FULLY REVISED EDITION

Compliant with the latest 2016 International Consensus on First Aid Science with Treatment Recommendations

STANDARD FIRST AID

SFATC™

SINGAPORE FIRST AID TRAINING CENTRE

FOREWORD

The initial reaction of the rescuer is critical in influencing the outcome of an emergency. Knowing what to do in the first few minutes of an emergency and applying them at the earliest instance of need can make that critical difference between life and death. These emergency lifesaving skills are not difficult to learn when conveyed in a systematic and clear manner. This course is designed to help you achieve the lifesaving knowledge and skills required as you understand your role as a rescuer and develop confidence to apply them effectively.

FEATURES OF THE MANUAL:

- Compliant to the latest 2016 guidelines
- Information conveyed to in simplified form
- Step by step instructions on how to approach
- Illustrations to further describe actions to be taken
- Column for additional notes shared by your facilitator

TIPS:

1) Participate fully in all practical session. Practice makes perfect and you may not get another chance to do so.

2) Do it as though it's the real thing. The next time it will be real.

3) Clarify with your facilitator whenever in doubt. Just remember that knowledge is power but excess knowledge is baggage. Keep it simple!

We wish you the very best in learning how to save lives and make a difference!

Thank you,

Singapore First Aid Training Centre Pte Ltd

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PRINCIPLES AND PRACTICE OF FIRST AID

NOTES:

First Aid is a lifesaving measure that can provide initial care to a victim of injury or sudden illness, before advanced care can be obtained.

AIMS OF FIRST AID

- to preserve life
- to prevent condition worsening
- to promote recovery
- to provide pain relief
- to provide reassurance

RESPONSIBILITIES AND DUTIES OF A FIRST AIDER

1. **Rendering first aid until medical help arrives.**
   The first aider is expected to attend to any casualty including those with head injuries, severe bleeding, fractures, heart attack or lack of oxygen which demand immediate attention.

2. **Keeping records of injuries.**
   Certain accidents have to be legally notified. Thus, knowledge of legal requirements and how to record injuries is a must.

3. **Maintaining first-aid equipment and room.**
   The first aider will need to maintain the first aid equipment, first aid boxes or first aid room, if any. It is important to check that the various pieces of the first aid equipment are in order and the first aid box contents are replenished regularly.

4. **Knowing the workplace and possible hazards.**
   The first aider must be familiar with the layout of the workplace so that he can respond without any delay. It is important for the first aider to know the processes and its associated hazards so that he can anticipate the possible types of injuries and be prepared to render the appropriate first-aid.

5. **Helping in accident prevention.**
   The first aider can play an active role by participating in preventing accidents at the workplace.

UPDATING KNOWLEDGE OF FIRST-AID.

The first aider must keep attend a refresher course every 2 years to stay current with the latest changes.

UNIVERSAL PRECAUTIONS

Universal precautions can help protect the first aider from exposure to diseases spread by blood and other bodily fluids.

- Use latex gloves, face shields and aprons when dealing with bleeding or large quantities of body fluids.
- If these are not available, do not touch blood, blood tinged saliva or the vomits of a victim with bare hands.
- Use clean dressings or cloths when applying pressure to a bleeding wound.
- When latex gloves are removed, always wash hands or other skin surfaces that may be contaminated with soap and water.
- Do not wash or reuse latex gloves. Dispose of them in proper containers or biohazard bags provided.
- Do not use gloves soiled with blood on another casualty as this may result in cross-contamination.
- Do not eat, drink or touch your mouth, nose or eyes when giving first aid.

- Do not touch objects that may have been soiled with blood.
- Be prepared by having a first-aid kit handy.
- Use a mouth-to-mouth barrier device when doing CPR.

FIRST AID BOXES
Refer to the next chapter for details on first aid box for the workplace.

