.
- Hydrogel products are an alternative if water is not available.

- DO NOT apply ice directly to burns.
- DO NOT break blisters.
- DO NOT apply lotions, ointments, creams or powders (except hydrogel).
- DO NOT peel off adherent clothing or other substances.
- DO NOT use “fluffy” dressings to cover burn (towels, tissues, cotton wool).

Seek medical help for:

- Chemical burns
- Electrical burns
- Inhalation burns
- Full thickness burn
- Infant, child or elderly.
- Burns to hands, face, feet, major joints, or genital area.
- Burn size > casualty's palm.
- Burns encircling limbs or chest.
- Burns associated with trauma.

Extensive burns may result in shock from fluid loss (pg 14)



Superficial Burn

(1st degree)

Reddening (like sunburn)

Painful



Partial Thickness Burn

(2nd degree)

Red and Blistering

Very Painful



Full Thickness Burn

(3rd degree)

White or blackened

Not painful

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

Inhalation: (See also pg 32, Poisons) • Inhalation of flames or heated air 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 • Give oxygen if available • Call ☎

Chemical: • Acids and alkalis cause chemical burns • Brush powered chemicals from the skin before cooling with water • Do not neutralise acid or alkali burns because this will increase heat generation and cause more tissue damage • Call ☎

Bitumen: • Bitumen holds heat therefore cool with water for 30 mins • DO NOT remove from skin unless it's obstructing the airway • If the limb is completely encircled, split the bitumen lengthwise as it cools • Call ☎

Electrical: • Burns are usually more severe than they appear and often associated with other injuries (pg 16) • Call ☎

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. Do not put a apply a tight compressive bandage around the chest for chest injuries because it may restrict breathing.

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)

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).

Dressing
taped on
3 sides



Collapsed
lung due to
sucking
chest
wound



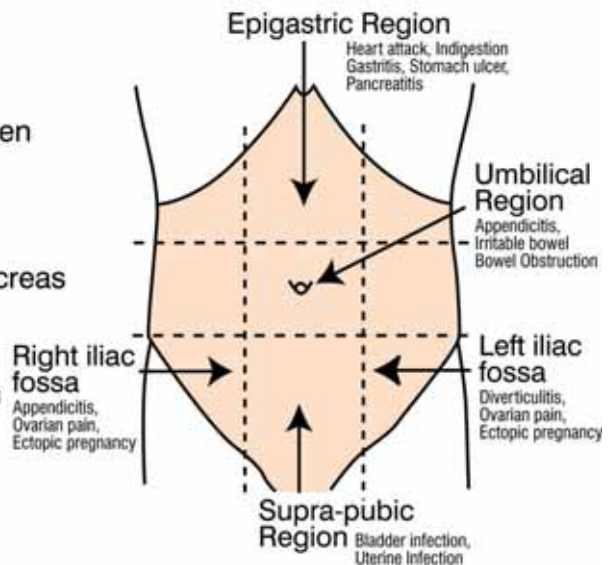
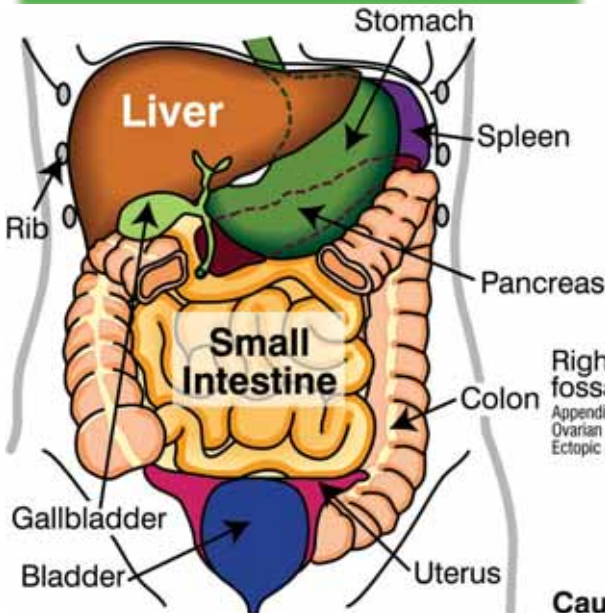
Abdomen An injury to the abdomen can be an open or closed wound. Even with a closed wound the rupture of an organ can cause serious **internal bleeding** (pg 13, 14), which results in **shock** (pg 14). With an open injury, abdominal organs sometimes protrude through the wound.

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 (pg 48, 49).
- Elevate legs if shock develops (pg 14).
- 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

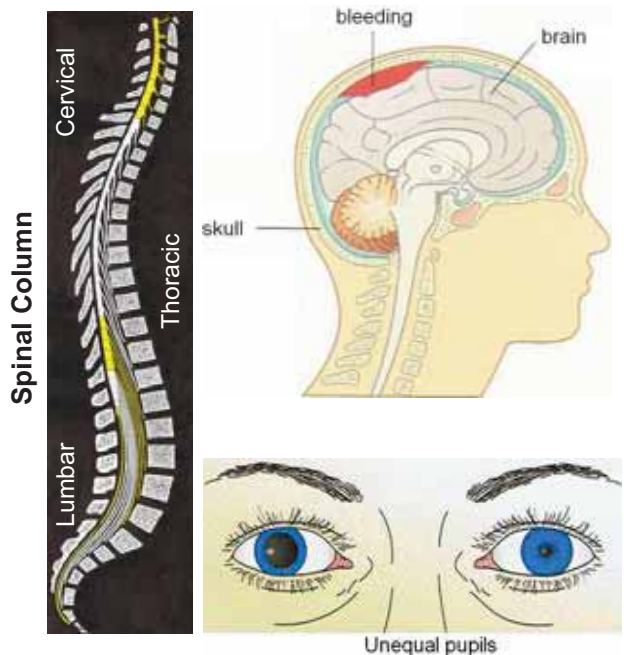
- Rest and Reassure • Place padding over eye • Secure with tape or bandage
- Ask casualty to limit eye movement • Seek urgent medical aid

Head Injury

Blood or fluid from the **ear** may indicate a ruptured eardrum or skull fracture:

- Position casualty injured side down to allow free drainage of fluid from the ear.
- DO NOT plug or bandage ear.

- AIRWAY management takes priority over ALL injuries, including spine.
- ALL cases of unconsciousness, even if casualty was unconscious only briefly, must be assessed by a doctor.
- If casualty didn't lose consciousness, but later develops any of the following signs and symptoms (below), urgent medical advice must be sought.
- Monitor all casualties closely for the first 8 hrs after a head injury.
- All head injuries should be suspected as a spinal injury until proven otherwise.



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.

Concussion: “Brain Shake” is a temporary loss or altered state of consciousness followed by complete recovery. Subsequent decline (see signs and symptoms above) suggests a more serious brain injury.

FIRST AID

Check **DRSABCD** (pg 3)

Conscious:

- Support casualty's head as best as possible.
- Reassurance, especially if confused.
- If blood or fluid coming from ear or nostril, loosely cover with a dressing (do not plug).
- Control bleeding and cover wounds (pg 12).
- DO NOT give anything to eat or drink.
- DO NOT give aspirin for headache (may cause bleeding within skull).
- Prepare for possible vomit – locate bowl, towel.
- Seek urgent medical aid.
- Unconscious:
- Recovery position with head & neck support.
- Call ☎
- Monitor Vital Signs every 5-10 mins (pg 48, 49).
- Control bleeding and cover wounds.
- Support/stabilise head and neck.
- Keep warm with a blanket.
- Prepare for possible vomit.

Cerebral Compression: Brain swelling or bleeding within the skull shows deteriorating signs and symptoms (above). This is a serious brain injury and could be life threatening.



Spinal Injury

The key to managing a spinal cord injury: **Protect airway & minimise spinal movement**

Conscious:

SIGNS & SYMPTOMS

- Pain in neck or back.
- Pins and needles in any part of body.
- Numbness or weakness.
- Unable to move legs or arms.
- Uncontrolled penile erection.
- Onset of shock (pg 14).

QUICK CHECK

- Can you wriggle your fingers and toes for me?
- Can you make a fist?
- Can you shrug your shoulders?
- Can you pull your toes up towards you and point them away?
- Do you have pins and needles anywhere?
- Can you feel me touch your hands/ feet?

NB. If the casualty has neck or back pain-treat as a spinal injury. The pain may be due to an unstable vertebral fracture which may result in spinal cord damage if handled incorrectly.

Suspect spinal injury with:

motor vehicle accidents, motor bike and cyclists, diving, falls from a height, minor falls in the elderly and sports injuries such as rugby and horse riding.

