



FIRST AID & CPR TRAINING MANUAL

The **FACT** is you can save a life

www.factco.nz

0800 322 826

IN AN EMERGENCY CALL 111

Healthline	0800 611 116
Poison Control	0800 POISON
Diabetes NZ	0800 DIABETES
Immunisation Advisory Centre	0800 IMMUNE
AED Locations	aedlocations.co.nz

IN AN EMERGENCY CALL 111

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WHAT IS FIRST AID?

First aid is the initial help to an ill or injured person. Our job is to keep them alive until more advanced help arrives

PRIMARY ASSESSMENT

The primary assessment is the first thing that we do for any person requiring first aid, it is also the most important thing we can do.

It is commonly called the **DRSABCD's**

UNCONSCIOUSNESS

When a person becomes unconscious, their muscles relax and their tongue falls to the back of their throat. This causes their airway to become blocked.

This is dangerous because if their airway is blocked they cannot breathe. If they cannot breathe they will die. It is important to physically open the airway for any unconscious victim, regardless of the position you find them in.

When a person is unconscious on their back they may also inhale their own vomit - this is called aspiration and is a very dangerous.

It is important to place all breathing, unconscious victims in the stable side position to avoid aspiration.



PRIMARY ASSESSMENT

seven steps to save a life



DANGER

Check for danger - ensure everyone is safe



RESPONSE

Check for response - ask name, squeeze shoulders



SEND for help

Send for help - **call 111** for an ambulance, or get a bystander to make the call



AIRWAY

Open mouth - look for foreign material and maintain the airway



BREATHING

Check for breathing - look, listen, feel



CPR

Start CPR
30 compressions : 2 breaths



DEFIBRILLATION

Apply Defibrillator (AED) as soon as available
Follow the voice prompts

0800 FACT CO



YOUR SAFETY COMES FIRST

Before you help, check for any dangers and make sure that you are safe. You cannot help someone else if you are hurt.

If your life becomes in danger, stop and make it safe before continuing help.

LEVEL OF RESPONSE

Determine the victim's **Level of Response** – sometimes called the Level of Consciousness or LoC.

TALK

to them

TAP

their shoulder

SHOUT

their name

Based on their response, they may be

A

ALERT and fully responsive

V

Responds to **VOICE**

P

Unconscious but responds to **PAIN**

U

Unconscious and **UNRESPONSIVE**

Keep checking the Level of Response and note any changes; this is important information for the people who will take over care.




HOW TO GET HELP

In an emergency

CALL 111

and ask for an ambulance.

An emergency is defined as any threat to life or limb and includes:

-  if someone is not breathing
-  if someone is unconscious
-  if someone is bleeding severely

OPEN THE AIRWAY

If the victim is unconscious you have to open their airway. This is one of the most important things a first aider can do to help an unconscious victim.

For an adult use the head-tilt, chin-lift manoeuvre to open the victims airway.




For a child, open the airway by gently tilting their head back and lifting the chin.

For an infant, place head in neutral position.

CHECK FOR BREATHING

Place your ear close to the victims mouth and nose, looking towards their chest.

Check for breathing for between 5 seconds and 10 seconds

-  **LOOK** at the chest and tummy for movement
-  **LISTEN** for any sounds
-  **FEEL** for air coming from the nose and mouth

If the victim is not breathing start CPR (PAGE 9); if the victim is breathing for themselves but is unconscious place them in the stable side position (below), monitor for changes in breathing and Level of Response, and wait for help to arrive.

STABLE SIDE POSITION (RECOVERY POSITION)



If the victim is unconscious but breathing, they need to be placed in the stable side position, commonly called the recovery position.

The stable side position helps keep the airway open and protected; it prevents the victim from inhaling their own vomit.

Once the victim has been placed on their side, re-open the airway and re-check for breathing.

CPR & DEFIBRILLATION

Normal breathing should be rhythmical, should not be noisy, should not be difficult - if the unconscious victim's breathing is not rhythmical and they appear to be gasping for breath, this is not normal breathing and you should start CPR.