NOTES:

MANAGEMENT OF MEDICAL EMERGENCIES

PRIMARY SURVEY

1. SCENE SURVEY
- Make sure it is safe for you to approach
- Look for bystanders who can help
- Look around and account for all the casualties

2. GET HELP
- During Emergency, you may find bystanders
- A First Aider works smart and gets all the help
- Ask the people to help you during the rescue

Ask them for help
- Calling the ambulance
- Getting the first aid kit or AED
- Assist during treatment of casualty
- Carrying the casualty
- Gathering casualties medication or belonging to the hospital

3. GET INTO ACTION
- Approach the casualty
- Introduce yourself and identify as a First Aider
- Assess the casualty's condition and injury
- Identify injuries and prioritize which ti be treated first
- Treat major injuries first
- Conditions affecting Airway, Breathing and Circulation are life threatening
- Once you know what to do first, proceed with the appropriate treatment
- If there is more than 1 casualty, decide which to be treated first.

SECONDARY SURVEY

Once the victim has been assessed and stabilised, the first aider can then begin the Secondary Survey.

MAIN COMPLAINT
- What is bothering you the most?

DETAILS OF MAIN COMPLAINT
- Location and description of injury
- Nature of pain

DETAILS OF MEDICAL HISTORY
- Do you have any medical conditions?
- Do you carry a medic alert tag or MEDIK AWAS card?
- Are you taking any medication? What do you take them for?
- Do you have any allergies?
-

HEAD-TO-TOE EXAMINATION

- Visually inspect whole body.
- Look out for fluid or blood coming from ears or nose
- Look out for fracture, swelling, bruises or wounds
- Ask if the victim has other injuries to the arms or shoulders.
- Ask if the victim is able to take a deep breath and blow out air without feeling any pain.
- Ask if the victim experiences any pain in the abdomen.
- Ask the victim to move hands, fingers and bend arms.Compare grip strength between both hands.
- Ask if the victim can move his or her feet, ankles and bend legs.

CONTINUOUS MONITORING

Look out for:

- changes in breathing or skin colour
- worsening of the condition deteriorating conscious level

FIRST AID KIT

Contents	Illustration	Usage
Individually wrapped sterile adhesive dressings		For minor cuts and grazers
Crepe bandage 5 cm		Securing gauzes/ compression bandage
Crepe bandage 10 cm		Securing gauzes/ compression bandage
Absorbent gauze (packets of 10 pieces)		To stop bleeding and cover wounds
Hypoallergenic tape		To secure bandages in place
Triangular bandages		For slings and secondary dressing

NOTES:

Contents	Illustration	Usage
Scissors		To cut bandages and clothing
Safety pins		To pin the ends of bandages
Disposable gloves (pairs)		For protection against blood and contamination
Eye shield		To protect the eye from further injury
Eye pad		To cover eye wounds
Resuscitation mask (one-way)		For protection during mouth to mouth
Sterile water or saline in 100 ml containers		Wash (irrigate) wounds and injuries
Torch		Eye examination

NOTE:
Place your first aid kit in areas it is easily accessible. Ensure that your office, organisation or home is equipped with sufficient first aid kits to cater to the total number of people present.

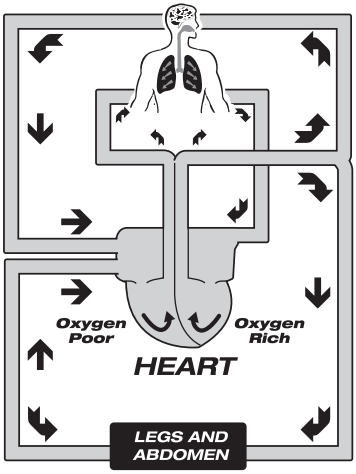
NOTES:

SHOCK, BLEEDING AND WOUNDS

NOTES:

THE CIRCULATORY SYSTEM

The heart is situated between the lungs and behind the sternum. The size of a person's heart is about the size of his or her fist. A typical person has about 4 – 6 litres of blood. The HEART pumps blood full of oxygen and nutrients into the arteries. Once the oxygen and nutrients has been absorbed into the body via the capillaries, blood then returns back to the heart via the veins. This continuous distribution of blood, oxygen and nutrients to all parts of the body is called circulation. You can assess circulation by checking for pulse.



How blood circulates throughout the body

SHOCK

CAUSES OF SHOCK

- **Hypovolemic Shock:**
  Volume failure from bleeding, loss of plasma in burns, loss of fluids from vomitting or diarrhoea.
- **Neurogenic Shock:**
  Caused by fright or sudden stress
- **Anaphylactic Shock:**
  Severe allergy which causes blood vessels to dilate.
- **Septic Shock:**
  Severe infection in blood vessel.
- **Cardiogenic Shock:**
  Heart failure such as from heart attack.