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: Helmets could be preventing further spinal or head injuries. If a full-face (motorcycle) helmet is impeding proper airway management in an unconscious casualty and/ or you intend to perform CPR, the helmet needs to be removed carefully. Otherwise leave helmet removal to the experts.

FIRST AID

- Prevent further injury by AVOIDING movement of patient - leave this to the experts.
- Advise casualty to remain still.
- Call ☎
- Support the head and neck.
- Reassure casualty.
- Maintain body temperature

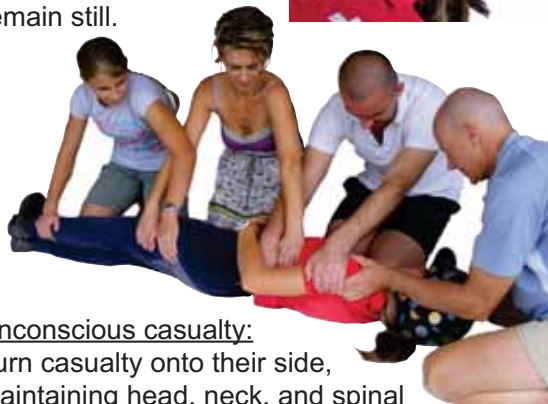
Conscious Casualty:

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



Unconscious casualty:

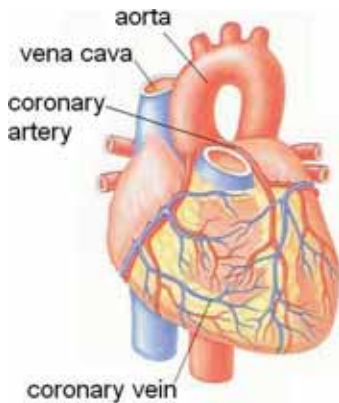
Turn casualty onto their side, maintaining head, neck, and spinal alignment. Maintain an open airway. (Log roll technique). Use safe manual handling techniques to avoid injuring yourself. eg ask for assistance; bend your knees.



FIRST AID

- Recovery position with head & neck support
- Call ☎
- Monitor & record Vital Signs every 5-10 mins (pg 48, 49)
- Control bleeding and cover wounds
- Support/ stabilise head and neck
- Keep warm with a blanket
- Prepare for possible vomit

Heart Conditions



Angina is a “cramping” of the heart muscle; relieved by rest, with no permanent muscle damage.

Heart attack is caused by a blocked coronary artery, resulting in **muscle damage** which may 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 (Ventricular Fibrillation) which result in cardiac arrest. Some abnormal rhythms can be reversed by an AED. Cardiac arrest is fatal without basic life support (pg 3)

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

SIGNS & SYMPTOMS – vary greatly, and not all symptoms and signs are present!

- **Central chest pain** – may be described as • Crushing • Tightness • Heaviness
- **Breathlessness** or difficulty “catching the breath”
- **Indigestion type pain** in the upper abdomen (referred pain from the heart)
- **Pain spreading to the** • Jaw • Neck • Shoulder • Either arm • Wrists
- **Heaviness** or **weakness** in **either arm**
- **Dizzy**
- **Nauseous**
- **Pale and sweaty**
- **Irregular pulse**

NB. Casualties having a heart attack may have breathlessness alone while others may have heaviness in the arm or believe they have indigestion.

FIRST AID

- **STOP** and **REST** – in position of comfort (usually sitting).
- Reassure and talk to casualty - **Are you on prescribed heart medication?**
- **Do you have angina? Can you take Aspirin?**
- If casualty has no heart medication and has never been diagnosed with heart problems – treat as for **HEART ATTACK** • **Call ‘☎’** • **Give Aspirin if directed** • **Monitor**
- Assist casualty to take **prescribed heart medication** (Anginine tabs or GTN spray).
- If after 5 mins symptoms are not relieved, **give another dose** of heart medication.

ANGINA should be relieved by rest and medication (tablets or spray).

- If after **3 doses of medication over 10 mins**, the pain has not diminished, then the condition should be considered a **HEART ATTACK**

Warning signs:
Pain lasts > 10 mins
Pain gets suddenly worse

DON'T WAIT
ACT NOW

Call ☎

Monitor vital signs

Give Oxygen if trained

Prepare for CPR

Vital Signs
(pg 48, 49)

Give **Aspirin (300mg)** if directed by emergency services.

Before directing you to give Aspirin, emergency services will want to know if:

- Casualty takes **Warfarin** (blood thinning medication)
- Casualty has a history of **Asthma** or **Stomach ulcers**



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 episodes are triggered in sensitive airways by many things. Common triggers are: weather change, exercise, emotional stress, pollen, dust-mite, food preservatives, smoke, fumes, colds, flu. An asthma episode can take from a few minutes to a few days to develop.

SIGNS & SYMPTOMS

Mild:

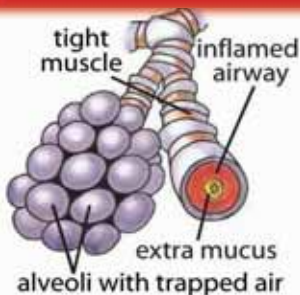
- Dry persistent cough
- Wheeze
- Breathless but speaks in sentences
- Chest tightness

Severe: (Call ambulance straight away)

- Gasping for breath (too breathless to speak)
- Wheeze inaudible (no air movement)
- Cyanosis (blue lips)
- Skin pale and sweaty
- Exhaustion
- Anxious/ Distressed
- Rapid pulse
- Collapse (respiratory arrest)

Young Children may also demonstrate:

- Severe coughing and vomiting
- Stop eating or drinking
- Restless or drowsy
- Muscles in throat and between ribs 'suck in'



Using Puffer - with spacer



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.
- Adults can use Symbicort in emergency: follow SMART action plan, available from Asthma Foundation

- 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

FIRST AID

- Sit casualty comfortably upright.
- Calm and reassure - stay with casualty
- Follow casualty's **Asthma Action Plan** or
- **Give Reliever Medication total of 4 puffs**
- **4 breaths after each puff Shake each time.**
- Borrow an inhaler if necessary
- If no improvement, repeat after 4 mins
- Call ☎ if no improvement after 8 mins or immediately if asthma episode is severe
- Give oxygen if available (8 L / min)
- Keep giving 4 puffs every 4 mins until ambulance arrives or casualty improves significantly. Shake before each puff.
- If Collapse:
- Commence DRSABCD (pg 3)

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

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:

- Cold-like symptoms
- Barking cough
- Noisy breathing
- Slight temperature
- Worse at night
- **Breathing difficulties**
- **Cyanosis (blue lips)**

Mild

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.

EPIGLOTTITIS:

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

Severe

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

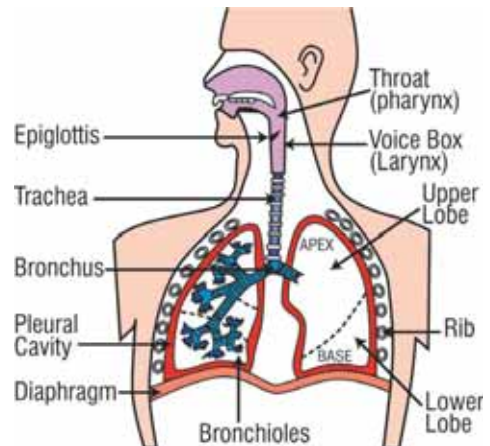
Croup: Viral infection affecting upper airways in infants and children < 5 yrs. Slow onset, usually follows a cold or sore throat and lasts 3-4 days. Can also affect adults.

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 you are not sure



Faint Fainting is

a sudden, brief loss of consciousness caused by lack of blood flow to the brain, with full recovery. It may occur 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). Fainting could have a serious underlying cause, and should be referred for medical assessment.

SIGNS & SYMPTOMS

- Dizzy or light headed.
- Nausea
- Sweating
- Return of consciousness within a few seconds of lying flat.
- Pale and sweaty.
- 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



Seizure/ Epilepsy

A seizure is caused by abnormal electrical activity in the brain. Types of seizure include brief lapses of attention (absence seizure) trance-like wandering (partial-complex seizure) and rigidity followed by jerking (tonic-clonic seizure). A seizure may be associated with • **Hypoxia** • **Onset of cardiac arrest** • **Head Injury** • **Stroke** • **Meningitis** • **Fever (febrile convulsion)** • **Hypoglycaemia (low blood sugar)** • **Poisoning** • **Alcohol** • **Drug withdrawal** • **Epilepsy**.