START CPR

If the victim is not breathing, or not breathing normally, start CPR.

CARDIO

HEART








PULMONARY

LUNGS

RESUSCITATION








RESTART

PUSH HARD, PUSH FAST









-  The victim must be on their back on a firm, flat surface
-  Place the heel of one hand in the centre of the chest. Place your other hand on top of the first
-  Start **30 COMPRESSIONS** at a rate of 100 to 120 per minute
-  Push down 1/3rd the depth of the chest, 5cm on average
-  Open the victim's airway with the head-tilt, chin-lift manoeuvre and give **2 BREATHS**
-  Give enough air to make the chest rise
-  Continue **30 COMPRESSIONS TO 2 BREATHS**

CPR IN CHILDREN & INFANTS

CPR in Adults and Children are very similar. Children are defined as anyone older than 1 year but younger than 8 years.

-  The child must be on their back on a firm, flat surface
-  Place the heel of one hand in the centre of the chest. You may use one or two hands to perform CPR, as long as you reach the correct depth and remain at the correct speed
-  Start **30 COMPRESSIONS** at a rate of 100 to 120 per minute
-  Push down 1/3rd the depth of the chest, 5cm on average
-  Open the victim's airway with the head-tilt, chin-lift manoeuvre and give **2 BREATHS**
-  Give enough air to make the chest rise
-  Continue **30 COMPRESSIONS TO 2 BREATHS**

For CPR in infants follow the same process but we have a few technical differences:

-  Pick the infant up to look for a response, if there is no startled reaction they are unresponsive
-  The infant must be on their back on a firm, flat surface
-  When pushing, use two fingers in the centre of the chest
-  Start **30 COMPRESSIONS** at a rate of 100 to 120 per minute
-  Push down 1/3rd the depth of the chest, 4cm on average
-  Cover the infant's mouth and nose with your mouth to form a seal
-  Open the victim's airway with the head-tilt, chin-lift manoeuvre and give **2 BREATHS**
-  Give enough air to make the chest move, about a mouthful of air

STOP CPR

When should we STOP CPR?

Start to breathe

the victim starts breathing by themselves

TOO Unsafe

your life is in danger

Out of Breath

you cannot continue

Professionals Arrive

help arrives and takes over

DEFIBRILLATION (AED)

Automated

External

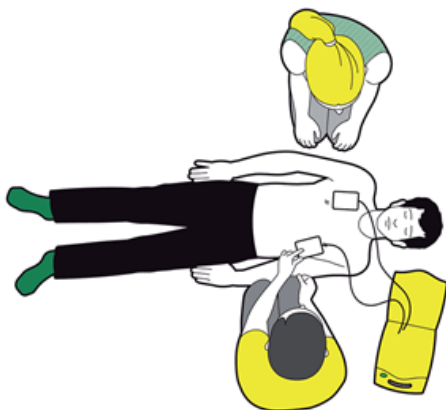
Defibrillator

A defibrillator and an AED is the same thing. Make sure you know where your nearest AED is www.aedlocations.co.nz

Use the defibrillator (AED) as soon as it arrives. The longer you wait to use it, the less chance of survival the victim has.

To use most AEDs simply turn it on and follow the instructions.

Place one pad on the right of the victim's chest, just below the collarbone. Place the second pads on the left ribs, in line with the armpit.



The machine will tell you whether it needs to shock or not, simply listen to and follow the voice prompts.

FOREIGN BODY AIRWAY OBSTRUCTION (CHOKING)

CHOKING – ADULTS & CHILDREN

For victims more than a year old.

BACK BLOWS AND CHEST THRUSTS

If you think someone is choking

1. ASK them if they are choking, if they nod yes then
2. ASK them if they can cough – if they cannot cough:

- FA CT CALL 111
- FA CT Lean the victim forward, holding their shoulder so they don't fall
- FA CT Deliver up to **FIVE SHARP BACK BLOWS** between the shoulder blades – use the heel of your hand

If the back blows do not dislodge the object,

- FA CT From behind, deliver up to **FIVE SHARP CHEST THRUSTS** by placing the thumb side of your fist in the centre of the chest, place your other hand on top of the fist



Continue with 5 Back Blows and 5 Chest Thrusts until the object comes out, or the victim becomes unconscious.