SIGNS AND SYMPTOMS

- Rapid and faint pulse (more than 100 beats per minute)
- Low blood pressure
- Pale, cold and sweaty skin
- Feeling fainting, thirsty and even unconscious

TREATMENT

- Call for ambulance immediately.
- Lie the victim down and elevate legs above heart level.
- Do not give anything by mouth.
- Treat any external bleeding.
- Administer oxygen if available.
- If the victim turns unconscious, place in a recovery position.
- If victim stops breathing, begin CPR.

NOTES:

BLEEDING
Bleeding or **HAEMORRHAGE** must be treated immediately as excessive bleeding can lead to **shock** and **death**.

Bleeding occurs when there are damages to the blood vessels. The severity of bleeding depends on:

1. COLOUR
- **Bright red blood** indicates arterial bleed (from arteries which carries blood out from the heart)

- **Dull dark red blood** indicates venous bleed (from veins which carry blood back to heart)

2. FLOW RATE
- Blood that **spurts** out from a wound indicates arterial bleed (from arteries)
- Blood that **flows** out indicates venous bleed (from veins)
- Blood that **oozes** out indicates capillary bleed (from capillaries)

TREATMENT
- For minor wounds, wash the wound well with water and soap.
- For major wounds, quickly proceed to stop the bleeding.
- Cover the wound with gauze, a pad or your gloved hand.
- If bleeding soaks through the gauze, add more dressings and press harder.
- Alternatively, you can apply a pressure dressing using a crepe bandage.
- If bleeding is severe or does not improve, call for ambulance.
- Prepare to treat for shock.

WOUNDS

Different types of wounds include:

Illustration	Description	Illustration	Description
	Abrasion: Rubbing injury eg. fall on road surface		Contusion: Bruising or "blue-black e.g. knock against hard objects
	Incision: Cleanly "sliced" eg: with a knife or glass		Laceration: Irregular, ripping injury e.g. hit on the edge of a table
	Puncture: Penetrating injury e.g. nail piercing through a finger		Amputation: Severed limb or body part e.g. cut by a bench saw

EMBEDDED OBJECTS

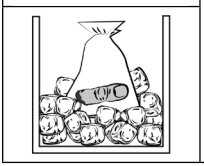
An embedded or impaled object may:
1. cause serious injury to the tissues beneath; and
2. lead to major bleeding, shock and death

TREATMENT
- Call for an ambulance immediately.
- Apply gauze and add pressure to the sides of the wound.
- For large objects, place padding beside object and bandage above and below the object.
- Do NOT press on the object.
- Prepare to treat for shock.

Do NOT remove the object.

AMPUTATION

AMPUTATIONS occur when the body part is completely severed.



TREATMENT

- Call for ambulance immediately.
- Apply pressure to stop bleeding.
- Rinse the amputated part.
- Wrap the amputated part in gauze.
- Place the **amputated part in a plastic bag** and THEN **submerge it inside ice** or iced water.

Do NOT put the amputated part directly into ice.

CRUSH INJURY

A CRUSH INJURY
is caused by large force or weight on the body;
may cause fractures, swelling and other serious injuries; and
may lead to tissue damage, system failure and death.

TREATMENTS

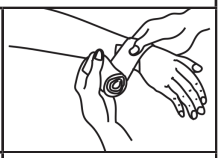
If less than 1 hour
- Remove the force or weight.
- Call for an ambulance.
- Treat injuries.

If more than 1 hour
- Call for an ambulance immediately.
- Do not remove weight UNLESS it is hindering breathing
- Treat other injuries.

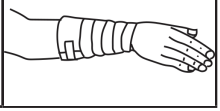
BANDAGING FOR BLEEDING

Spiral Bandage: To cover the gauze or pad after stopping bleeding
Using crepe roller bandage

Start:
1. Begin with 2 turns to secure the bandage.
2. Spiral down by covering 2-thirds of previous bandage and leaving 1-third exposed



End:
1. Bandage until gauze or wound is covered.
2. Complete with 2 turns and secure the ends with a tape.