SIGNS & SYMPTOMS

Tonic-Clonic Seizure

- Cry out or make moaning sound.
- Collapse and momentary rigidity (tonic phase – lasts few secs).
- Eyes may roll upwards or stare.
- Jerking movements of body (clonic phase – lasts few mins).
- Shallow breathing 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.

Other types of seizure

- Seizure activity may take many forms
- Signs vary greatly eg unusual behaviour such as repetitive fiddling with clothes.
- Not all seizures are considered epilepsy.

FIRST AID

- DRSABCD if unconscious and not breathing normally.
- Follow seizure management plan, if available.
- Protect from harm – remove casualty from danger or remove dangerous objects
- Protect head (eg with cushion/ pillow).
- Note the time seizure starts.
- Avoid restraining (unless to avoid injury).
- DO NOT put anything into casualty's mouth.
- Place in recovery position as soon as possible.
- Frequently reassess casualty (pg 48, 49).
- Reassure casualty (may be dazed or drowsy).
- Call ☎ if unconscious and actively seizing, pregnant, first seizure or followed by another.

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**.



SIGNS & SYMPTOMS

(Similar to epilepsy + fever)

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

- Protect from harm
- Place in recovery position after seizure stops
- Remove excess clothing

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)
	<ul style="list-style-type: none"> • Pale, cold sweaty skin • Fast progression • Hunger • Trembling • Weakness • Seizure 	<ul style="list-style-type: none"> • Warm, dry skin • Slow progression • Acetone smell on breath (nail polish remover) • Thirst • Passes urine frequently • 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:

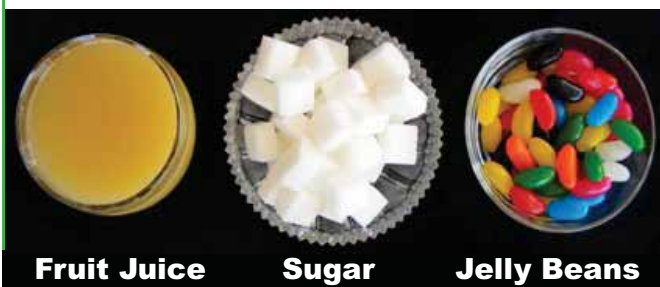
- Give sweet drink/ food: 5-7 jelly beans, 2-4 teaspoons of sugar or honey, glass of fruit juice (not diet or low sugar type).
- **Repeat** if casualty responds
- On recovery assist with **high carbohydrate** food: sandwich, few biscuits, pasta or rice meal.
- Call ☎ if no improvement within a few minutes 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 consciousness is that most will be **hypoglycaemic**. The symptoms of hypoglycaemia progress more rapidly and must be addressed quickly.

If the casualty is **hyperglycaemic**, the small amount of sugar given by a first aider will not significantly raise blood sugar levels and will do no harm.



Fruit Juice

Sugar

Jelly Beans

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). The signs and symptoms of a "stroke" vary, depending on which part of the brain is damaged.

SIGNS & SYMPTOMS

- Confusion or dazed state
- Headache
- Unequal-sized pupils
- Blurred vision
- Drooping of one side of face
- Slurred speech
- Difficulty swallowing - drool
- Weakness or paralysis affecting one side of body.
- Loss of balance
- Incontinence of bladder/ bowel.
- Seizure
- Unconsciousness

FAST is a simple way of remembering the signs of a stroke:

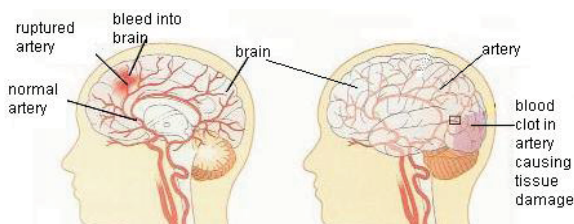
- **F**acial weakness – Can the casualty smile? Has their mouth or eye drooped?
- **A**rm weakness – Can casualty raise both arms?
- **S**peech – Can casualty speak clearly and understand what you say?
- **T**ime to act fast - Call ☎

FIRST AID

- If casualty fails one of the **FAST** tests, act fast and **Call** ☎
- Adopt position of comfort
- Reassure
- Recovery position if unconscious
- Maintain body temperature
- Give oxygen if available
- Monitor Vital Signs (pg 48, 49)

New drugs and medical procedures can limit or reduce damage caused by a stroke. Therefore, prompt action is essential for optimum recovery.

TIA (Transient Ischaemic Attack) is a mini-stroke with signs and symptoms lasting < 60 mins. The risk of a stroke subsequent to a TIA is high, therefore early recognition and treatment is vital.



Cerebral haemorrhage Cerebral thrombosis

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
- Rapid pulse

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

Heat Exposure

Normal body temp is approx 37°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). 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 condition.

Heat Exhaustion

(Mild – Moderate Hyperthermia)

- Body Temp 37°C – 40°C

SIGNS & SYMPTOMS

- Sweating
- **Pale, cold, clammy skin**
- Headache
- Muscle cramps
- Thirst
- Fainting
- Nausea
- Rapid pulse

(Onset of mild shock due to fluid loss (pg 14))

Progresses to

Heat Stroke

(Severe hyperthermia)

- Body Temp > 40°C

SIGNS & SYMPTOMS

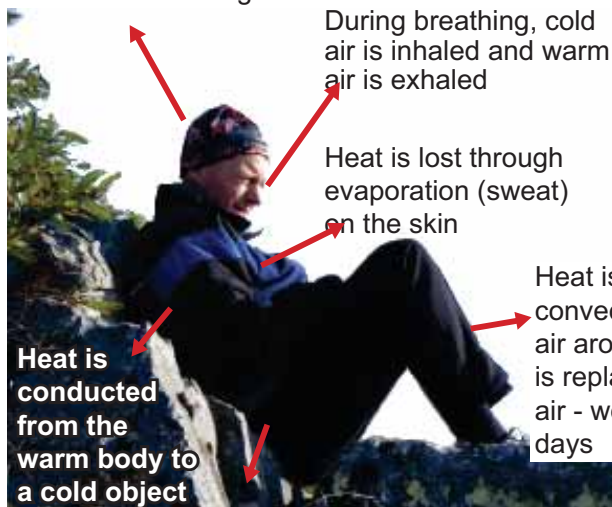
- **NO Sweating**
- **Red, hot, dry skin**
- Nausea and vomiting
- Visual disturbances
- Irritability/ confusion
- Staggering/ unsteady
- Seizures
- Unconscious

Profuse sweating may occur

FIRST AID

- Move casualty to cool, **shaded, ventilated area**.
- **Lie flat with legs elevated**.
- Loosen and remove **excess clothing**.
- **Cool by:** •fanning •spraying with water •applying wrapped ice packs to neck, groin and armpits •draping wet sheet over body and fanning.
- Give **cool water** to drink if fully conscious.
- Seek medical help or
- Call ☎ if in doubt

Heat radiates from the body, especially the head into the surrounding air



Heat Exhaustion and Heat Stroke are usually caused by over-exertion in hot, humid conditions with poor fluid intake.



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

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)
	Funnel web Spiders	
	Red back spiders/ others	COLD COMPRESS/ ICE PACK
	Bees	
	Wasps	
	Scorpion	
	Ants	



Red Back Spider

SEA CREATURES	TYPE	FIRST AID
FATAL	Sea Snakes	Pressure Immobilisation Technique (PIT) (see next page for PIT)
	Blue-Ringed Octopus	
	Cone Shell	
	Box Jelly Fish Irukandji Jelly Fish	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. HOT WATER - Use cold compress if no pain relief with hot water
	Fish Stings: Stingray	
	: 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
- 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.



(Both found in tropical waters)

Box Jellyfish

SIGNS & SYMPTOMS

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



Irukandji Jellyfish

SIGNS & SYMPTOMS

- **Mild sting** followed 5-40 mins later by:
- Severe **generalised pain**
- Nausea, vomiting, sweating
- Collapse /**Respiratory arrest**
(Anti-venom not yet available)

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 insect from skin and move casualty to safe area • Immediately remove sting or carefully remove tick (DO NOT remove tick if casualty is anaphylactic to ticks. See pg 33)

- 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 petroleum 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. See pg 52

SIGNS & SYMPTOMS of a corrosive

substance: • Pain in the mouth/ abdomen
• Burns to lips/ mouth • Nausea/ vomiting •
Tight chest • Difficulty breathing • Sweating •
Unconscious

- If rescue breathing is required, wipe away any contamination from around the mouth.
- Use a resuscitation mask if available.(pg 53)
- DO NOT use **Syrup of Ipecac** unless advised by Poisons Information Centre.

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, and industrial chemicals.