If they become unconscious, follow your **DRSABCDs**

CHOKING – INFANTS

For victims less than a year old.

BACK BLOWS AND CHEST THRUSTS, WHILE SUPPORTING THE HEAD

When an infant has a severe obstruction you may see the following:


Their lips, ears and/or nose turn blue

They are not making any sounds while they appear to be coughing or sneezing.

-  CALL 111
-  Support the infant's head by holding their jaw
-  Deliver up to **FIVE SHARP BACK BLOWS** between the shoulder blades – use the heel of your hand

If the back blows do not dislodge the object,

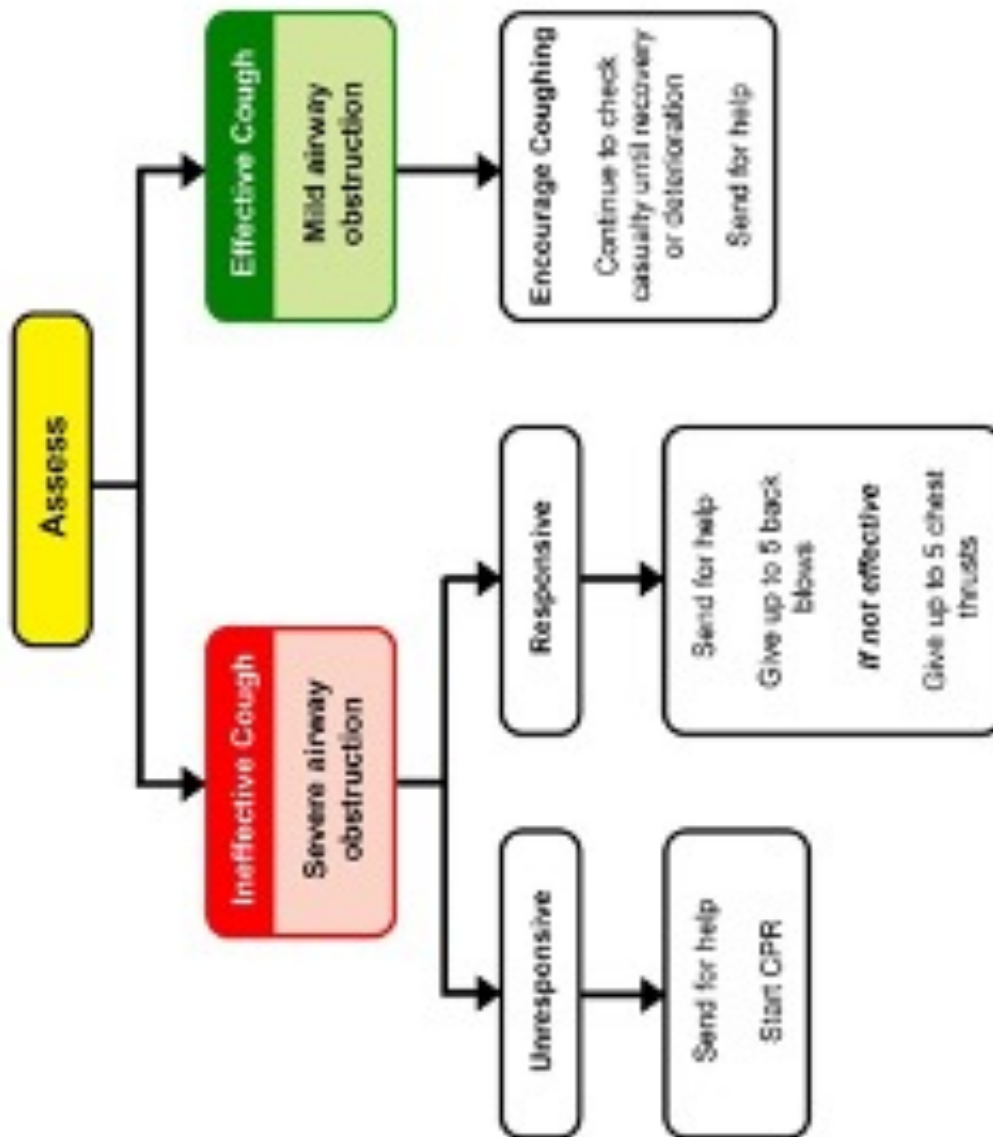


-  Turn the infant face up and deliver up to **FIVE SHARP CHEST THRUSTS** using two fingers in the centre of the chest.

Continue with 5 Back Blows and 5 Chest Thrusts until the object comes out, or the victim becomes unconscious.

If they become unconscious, follow your **DRSABCDs**

CHOKING ALGORITHM







BLEEDING & SHOCK

WOUNDS

Types of wounds include **lacerations** (cuts); **contusions** (bruises); **abrasions** (grazes); **amputations** (body part cut off); **punctures** (commonly from an impaled object or a bite/sting).

BLEEDING GENERAL CARE

-  Control the bleeding
-  Clean the wound
-  Cover the wound with a clean bandage
-  Apply pressure (unless there is an impaled object)

External bleeding is when the blood is flowing out of the wound. It can appear dark red and flowing – known as venous bleeding, or bright red and squirting – known as arterial bleeding.