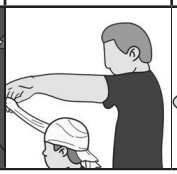
NOTES:

NOTES:

Elevated Sling: To keep arm in an elevated position
Using triangular bandage

Step 1: Make a loop with a narrow bandage	**Step 2:** Gently place the injured hand into the loop	**Step 3:** Tie the two ends at the back of the neck	**Step 4: For fractures or dislocations,** Add a broad bandage across the arm to immobilise.
			

Scalp Bandage: To cover minor wounds and hold bandage
Using triangular bandage

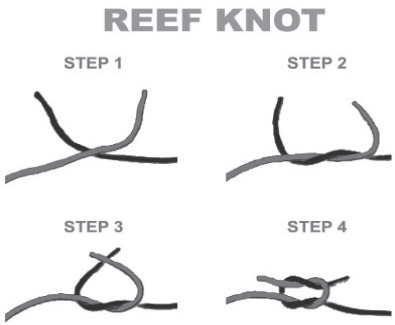
Start: 1. Place bandage over head.	2. Bring the two ends to the front of head.	**3.** Tie the ends together.	**End:** 4. Tuck in any loose cloth.
			

CHEST WOUNDS

Cover the chest wound using a sterile dressing. Sit the casualty up and encourage leaning towards the injured side, allowing the uninjured lung to work better.

ABDOMINAL WOUNDS

Lay the victim down with knees bent. If the abdominal contents are on the floor, place them back ON the victim's abdomen. Cover with a wet sterile dressing or plastic film to keep it moist.



NOTES:

BITES AND STINGS

***BITES AND STINGS may*:**
1. lead to allergic reactions
2. cause pain, injury and deadly envenomation.

TREATMENTS

For bites by:

- **ANIMALS** – stop bleeding, wash, cover and see a doctor.
- **SNAKES** – call ambulance, wash with soap and water, keep low, apply pressure dressing.
- **HUMAN** – wash and apply ice pack up to 20 minutes

For stings by:

- **INSECTS** – scrape stinger with the edge of an ATM card, wash, apply ice packs and look out for allergy.

MARINE LIFE – for jellyfish, wipe away tentacles and rinse with vinegar first. Then, continue with the following steps. Soak in hot, non-scalding water and see a doctor.

Monitor the victim.

- Do not apply anything on the wound. See a doctor if needed.
- For all snake bites and serious bites, call an ambulance.

FRACTURES AND SOFT TISSUE INJURIES

FRACTURES

A FRACTURE is a broken or cracked bone and described as:

- **CLOSED** – where the skin is still intact; and
- **OPEN** – where the skin is broken and the fracture may be visible.

- Call for ambulance immediately.
- Immobilise the fracture with a support.
- Stabilise to limit movement. Cover open wounds lightly.
- Apply ice pack for up to 20 minutes.

Do NOT try to straighten or bend fractures.

DISLOCATION

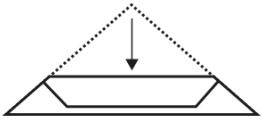
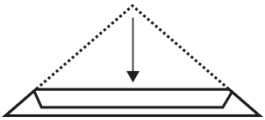
DISLOCATIONS occur when a joint is forced out of its original position and is likely to recur.

Do NOT try to straighten dislocations.

TREATMENT
- Call for ambulance immediately.
- Treat just like fractures.

Do NOT attempt to force the joint back yourself.

BANDAGING FOR FRACTURES AND DISLOCATIONS

Broad and Narrow Bandage Using triangular bandage	
Broad Bandage: 1. Fold bandage in half. 2. Then, fold in half again. 3. A broad bandage is mainly used for immobilising fractures.	
Narrow Bandage: 1. Fold the broad bandage in half. 2. A narrow bandage is used for bandaging and immobilising fractures as well.	

COLLARBONE FRACTURE AND DISLOCATED SHOULDER

- Apply an elevated sling to support the arm.
- Stabilise arm with a broad bandage.

FRACTURE OF THE HANDS OR FINGERS

- Apply splint or padding on injury.
- Apply an elevated sling to support the arm.
- Stabilise arm with a broad bandage.