SIGNS & SYMPTOMS

- Breathing problems • Headache
- Nausea • Dizziness • Confusion

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

FOR ALL POISONING:

- DRSABCD
- What? When? How Much?
- Call Poisons Information Centre for advice or Call ☎
- Monitor Vital Signs (pg 48, 49)
- Send any containers and/ or suicide notes with casualty to hospital.
- Send any vomit with casualty to hospital.

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).

FIRST AID

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



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

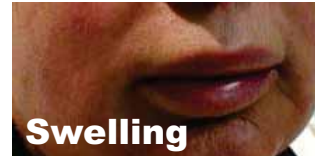
- Lay casualty flat, do not stand or walk. If breathing is difficult, allow to sit
- Give adrenaline (record time adrenaline was given)
- **Call ☎**
- Administer oxygen if available
- Give asthma reliever medications for breathing difficulties (pg 23)
- Further adrenaline should be given if no improvement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

If in doubt give the autoinjector

Use adrenaline if symptoms become severe. EpiPen and Anapen are auto-injecting pens 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:



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



Push orange end hard into outer thigh so it clicks and hold for 10 secs
Remove EpiPen and massage injection site for 10 secs

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

How to Use an Anapen:



Pull off Black needle shield.



Pull off grey safety cap from red button.



Place needle end firmly against outer mid-thigh (with or without clothing)



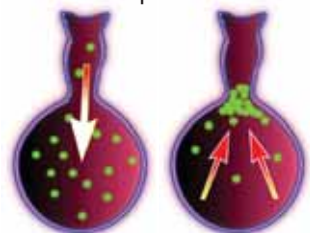
Press red button so it clicks and hold for 10 secs.
Remove Anapen and massage injection site for 10 secs

BEWARE of needle protruding from end after use. (For needle stick see pg 57)

Why Asthma is Dangerous

The extra mucus that is produced during an asthma episode, can form a mucus plug in the air sacs (alveoli) in the lungs. The mucus plug **prevents the casualty from exhaling**. This causes dangerous levels of CO₂ (carbon dioxide) in the lungs and blood which leads to acidosis. **Acidosis is life threatening and needs advanced medical management, in hospital.** 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 an irreversible level.

Diagram shows how CO₂ is trapped in the lungs during an asthma episode.

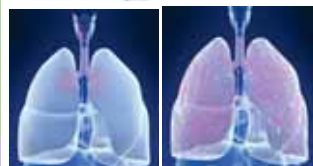


Inhalation Exhalation

Asthma Medications & Devices

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.	
NOT FOR EMERGENCY	Orange, Brown	Device	Ventolin & Asmol Puffer. Airomir Autohaler. Bricanyl Turbuhaler*	
		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.	
NOT FOR EMERGENCY	Green	Device	Puffer, Accuhaler, Turbuhaler, Tablet.	
		Symptom Controllers		
		Names	Oxis and Serevent	
		Speed	Slower acting than relievers. About 30 minutes.	
NOT FOR EMERGENCY	Purple	Purpose	Relax airway muscles lasts up to 12 hours.	
		Device	Turbuhaler, Accuhaler	
		Combination Medication	Preventer plus a Symptom Controller	
		Name	Seretide	
Adult use only	Red & White	Speed	Slower acting	
		Purpose	Prevention plus control of symptoms	
		Device	Accuhaler or MDI (Puffer). Taken twice a day.	
		Combination Medication	Can be used in emergency for ADULTS	
Adult use only	Red & White	Name	Symbicort	
		Speed	Reliever is fast acting	
		Purpose	Prevention plus control of symptoms	
		Device	Turbuhaler* or MDI (Puffer).	
Adult use only	Red & White	CAUTION	Symbicort may be used for casualties over 12, when prescribed. Max 6 doses at a time. Max 12 doses per day of Symbicort#.	

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



Without spacer With Spacer



Children may need a spacer with a mask
Spacers

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

* Turbuhaler needs sharp "in-breath". This may not be possible in emergency
SMART action plan for Symbicort use as a reliever is available from Asthma Foundation

Asthma in the workplace - some work has higher risks of asthma

Occupational Asthma (OA) People affected:

- **Flour, dust:** (cooks, bakers, farmers) • **Sawdust:** (builders, carpenters)
- **Animals:** (vets, lab technicians) • **Detergents:** (cleaners) • **Resins, solvents, solder:** (repairers, builders, electricians, Spray painters)

Managing Workplace Asthma - How to reduce the risk

- PPE (Personal Protective Equipment) • Re-deploy workers to lower risk area or duties • Have Emergency Asthma Kit available at first aid station • Keep filters clean
- Seek less toxic alternatives • Provide emergency asthma management training



Manage asthma in aged care

How to help people with asthma who have special needs and circumstances

- **Wheelchairs.** Keep person in wheelchair; upright as possible. (Unconscious - DRSABCD)
- **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) support sitting up. 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.

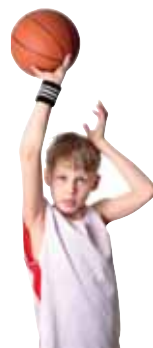


Exercise Induced Asthma (EIA)



At rest breathing is mostly through the nose. During exercise, air is breathed through the mouth and air that enters the lungs is colder, dryer and unfiltered. These factors can trigger an asthma episode.

Exercise is an excellent activity for everyone including asthmatics as it helps to improve overall health and lung function. Exercise is one trigger that should not be avoided. Therefore it is important to manage EIA so people with asthma can continue to participate in most sports.



Managing EIA

- Take reliever 5-20 minutes before exercise • Warm-up before exercise • Warm-down after exercise • Always carry blue reliever medication in case needed

Tips for coaches: • Use the "2 Strikes - You Are Out" rule (*If symptoms occur during 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 Authority¹ for info on banned medications



¹ Australian Sports Anti-Doping Authority (ASADA) <http://www.asada.gov.au/substances/>

Allergy/Anaphylaxis Facts Anaphylaxis is the most severe form of allergic reaction. Anaphylaxis can cause symptoms such as swelling of the tongue and throat and this 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)

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.

Anaphylaxis Facts - Australia

- Allergies in Australia are very common, affecting about 1 out of 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 fatal 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

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.



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 these 9 Foods are the most common

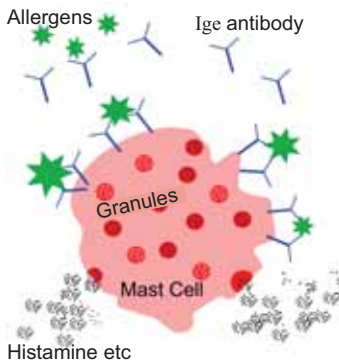
- Peanuts • Dairy • Sea Food • Shell Fish
- Tree Nuts • Gluten • Soy
- Sesame Seeds • Eggs

What does all this mean? Most allergic reactions do not cause death. However when anaphylaxis is **life threatening** it develops 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



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 happens in an anaphylactic reaction?

- **The first time** an allergy prone person runs across 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
 - Fluid loss into tissues
 - Smooth muscle contraction
 - Increased mucus secretion
- This causes the common anaphylaxis signs & symptoms
 - Redness, rashes and welts
 - Swelling, chest tightness and breathing difficulties
 - Shock
 - Cardiac arrest

What does adrenaline do?

Adrenaline:

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

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.
- Otherwise the combined effects of vasodilation and oedema (fluid leaking into the tissues) can result in severe shock leading to cardiac arrest.
- The first signs of mild and severe anaphylaxis can look the same.
- It is very important to give the adrenaline autoinjector if the signs and symptoms of the casualty suggest anaphylaxis.
- If you are in doubt - give the autoinjector.
- **Call ☎**. The reaction could 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 all the medication is pushed out. **Each Autoinjector can only be used once.**

EpiPen & Anapen are different BRANDS of autoinjector. Both brands contain adrenaline. Each brand **has different operating 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.

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** and an **anaphylaxis management plan** (pg 61) and communication plan in place. For the **Child Care** sector there are stringent legal requirements that impose obligations on the child care centres, the employees and the parents.

Voluntary Organisations - Duty-of-Care

Generally voluntary organisations have a duty-of-care responsibility when running activities.

When a duty-of-care relationship exists there is responsibility to

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



Case study.

- “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.

Organisations should

- **Conduct a risk assessment.**
- **Develop a policy**
- **Have communication plan**



A Risk Assessment *should* be part of the planning for every activity. Some risks can be anticipated. For example a child playing sport could have an anaphylactic attack if they were allergic to insect stings.

Example:

- Billy’s club knew he was anaphylactic from questions on the **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.