Stop bleeding by using **RED & RED**

R

Rest & Reassure

E

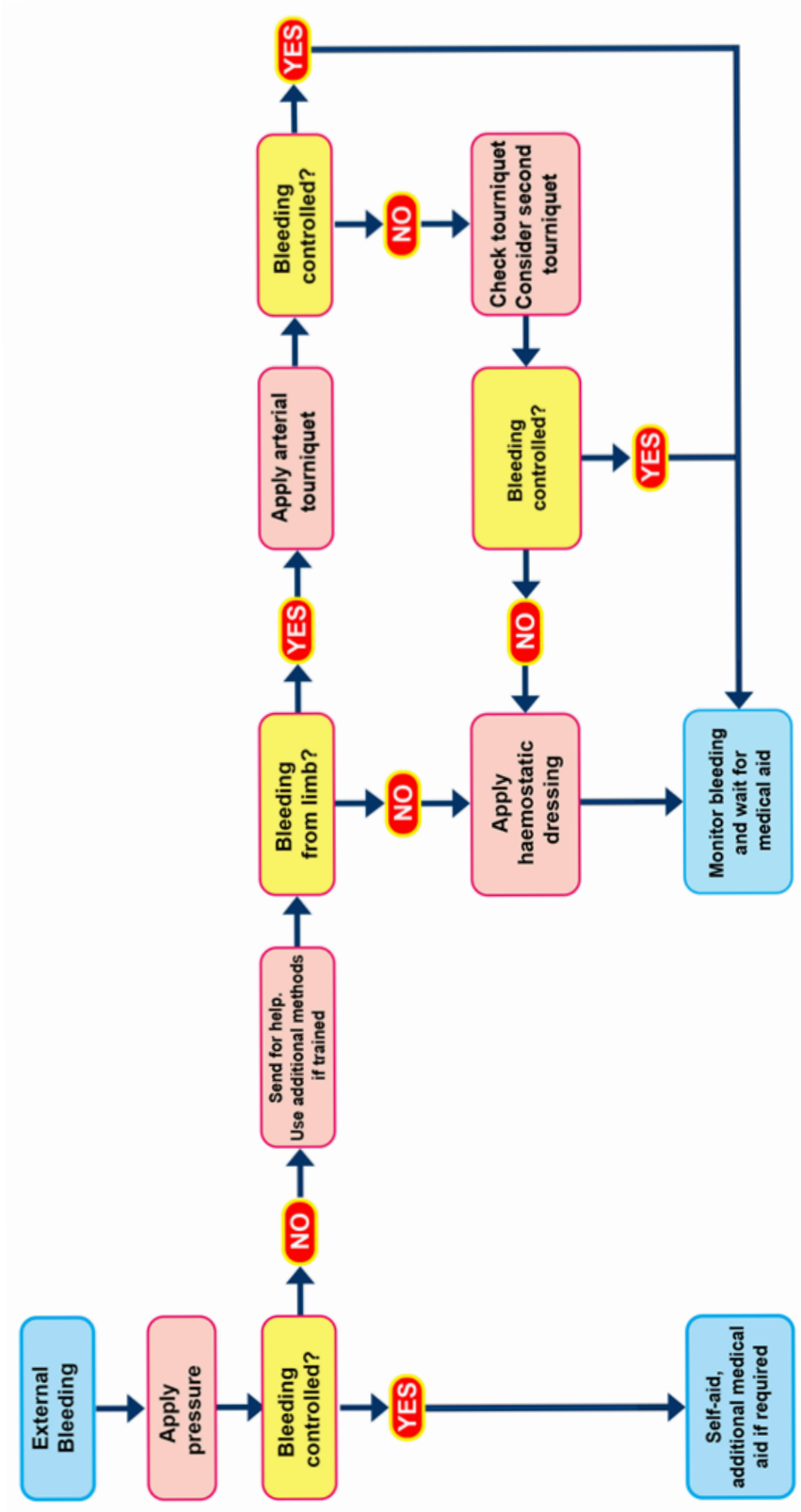
Expose & Elevate

D

Direct Pressure &
Dressing

If bleeding still continues it you may need to remove the dressing to ensure that the specific bleeding point has not been missed.

You may need to REMOVE the initial dressing to allow more direct pressure to be placed on the bleeding location – only do this once.



SHOCK

The causes and effects of shock can all be life threatening.

When someone is in shock they need help - CALL 111



Shock can be caused by a loss of blood or other body fluids; infection or septicaemia; heart problems; severe allergic reactions.

Shock is the body's defence mechanism. It allows blood to be redirected and sent to the vital organs.

Blood flow to the skin is restricted, so the victim will look **PALE, COLD** and **CLAMMY**

-  Keep the victim warm

Blood flow to the mouth and stomach is restricted, so the victim may have DRY MOUTH, NAUSEA AND VOMITING, and an URGENT NEED TO GO TO THE TOILET

-  Give nothing to eat or drink
-  Ensure the victim does not choke on vomit

TRAUMA & INJURIES





SOFT TISSUE INJURIES

A **BRUISE** is caused when tiny blood vessels are damaged or broken and blood leaks from these injured blood vessels into the surrounding tissue.

A **SPRAIN** is an injury to a ligament – ligaments connects bones together.

A **STRAIN** is an injury to a muscle or tendon – tendons connects muscles to bones.

Signs & Symptoms

-  Tenderness
-  Bruising
-  Swelling
-  Pain

How to Help

For the first 24 to 48 hours use **RICED**

Rest

Ice

Compression

Elevation

Diagnose

get a proper
diagnoses if no
improvement

And **do no HARM**

Heat

Alcohol

Running




Massage

or anti-Inflammatory
meds

FRACTURES & DISLOCATIONS





A **FRACTURE** is any discontinuation in a bone and could include a crack or complete break.

Signs & Symptoms





-  Bruising and Swelling
-  Loss of function
-  Deformity

A **DISLOCATION** is when a joint slips out of place. It occurs when the ends of bones are forced from their normal positions.

Signs & Symptoms

-  Swelling
-  Pain
-  Unable to move the limb
-  Deformity

How to Help

-  Control any bleeding
-  Support it in the as found position and minimise movement
-  Keep the victim warm and continue to reassure them
-  Check for signs of shock

BURNS

A **BURN** is an injury to the skin and could have varying depths and severity.