Anaphylaxis Action Plans

ASCIA 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.

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.

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

Personal Action Plans should be stored with medication.

They contain:

- **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 either Anapen or EpiPen**

Child details
Date of birth

Child photo

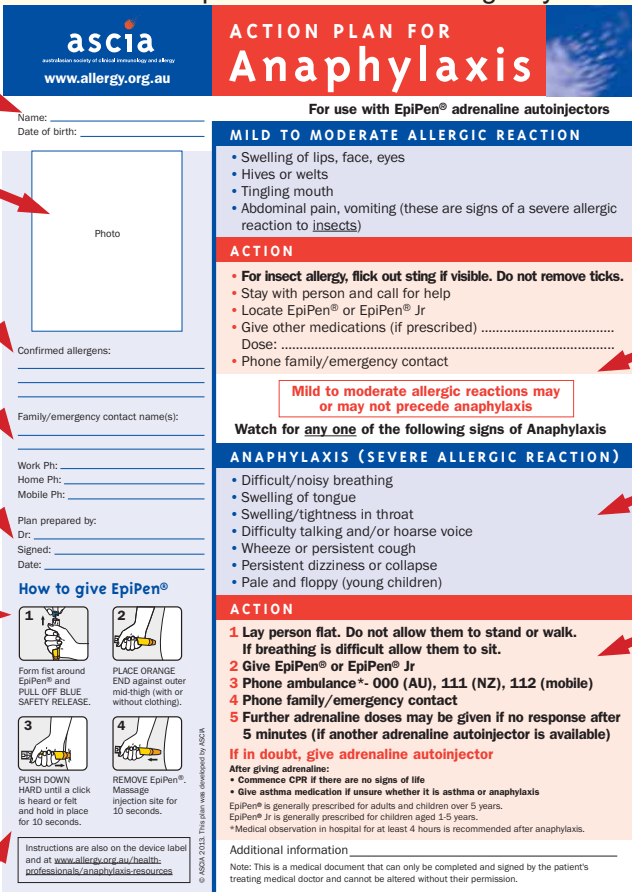
What child is Allergic to

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.

The difference between EpiPen Action Plan and an Anapen Action Plan is the instructions on how to use each device



The form is titled 'ACTION PLAN FOR Anaphylaxis' and is for use with EpiPen® adrenaline autoinjectors. It is divided into sections for 'MILD TO MODERATE ALLERGIC REACTION' and 'ANAPHYLAXIS (SEVERE ALLERGIC REACTION)'. The form includes fields for personal details, allergies, and contact information. It also contains instructions on how to use the EpiPen device, illustrated with four numbered steps. A red box highlights that mild to moderate reactions may not precede anaphylaxis, and another red box states that if in doubt, the autoinjector should be given.

This is a sample Anaphylaxis action plan for **EpiPen**.

What to do for mild reaction

What to do for anaphylaxis

If in doubt... give the autoinjector

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

Throughout this book the word parent includes legal guardian

For privacy, Action Plans should be displayed discreetly to enable rescuers to recognise individuals and their set of signs and symptoms.

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 for Anaphylaxis				Risk Rating		
Instructions to use this matrix: 1. Look up "Likelihood" score 2. Look up "Consequence" score 3. Read "Risk" from table.				Likelihood Refer matrix above	Consequence Refer matrix above	Risk Refer matrix above
No.	Type	Activity	Hazard			
#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 Table** : A risk rating table 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. 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 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.

Strategy	Residual Risk			Person responsible	
	Likelihood	Consequence	Risk	Name	Done
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					
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	

Asthma Risk Assessment

Common Asthma Triggers	Possible Risk Management Strategies
<ul style="list-style-type: none"> • Pollens from grasses, trees, shrubs 	Consider removing problem plants around schools, child care centres and work places.
<ul style="list-style-type: none"> • 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.
<ul style="list-style-type: none"> • 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.
<ul style="list-style-type: none"> • Animal dander and saliva 	Consult with parents before introducing a "pet" day. Cats, dogs, horses, rodents, even insects, can trigger asthma.
<ul style="list-style-type: none"> • Chemicals & cosmetics 	Develop a dress code policy. Avoid highly scented deodorant. Include cleaning staff in communication plan.
<ul style="list-style-type: none"> • Foods & Additives 	Have a food policy. Check ALL ingredients, for identified triggers. Alert cooking staff, catering suppliers.
<ul style="list-style-type: none"> • Dust & Dust Mites 	Schedule cleaning to reduce dust levels during open times. Vacuum frequently. Use damp cloth for dusting.
<ul style="list-style-type: none"> • Exercise is a common asthma trigger and affects about 50% of people with asthma. 	Allow time for people to warm up AND warm down. Aim to control asthma rather than avoid exercise.

*PPE = Personal Protective Equipment

Examples using the risk assessment matrix

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).

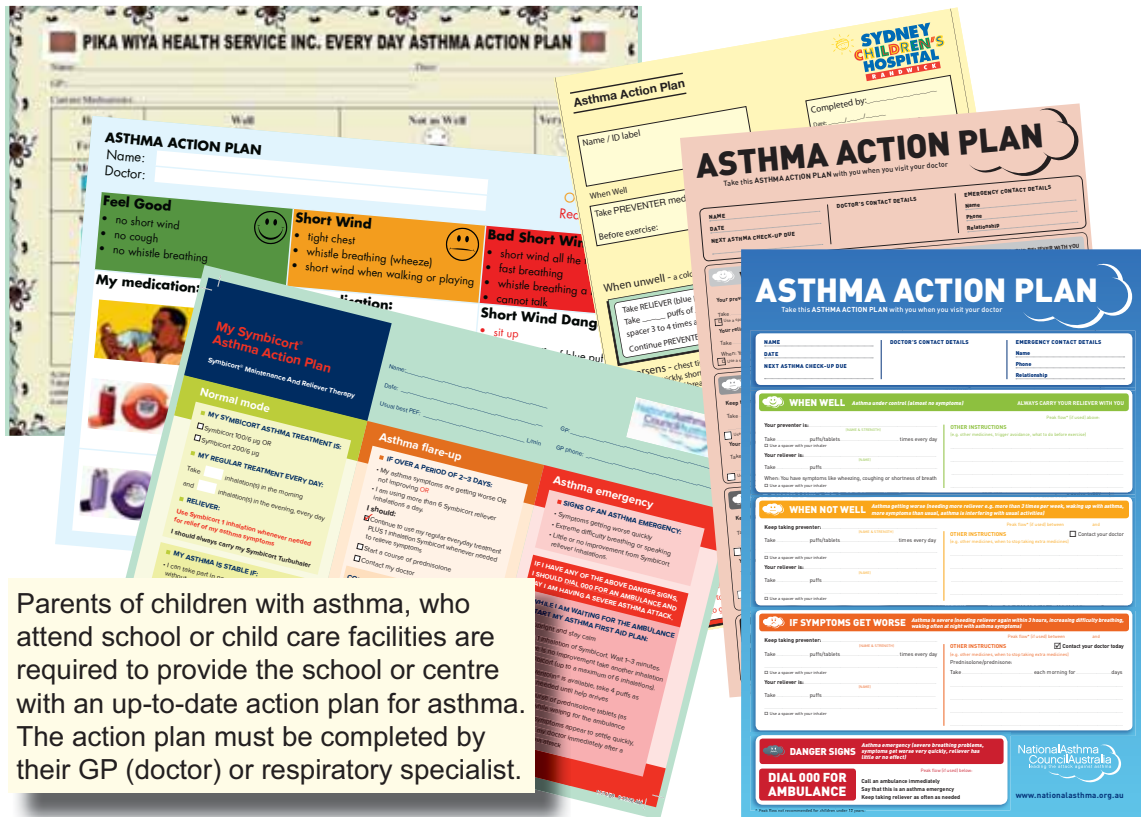
Workplace A factory worker reports asthma being triggered by the floor sanding. The residual risk is HIGH. The risk rating table (pg 41) indicates that the safety officer and management must both approve the strategies before work can proceed.

Example of Risk Assessment for Asthma				Risk Rating		
No.	Type	Activity, infrastructure or environment	Hazard	Likelihood Refer pg 40	Consequence (pg 40)	Risk (pg 40)
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	Work	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.

Strategy	Residual Risk			Person responsible	
	Likelihood	Consequence	Risk	Name	Done
In schools and child care facilities, strategies must be developed in consultation with parents					
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	

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 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 (pg 50) explains how many first aiders are required for workplace
- Describes how to conduct a hazard assessment (pg 40)
- There are many Codes of Practice/Compliance Codes covering a wide range of workplace health and safety issues

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

- cleaning eg a coolroom • unloading a delivery vehicle • use tools eg chain saw
- cleaning an asthma spacer • changing a nappy • preparing for an excursion

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.