Types of Burn

- FACT Thermal - hot surfaces and liquids
- FACT Chemical
- FACT Electrical
- FACT Friction
- FACT Radiation - Sunburn
- FACT Cold

Symptoms of Depths of Burns

Superficial

- FACT Redness
- FACT Pain

Partial Thickness

- FACT Blistering
- FACT Weeping
- FACT Very Painful

Full Thickness

- FACT Charred
- FACT White/Waxy Film
- FACT No Pain



FIRST-DEGREE Superficial

Cause damage to the first layer of the skin only. Area will be red and painful. E.g. sunburn.



SECOND-DEGREE Partial thickness





Cause damage to the first and second layer of the skin. Area will be red, peeling, blistered and swelling with clear or yellow-coloured fluid.



THIRD-DEGREE Full thickness

Cause damage to the first and second layers, plus underlying tissue. Burn site appears black or charred with white exposed fatty tissue. Nerves are destroyed and pain will not be as strong.







How to Help

-  Cool the burn for at least 20 minutes with cool running water (8°C - 23°C)
-  Remove restrictive jewellery and clothing that is not stuck to the skin
-  For **chemical burns** dilute the chemical for at least an hour with cool running water
-  Dress the burn with a clean, non-stick dressing

Remember the **Three Cs**

C Cool	C Clear	C Cover
for at least 20 minutes	restrictive jewellery or clothing that isn't stuck to skin	with a clean, non-stick dressing

GET MEDICAL ASSISTANCE OR CALL 111 FOR:

-  Burns that are greater than 10% of total body surface area
-  Burns to special areas – face, hands, feet, genitalia, perineum and major joints
-  Electrical burns
-  Chemical burns
-  Burns with an associated inhalation injury
-  Burns in the very young or very old

Call for SCALDs

S Size	C Cause	A Age	L Location	D Depth
burns to more than 10% of body surface area	Electrical, chemical and inhalation burns	Very old, and very young victims	Burns to special areas	Full thickness burns

POISONING

Poisoning occurs when the body comes into contact with a harmful or toxic substance.

TYPE	EXAMPLES	SIGNS & SYMPTOMS
INGESTED	Food or Drink	Nausea, Vomiting, Burns around the mouth
INHALED	Fumes, Gases, Smoke	Breathing Difficulties, Coughing, Wheezing
ABSORBED	Chemicals and Powders	Rash or Burns to skin
INJECTED	Bites, Stings or Drugs	Puncture Wounds

Other Signs & Symptoms

- Diarrhoea
- Abdominal pain
- Seizures
- Unconsciousness

How to Help

- Follow your DRSABCD's
- Call **0800 POISON** for advice (0800 764 766)
- Call **111** if you require an ambulance
- **Do Not** make the victim vomit or eat or drink anything unless advised to do so by the Poison Control Centre or Emergency Medical Services

MEDICAL CONDITIONS

HEART ATTACK & ANGINA

The heart is supplied with oxygen and nutrients through its own blood supply: the coronary arteries.

Angina occurs when the coronary artery is narrowed resulting in part of the heart not receiving enough oxygen.

Heart Attack occurs when there is a blockage of the coronary artery resulting in the heart not receiving any oxygen.

Other Signs & Symptoms

	Angina	Heart Attack
P Provoking Factors	Increase HR	None
Q Quality of Pain	Stabbing	Crushing
R Relief of Pain	Rest & Meds	None
S Severity of Pain	9/10	10/10
T Time	5 to 10 minutes	hours, days, weeks

How to Help

Angina

Get victim to **rest**

Get victim to use their **medication** if they have any

If after **5 minutes** there is no improvement take a second dose of medication

If no improvement in another 5 minutes **call 111**

Heart Attack



Get the victim to **rest and sit down**

Call 111 and ask for an ambulance




Give the victim 1 soluble **aspirin** (300mg) unless they have an allergy to it

Send for an **AED**

If you are unsure if the victim is suffering from Angina or a Heart Attack, always treat them for a Heart Attack

-  If the victim becomes unconscious, follow your DRSABCD's
-  If they are not breathing start CPR

DO NOT

-  Encourage the victim to cough
-  Allow the victim to walk
-  Allow the victim to go to the toilet – this is a sign of shock

STROKE

A Stroke occurs when the supply of blood to part of the brain is suddenly disrupted by a blockage or when a blood vessel in the brain starts bleeding.

When someone is having a stroke, think **FAST**

F

FACE

Drooping on one side

A

ARM

Weakness on one side

S

SPEECH





Jumbled, slurred, or lost

T

TIME

to call 111

Other Signs & Symptoms

-  Sudden confusion, trouble speaking or understanding
-  Sudden trouble seeing in one or both eyes
-  Sudden trouble walking, dizziness, loss of balance or coordination
-  Sudden severe headache with no known cause

How to Help

If you suspect a stroke **call 111** for an ambulance immediately, even if signs and symptoms have gone away – this is often called a Transient Ischaemic Attack (TIA) or a mini-stroke, and can be a pre-cursor to a more severe stroke.

Sit the victim down and reassure them.

SEIZURES

A seizure is a sudden electrical discharge in the brain resulting in involuntary behaviour that usually affects how a person feels or acts for a short time.

Epilepsy results in seizures, but not all seizures are due to epilepsy.

Signs & Symptoms

- Staring, excessive blinking or upward rolling of the eyes
- Dizziness
- Falling to the ground/loss of consciousness
- Incontinence
- Body spasms
- Clenched jaw
- Foaming at the mouth

How to Help

Before the Seizure

- Get the victim to sit/lie down
- Place them in a cool, dark, quiet area

During the Seizure

- Protect the victim's head
- Clear the area - move any furniture or objects out of the way that may hurt them
- Do not place anything in their mouth
- Do not try to restrain the victim, but protect or cushion the head

After the Seizure

- Follow your DRSABCD's
- If the victim is breathing place them into the stable side position and monitor their level of response
- Call 111 if this is their first seizure, if the seizure lasts longer than usual or if they significantly hurt themselves during the seizure

DIABETES

Diabetes is a disorder that affects how the body absorbs sugar – either there is little or no insulin (Type 1) or the insulin is not working effectively (Type 2).

A blood sugar level between 4.4mmol/L and 7.7 mmol/L is normal – below 4.4mmol/L is **LOW** blood sugar and above 7.7mmol/L is **HIGH** blood sugar.

In a diabetic emergency you are more likely to have low blood sugar levels instead of high.

Signs & Symptoms

- Often mistaken for being intoxicated
- Irritable, hungry or a change in mood
- Feeling weak & tired
- Shallow breathing
- Skin may be cool, clammy, pale or sweaty
- Confused, forgetful or disorientated

How to Help

When the victim is awake

- Give 15–20 grams of real sugar or honey
- Wait 10 to 15 minutes – if they do not improve call 111
- If they show signs of improvement give them a complex carbohydrate like a biscuit, sandwich or cheese

When the victim is unconscious






- Place in stable side position then apply a sugary paste to the inside of the cheek or gums
- Call 111
- If they improve, give more sugar until they can eat a complex carbohydrate

DO NOT ADMINISTER INSULIN





ASTHMA

Asthma is when a person comes into contact with an irritant and the airway starts to close off and the victim can no longer breathe.

Signs & Symptoms

-  Coughing
-  Wheezing
-  Shortness of breath
-  Tightness in the chest
-  Distressed

How to Help

-  Calm them down and monitor their breathing
-  If they have an asthma inhaler, give 6 puffs every 6 minutes
-  If there is no improvement, call 111 for an ambulance immediately
-  Keep giving 6 puffs every 6 minutes until the ambulance arrives



If you lie the victim down their breathing will get worse, sit them up and reassure them.

If uncertain whether the victim is suffering from asthma or anaphylaxis, administer an EpiPen first, followed by the asthma inhaler

The inhaler is best given one puff at a time via a spacer device - if a spacer is not available, simply use the inhaler.