93 Administration of medication.

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

95 Procedure for administration of medication

Medication must be • Administered from it's original container, • with child's name 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*)

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 (see reg 95) • Signatures



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 case notify parent and emergency services as soon as practicable.



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



In a **factory** the stakeholders will include

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

Stakeholders:

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

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

In a **school setting** stakeholders will 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

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 would have 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 medical information if they feel the information will be used respectfully, in a supportive environment.

Seek 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.

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 (at rest) is about **72**
- Normal breathing rate is about **15**
- Normal temperature is about **37°C**.

	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	40-30
Temp °C	36-37	36-37	36-37	36-37

Table shows approximate range of normal clinical values by age

Children and babies usually have about the same temperature (37°C) as adults

Heart rate (pulse) and breathing rates are fastest in infants and younger children and slow down as the child gets older. One reason **AED's are not recommended for use on infants (under 12 months)** is because the devices are not reliable when checking if the heart rhythm is a normal rhythm. The faster heart rate of infants can cause the AED to give a false reading.



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

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 skull **bones are not fully knitted together**, which can make them more vulnerable to head injury.

Proportionally an infant's **head is much larger** than an adult. A baby's head is nearly 20% of total body surface area, while an adult head is only about 10%. A burn to an infant's face is even more serious than a burn to an adult face.

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 they are vomiting or have episodes of diarrhoea.

AED* for child care (Defibs)

Defibs can be used on a casualty who is unconscious and not breathing normally and who is over the age of 8 years old.

For children **under 8**, use with paediatric (child) pads *if available*. If child pads are not available use adult pads. If the pads cannot be placed without touching each other, position one pad on the front of the casualty's chest and the other pad on the back of the chest. Some defibs automatically adjust the size of the shock to the size of the casualty. Check manufactures instructions.

Do not use defibs on infants (under 12 months). They are not reliable when checking infant heart rhythms.

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 (for example taxation law.)

State Governments make laws that only apply to a state (for example health or education.)

Local Governments make laws that only apply to a council (for example 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.

Both Commonwealth & State Governments recognised it would be desirable to have uniform child-care regulations across Australia.

The Commonwealth Government does not have legal jurisdiction to create this legislation, so instead, the states used COAG in a cooperative action to pass the same legislation in each of their States. ACECQA was created to coordinate implementation of **National Child Care Legislation**.

Since the introduction of the National Child Care Regulations the Child Care law in all States will now be very similar to other States but may have important differences.



National Laws are not one single act of the Commonwealth Parliament but are the same legislation passed separately in each state.

Sometimes a proposed National Law conflicts with existing State laws. **An example of this is laws about who can administer an autoinjector.** When there is a conflict then the relevant State may change the wording of the National Law for that particular state.

So even though National Child Care Regulations are intended to be the same across Australia they still vary from state to state. **You need to check what the law is 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.

National Child Care Regulations apply to long day care, OOSH*, pre-school & family day care but **do not apply to schools**. Regulations for schools are the responsibility of each of the State Education departments.

Victoria's Ministerial Order 706 is a sample of regulations for schools. Other States have similar legislation (pg 44)

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



Casualty Assessment



Radial pulse

Do not check pulse during CPR

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

1. Start with a Primary Survey (DRSABCD), (pg 3) 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:

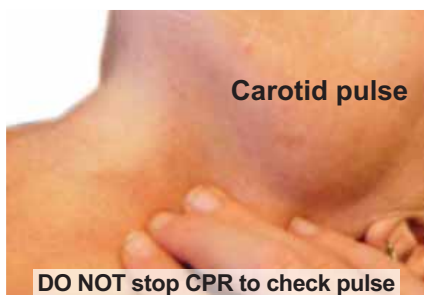
- What happened? Where are you?
- Do you feel pain or numbness anywhere? Describe pain from 1 to 10; 10 being the worst pain
- Can you move your arms and legs?
- Do you have any medical conditions or take any medications?
- Do you have any allergies?
- When did you last eat?
- (Bystanders may be helpful)

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.



Carotid pulse

DO NOT stop CPR to check pulse

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 pg 49

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?"



Temperatures

A temperature record may assist doctors to treat a casualty.

- Normal temperature is about 37 °C.

Causes of high temperature:

- **Infection.** High temperatures resulting from infection are called fever.

Fever is one way the body fights infection. On its own, fever does not cause harm or brain damage. However, fever could be a sign of a life threatening infection eg meningitis.



- **Inability to regulate temperature.** The body's cooling mechanism can't prevent overheating. Causes can be brain damage, some drugs, dehydration, hyperthermia, heat stroke. Vomiting and diarrhoea can cause dehydration especially in infants. Seek urgent medical assistance, call



Seek medical aid if:

- Child <3 months with temperature above of 38 °C
- Child 3-6 months with temperature above 39 °C
- Child over six months with other signs of being unwell – for example, they are floppy and drowsy or you are concerned about them.
- Temperature above 39 °C not caused by illness

Hazardous substances

Hazardous substances can cause harm to health.

Examples of hazardous substances include

poisons, corrosive substances that cause burns or skin and eye irritation, and substances that may cause cancer. Many hazardous substances are also classified as dangerous goods. The Hazardous Substances Information System (HSIS) is an internet advisory service on substances classified as Hazardous.

Dangerous Goods

Dangerous goods are substances that, because of their physical or chemical toxicity properties, are an immediate hazard to people, property or the environment. Examples of dangerous goods include explosives, flammable liquids and gases, corrosives and chemically reactive substances. Many dangerous goods are also classed as hazardous substances. The Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG Code) contains a list of substances classified as dangerous goods.

- Strict regulations control labelling, transport, use and exposure to substances classified as hazardous or dangerous.
- Employers must ensure workers are protected from these substances.

Types of thermometer

- Oral. Digital or filled with mercury or alcohol.
- Tympanic (ear). Digital
- Rectal. Most accurate for young babies



Oral thermometer

Instructions

- Use disposable shields to prevent cross infection.
- Follow makers instructions.
- Digital thermometers: wait for the beep



Ear thermometer

What is normal body temperature?

- 37 °C is an average of normal oral temperatures. Actual temperatures may be .5°C above or below 37 °C.
- Ear & rectal temperatures are a bit higher than an oral temperatures.
- Axial (armpit) temperatures are a bit lower than oral temperatures.



Childbirth

Birth is imminent if:

- The woman has had a child before and states the baby is on the way.
- There are strong contractions 2-3 mins apart with a desire to push.
- Waters/ membranes have ruptured.

You will need:

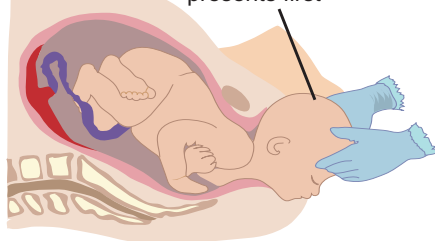


Preparation:

- Call ☎ - keep on loud speaker for assistance if required.
- Assist the woman to adopt position of comfort (lying, squatting, kneeling).
- Place pillows under head and shoulders if lying on back.
- Place a plastic sheet (bag/ shower curtain) with newspapers and towels on top to absorb fluids.
- Ensure clothing is removed from woman's lower body.
- Ensure adequate heating and privacy of the area.
- Wash hands thoroughly with soap - wear gloves and protective eye wear if available.

The Birth:

Normal birth - head presents first



- Reassure & encourage mother to relax between contractions.
- If mother passes a bowel motion while pushing, fold up soiled towel and replace with clean towel. This reduces chance of infection.
- When baby's head appears, support with both hands.
- Let the mother push out the baby.
- DO NOT pull baby's head to hurry the birth.
- Baby will be slippery.
- When baby is completely out - *Record the time of birth.*

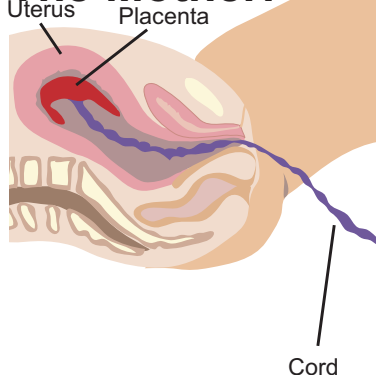
NB. If the umbilical cord is looped around baby's neck, let birth proceed and once baby is out then unravel cord from around neck.