ADVANCED FIRST AID

SEVERE BLEEDING IMPALED OBJECTS





-  DO NOT remove any impaled object
-  Restrict movement and immobilise the impaled object with supportive bandaging

AMPUTATION

Bag It

Tag It

Cool It

-  Control the bleeding
-  Call 111 for an ambulance
-  Protect the amputated part by keeping it clean and dry. Place it in a plastic bag and keep it cool, not in direct contact with ice
-  Treat the victim for shock

HEAD, NECK & SPINE INJURIES








Just like the skull protects the brain, the spinal column protects the nerves running from the brain to the body – the spinal cord.

The nerves leave the spinal column at each vertebrae – if the bones of the vertebrae are broken they have sharp edges that can cut the nerves resulting in loss of function.

CRUSH INJURIES

A crush injury may result from a variety of situations, such as falling debris or prolonged pressure to a part of the body due to their own body weight. The injuries can be extremely serious if it causes severe bleeding or damage to internal organs.

How to Help







-  Follow your DRSABCDs
-  Remove the crushing object as soon as possible, if it is safe to do so – this is a big change to previous teachings
-  Victims should be released as quickly as possible, irrespective of how long they have been crushed
-  Control bleeding – DO NOT use a tourniquet
-  Continue to reassure the victim and keep them warm – treat for shock
-  If victim becomes unresponsive and is not breathing normally, start CPR
-  All victims who have been subjected to crush injury, including by their own body weight, should go to hospital via an ambulance

ANAPHYLAXIS

Anaphylaxis is a severe allergic reaction causing the airway to swell and the victim to stop breathing.

Commonly people are allergic to peanuts, bee and wasp stings, shellfish, penicillin and eggs.






Signs & Symptoms

-  Swelling of tongue and throat
-  Swelling of the face
-  Difficult, noisy breathing
-  Wheeze, whistle or cough
-  Abdominal pain
-  Rash on the abdomen

Most fatal cases of food induced anaphylaxis occur in those with asthma

If it is uncertain whether the victim is suffering from asthma or anaphylaxis it is appropriate to use the EpiPen first, followed by asthma inhaler

How to Help

-  Call 111 for an ambulance, even if an EpiPen has been used
-  Lay the person flat and do not allow them to stand or walk
-  If breathing is difficult allow them to sit in a comfortable position
-  Assist the victim to administer an EpiPen
-  If no improvement within 5 minutes, a second EpiPen may be used

HOT & COLD EMERGENCIES

Normal body temperature ranges from 36°C to 37°C degrees Celsius

Hypothermia is a body temperature less 35°C

Hyperthermia is a body temperature higher than 37°C

LESS THAN 35°C	MORE THAN 37°C
Hypothermia	Hyperthermia - Fever
Cold, Pale Skin	Hot, Red Skin
Decreased Level of Consciousness	Muscle Cramps
Shivering	Sweating

How to Help

Hypothermia	MORE THAN 37°C
<p>Warm them up slowly</p> <p>Remove wet clothing and cover with dry clothing/blanket</p> <p>Move out of the wind/wet weather; do not put them next to a heater/fire</p> <p>Give a sweet drink if they are awake and able to swallow</p> <p>Do not use skin-on-skin contact</p>	<p>Cool them down quickly</p> <p>Immerse them in cool water for 15 minutes if possible</p> <p>If immersion is not possible: wet them with cold or cool water, under a shower if safe, or with a hose Repeatedly moisten the skin with a moist cloth or atomizer spray</p> <p>Apply ice packs: groin, armpits, facial cheeks, palms and soles</p> <p>Fan continuously</p>

IN AN EMERGENCY CALL 111

Healthline

0800 611 116

Poison Control

0800 POISON

Diabetes NZ

0800 DIABETES

Immunisation Advisory Centre

0800 IMMUNE

AED Locations

aedlocations.co.nz

Phone: 0800 322 826
Email: training@factco.nz
Web: www.factco.nz