The Baby:



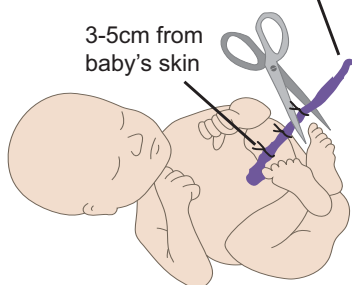
- Place baby on the mother's abdomen/chest and allow mother to hold and handle baby.
- Keep baby warm by placing a blanket over baby and mother.
- Wipe the baby dry with a warm towel.
- The baby will initially be blue in colour but when rubbed will cry and start to 'pink up'.

The Mother:




- Congratulate the mother!
- Observe the mother for bleeding - 300 to 500 mls is normal provided the mother feels well.
- Clean the vaginal opening with a clean moist towel, from front to back, and place a sanitary pad over vaginal opening and ask mother to bring legs together.
- 10-30 mins after the birth of the baby, the placenta (afterbirth) is delivered.
- Encourage mother to breast feed as this releases a hormone to contract uterus and expel placenta.
- DO NOT pull on the cord to extract the placenta as this may cause bleeding.
- DO NOT cut the cord until the placenta has been delivered and the cord has stopped pulsating - at least 10 mins after delivery.
- Sterilize string and scissors by placing in metho/ alcohol spray or boiling water for 5 mins prior to use.
- Tie cord with sterile string in 3 places (see diagram).
- First tie should be 3-5cm from baby's skin - ensure baby's skin is not caught in the tie.
- Cut between the 2nd and 3rd tie using sterile scissors.
- Check cord stump for bleeding after 2mins and 10mins.
- Place placenta in plastic bag for medical inspection.

Cutting the Cord:




Complications of Childbirth


Mother bleeds in excess of 500 mls:

- Massage the top of the uterus (at the level of the mother's navel) for about 30 secs or until it contracts (feels firm).
- Massage in a circular motion with hand at right angles to abdomen.
- Encourage mother to breast feed - this stimulates uterine contraction and stops bleeding.
- If mother feels nauseated, faint or unwell, Call  (see, Shock pg 14).

Baby does not start to cry or breathe:

- Towel dry baby immediately after birth which should stimulate baby to cry and breathe.
- If baby does not cry, check mouth and nose and wipe away mucus with soft cloth/ towel.
- If baby still doesn't cry and is unresponsive, commence CPR (pg 4).
- Call 

Breech Birth:

- If the woman knows her baby is breech, Call  and advise emergency services.
- Assist woman to an upright, forward leaning position eg kneeling and leaning on a chair.
- Allow baby to birth - the baby's buttocks or feet will present first.
- Allow baby's body to hang vertical.
- DO NOT pull the baby out to hurry the birth.
- If possible, ask the woman to pant while baby's head comes out.
- When baby is completely out - *Record the time of birth.*
- Manage baby, mother and cord as per normal birth (see above)

NB. Breech birth babies are more likely to need resuscitation (see above, **Baby does not start to cry or breathe**).

Substance Misuse

Substance misuse may be accidental or deliberate. Those most at risk of accidental misuse are the elderly and children. The elderly may confuse their medications and young children may mistaken medications for sugary treats.

Minimise accidental misuse by storing medications out of reach of children and by assisting the elderly to organise and label their medications. A pill box is a great way to organise daily doses.



NB. When handling a drug/alcohol misuse situation:

- DO NOT put yourself at risk.
- DO NOT approach if you feel unsafe.
- Talk calmly
- Reduce stimuli, move slowly, take to a quiet place
- Encourage positive, simple thoughts.



Narcotic Misuse

Narcotics (opiates) include heroine, morphine, pethidine, methadone and codeine. Narcotics are strong pain killers which are addictive and in overdose can result in respiratory arrest and death.

SIGNS & SYMPTOMS

- | | | |
|---------------------------------|------------------------|--------------------------------------|
| • Drowsiness | • Shallow breathing | • Seizure |
| • Constricted (pinpoint) pupils | • Cyanosis (blue lips) | • Unconsciousness |
| • Blood-shot (red) eyes | • Slow pulse rate | • Respiratory arrest |
| • Slow breathing | • Low blood pressure | • Needle tracks (hands, feet, elbow) |

FIRST AID

- Ensure area is safe - beware of needles & blood
- Wear gloves if available
- If unresponsive:
- Call ☎
- Commence CPR (pg 4)
- For rescue breathing, use resuscitation (pocket) mask (pg 53)



Solvent Misuse

Solvent abuse involves inhaling the fumes from domestic and industrial products creating a strong intoxication. The majority of solvent abusers are males aged 11-16yr. The intoxication wears off quickly but there is risk of vomiting, choking and unconsciousness.

SIGNS & SYMPTOMS

- Dazed appearance
- Unsteadiness
- Slurred speech
- Unpredictable behaviour
- Headache
- Hallucinating
- Rash around mouth
- Vomiting & Choking
- Unconsciousness

Solvent Inhalants:

- Glues • Lighter fluid • Aerosol Sprays • Dry cleaning products
- Paint • Petrochemicals

FIRST AID

- Ensure area is safe
- Move casualty to a ventilated area
- Give oxygen if trained
- Place in recovery position if unconscious
- Call ☎





Stimulant & Hallucinogen Misuse

Stimulant and hallucinogenic drugs can be swallowed, sniffed, injected or inhaled. They increase mental and physical activity leading to a state of euphoria and altered perception followed by a period of depression or 'let down'.

Stimulant Drugs: • Amphetamines (Speed, Ice) • Cocaine (coke) • Crack • Ecstasy • Ritalin

Hallucinogenic Drugs: • LSD (acid) • Phencyclidine (PCP, angel dust) • Mescaline • Marijuana (hashish)

SIGNS & SYMPTOMS

- Dilated pupils • Rapid pulse • Rapid breathing • Flushed appearance • Sweating
- Rambling speech • Headache • Dry mouth • Aggressive • Unpredictable behaviour

FIRST AID


- Ensure area is safe • Wear gloves if available • Speak calmly & reassure
- DO NOT be argumentative • Keep casualty warm • Monitor vital signs regularly (pg 48)

Alcohol Misuse

SIGNS & SYMPTOMS

- Alcohol on breath • Blurred vision
- Slurred words • Slow reaction time
- Very loud or very withdrawn behaviour • Confusion
- Unsteadiness on feet • Memory loss
- Loss of coordination • Unconsciousness

FIRST AID

- Ensure area is safe
- Wear gloves if available
- Position casualty on their side - likely to regurgitate or vomit
- Examine for head injury and exclude, diabetes (pg 26) and stroke (pg 27)
- Call 

Recognising a Drug/ Alcohol problem

If you're worried that a friend, work colleague or family member might be misusing drugs or alcohol, look for the following warning signs:

Physical warning signs of drug/alcohol misuse:

- Changes in appetite or sleep patterns.
- Bloodshot (red) eyes.
- Pupils that are larger or smaller than usual.
- Sudden weight loss or weight gain.
- Deterioration of physical appearance and personal grooming.
- Unusual smells on clothing or breath.
- Impaired coordination, tremors or slurred speech.

Behavioural warning signs of drug/alcohol misuse:

- Sudden change in hobbies, friends and favourite hangouts.
- Drop in performance and attendance at school or work.
- Unexplained need for money or financial problems. May borrow or steal to get it.
- Develops secretive or suspicious behaviours.
- Frequently gets into trouble (accidents, fights, illegal activities).

Psychological warning signs of drug/alcohol misuse:

- Appears fearful, anxious, or paranoid, for no reason.
- Unexplained change in attitude or personality.
- Sudden mood swings, irritability, or angry outbursts.
- Periods of unusual hyperactivity, agitation, or giddiness.
- Lack of motivation; appears lethargic or "spaced out."

Pocket masks protect you.

Where possible use a pocket mask or face shield for rescue breaths.

Pocket masks reduce the risk of infection from body fluids when providing rescue breaths.

Hold the mask in place with both hands to provide a good seal.



Capabilities of Emergency Services

Workplaces must be aware of the capabilities of emergency services. Many workplaces have unique hazards that emergency services may not be able to respond to easily or quickly. **All rescuers must be protected from dangers.** Examples include

- **Heights:** eg rescue from tree clearing, erecting scaffolding, high-rise window cleaning
- **Hazardous substances:** eg hydrofluoric acid used to prepare metal surfaces, industrial chemicals, pesticides & herbicides, radio-active substances. Emergency services may need specialised equipment and special training to perform a rescue.
- **Confined spaces:** Silos, trenches, maintenance hatches, controlled atmospheres. Special equipment may be required eg harness, breathing apparatus, gas monitoring
- **Remote locations:** eg Mobile repeater towers, surveyors, reservoirs, state and national park services, fishing fleets. Emergency services may take many hours to respond to emergencies in these workplaces.



Workplaces must include emergency service response capability as a part of hazard assessment and risk minimisation. This may include:

- Identify likely response times and plan for contingencies.
- Identify equipment that may be needed eg cranes, high access ropes, harnesses, lifting jacks, cutting equipment, breathing apparatus (BA).
- Provide a communication plan to activate appropriate resources
- Identify special training or induction requirements for rescue teams.
- Provide appropriate personal protective equipment (PPE).
- Develop procedures to guide or escort rescue team eg in a mine, on a large ship



Administration of Medication

In most States first aiders are permitted to **administer reliever medication for asthma** and an autoinjector containing a pre-measured dose of **adrenaline** as part of an emergency first aid response.

For other medications, *unless there are special provisions within the workplace*, a first aider **may only assist** a casualty to take their own medication. This may include locating the medication, reading the instructions on the label, opening the medication container or getting the medication out of its container. However, the first aider should be guided by the casualty and it is the casualty who makes the decision about what medications to take.

Some workplaces such as child care or aged care centres involve the administration of medication. These workplaces

- Must have policies and procedures regarding medications.
- Must provide staff training
- Must record all medications in the prescribed manner


Regulations control the administration of medications in child care centres and schools. For example see National Child Care regulation 94 on pg 44.



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 44)

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

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 patient 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 In the workplace, it is important to be aware of the correct documentation and record keeping used in first aid situations.

Every organisation 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 contents strictly confidential

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

FIRST AID

- Squeeze blood out of injury site to flush wound
- Wipe with alcohol swab.
- Wash hands.
- Place syringe in plastic drink bottle or sharps container.
- Take syringe to hospital for analysis.

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.

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

Workplace Health and Safety

Common principles are present in all state WHS legislation

Employers must

- provide for the health, safety and welfare of employees and others at work
- eliminate, at the source, risks to the health, safety or welfare of employees and others at work
- ensure that the health and safety of members of the public is not placed at risk
- consult employees, in the health, safety and welfare standards

Employees must

- take reasonable care for his or her own health and safety; and
- take reasonable care for the health and safety of others
- use safety equipment provided and follow workplace procedures

Employees must not

- misuse anything provided at the workplace in the interests of health, safety or welfare.

Manual Handling Code of Practice explains how to comply with WHS legislation

Safe Work Practices Workplace procedures must be followed and safe manual handling practices must be used **at all times** in the workplace, even when responding to first aid incidents. For example when moving a casualty into the recovery position or out of danger, it is important the first aider is protected from injury by using correct manual handling techniques.

- Always adhere to safe work practices to reduce potential risks.
- Use supplied Personal Protection Equipment (PPE) - this is a legal obligation.
- Plan ahead. eg arrange for delivery when help is available
- Use mechanical aids where possible.
- Ask for assistance for heavy loads.
- Know your own skills and limitations.



Manual handling

(MH) is an activity using force or exertion to

- lift,
- lower
- push
- pull
- carry or move
- hold or restrain

any object person or thing. Tasks involving physical stress or repetitive movements have the highest rates of manual handling injuries.



Repetition



Lifting



Carrying



Repetition



Pulling



Pushing



Lifting



Restraining



Pushing

Common Manual Handling injuries

- Back injuries
- Muscle and joint injuries
- Impact eg crushed fingers
- Abdominal hernia

Injuries can be caused by

- Intense effort - move heavy load
- Sudden movement
- Awkward or twisting movement
- Slips and trips

Gradual wear & tear caused by

- Reaching over to make a bed
- Pushing or pulling
- Cleaning activities
- Sustained posture eg laying tiles
- Sustained vibration eg grinding



Awkward posture



Vibration

Assisted walking with one carer Steps:

- Position yourself close, behind and slightly to the side of the client to avoid extended reach
- Place your inside palm on the client's outside hip or lower back
- Place your outside palm on the front of the client's inside shoulder, arm or elbow
- Your position will guide and reassure the client.



Assisting to walk

Note: If the client requires more help than this, do a reassessment and consider the use of a mobility aid.

Weight limit for lifting

There is no absolute limit for weight that can be lifted. However the heavier the load, greater is the risk of injury. The national code of practice for manual handling provides these guides.

For lifting, lowering or carrying loads:

- while seated 4.5 kg;
- when standing 16-20 kg
- for weights 16 - 55 kg use team lift
- above 55 kg recommended, do not lift

To minimise risk of injury:

Workplaces need to develop procedures

AND

Provide staff training in procedures

Lift and lower procedure

- Assess the load & test its weight
- Place feet in a comfortable balanced position, one foot slightly forward.
- Bend your knees and if possible hold the load with both hands.
- Keep your back straight at all times.
- Lift the load gradually by straightening your legs.
- Let your thigh muscles, not your lower back do the work.
- Carry the load as close as possible to your body.
- Do not twist your back to change direction, use your feet.
- Ensure you can see where you are going.
- Use the same techniques in reverse when lowering the load.



No-Lift Procedures

Many care providers have adopted "no-lift" policies and procedures to protect workers from injuries resulting from manual handling.



Assisting to stand up

Reducing Risk There are many different ways to reduce the risks of manual handling. The best way is to **eliminate the hazard**. For example the hazard of lifting a client in and out of the bath could be eliminated by replacing the bath with a wheel-in shower.

Risk control will usually include:

- Policies and procedures for manual handling
- Modifying the workplace layout
- Rotating repetitive tasks
- Use of mechanical aids
- Modify or repackage load
- Staff training

Identify hazards and control risks. Use the “Risk Assessment Matrix” on page 40 to complete this. Once the hazards are assessed it is then up to the employer to work in consultation with employees to take all reasonably practicable steps to minimise the risks to injury.



Use Mechanical Aids



Using Mechanical Aids



Back Injury. Half of all injuries in the workplace are to the back. Unfortunately workers and employers may not recognise the risks until after an injury has occurred.

- Back injury can cause long-term pain, discomfort and debility.
- Many back injuries can be prevented by adopting safe lifting principles.
- Where possible use mechanical aids
- Ask for assistance to lift heavy objects
- Use correct lifting techniques

Return to work Return to work programs are intended to assist a worker return to the workplace after sustaining an injury at work. This helps the worker to gradually return to active duties. The program is supported by medical advice and rehabilitation services.

Supporting an injured worker to return to safe and sustainable work as soon as possible is necessary to meet legal obligations. A return to work program, is good for workers and business. It can help increase productivity and keep the cost of WorkSafe Insurance premium down. It benefits your worker by reducing the financial, health and emotional impacts on them and their family.



- A work injury claim form should be filled out by an injured worker on the same day, or as soon as possible after an injury at work. Claims for compensation may not be recognised if the form is not completed within 30 days
- Supporting an injured worker to return to safe and sustainable work as soon as possible is necessary for employers to meet legal obligations. A return to work program, is good for workers and business.



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:		Home phone:	
Work phone:		Work phone:	
Mobile:		Mobile:	
Address:		Address:	
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 - <i>remove the risk if possible; otherwise reduce the risk</i>	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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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 (Melway), 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

[illegible]

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



Turn over

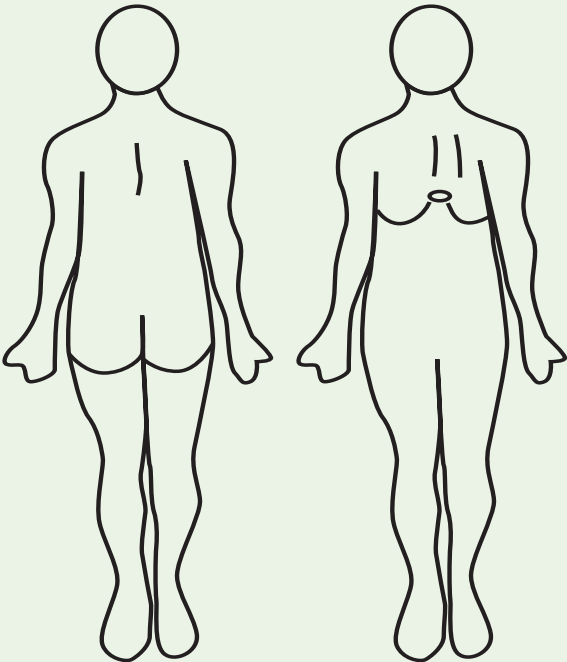
Casualty Examination:

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



Verbal Secondary Survey

W-H-A-M-M-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:_____