Arm Sling: To support the upper and lower arm (Using triangular bandage)			
	**Step 1:** Place triangular bandage in position.		**Step 2:** Bring one end around the shoulder and secure at the back of the neck.
	**Step 3:** Twist the loose end and tuck it inside the sling.		**Step 4:** For fractures or dislocations, add a broad bandage across the arm to immobilise

FRACTURE OF THE UPPER AND LOWER LEGS

- If possible, apply splints which are long enough to support both sides of the injured leg.
- Otherwise, use the uninjured leg as a splint.
- Place padding in between both legs to fill up gaps.
- Tie a “Figure of 8” narrow bandage on ankle.

NOTES:

- Apply broad bandages over these areas: knee, above and below the fracture.
- For upper leg fracture, tie another broad bandage over the hips.

FRACTURE RIB CAGE

- Place padding over injured ribs.
- Secure padding with broad bandages.

SPRAINS AND STRAINS

A victim suffering from
1. **SPRAINS** has injured the ligaments
2. **STRAINS** has injured the muscles and tendons

TREATMENT
- **R** – ***REST*** injured area completely
- **I** – ***ICE*** packs applied can reduce swelling and pain
- **C** – ***COMPRESSION*** with a bandage can reduce swelling
- **E** – ***ELEVATE*** the injured area to improve blood return

SWELLING

Swelling or **HAEMATOMA**
1. is caused by blunt trauma to the skin tissues
2. may be painful, appear swollen and "blue-black"

TREATMENT
- Sit victim and support injured limb.
- Apply a cold compress for no longer than 20 minutes.
- After 24 hours, you may apply heat treatment.
- If condition does not improve, bring the victim to a hospital.

Do NOT rub the injury.

MUSCLE CRAMPS

A **MUSCLE CRAMP** occurs as a result of
1. tightening or spasm of your muscles; and
2. commonly occurs in the legs or abdomen.

TREATMENT
- Gently **stretch** the affected muscle in the opposite direction.
- Hold the stretch until the cramp is relieved.

SPINAL INJURY

A **SPINAL INJURY**
1. is caused by fall from height, accidents or direct blow to the back
2. presents with severe pain, paralysis, shock and death.

TREATMENT
- Call for ambulance immediately.
- Do a head-grip or place supports on the sides of the victim's head to prevent movement
- If the victim is lying faced-down, get 2 or more persons to gently

NOTES:

log-roll the victim to a supine (face-up) position.

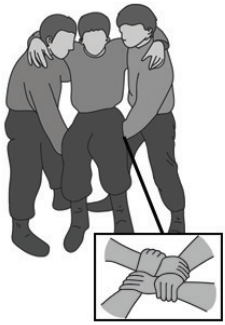
- Treat other injuries.

HANDLING AND TRANSPORTATION OF THE INJURED

PRINCIPLES OF LIFTING include to:

- get as many people to help as possible
- keep the victim as close as possible
- bend knees, keep back straight and use legs strength to stand up
- not make sudden twisting movements when carrying
- use the same principles to place victim back down.

METHODS OF LIFTING

1 Rescuer Techniques	2 Rescuer Techniques
Body Support: Stand on injured side of victim to provide support 	**Double-craddle carry:** One rescuer on each side lifting one leg, while supporting victim's back 
Piggy Back: Carrying the victim on the back 	**Cross-handed seat carry:** Rescuers hold on to each others wrists, forming a seat 

NOTES:

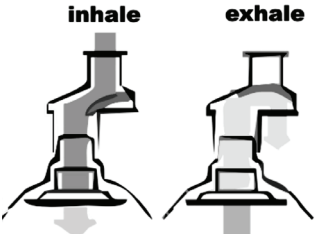
Drag Method: Pulling the victim by the underarms or on a blanket	**Fore-and-Aft:** 1st rescuer carries at the body while 2nd rescuer carries at the legs
	

POCKET MASK

The POCKET MASK is a barrier device used to provide rescue breathing. It has a one-way valve that prevents exchange of bacteria or viruses between the victim and rescuer. It is made of firm plastic with a cushioned rim and is triangular in shape. The rim creates a flexible seal around the victim's nose and mouth. The mask fits over the victim's mouth and nose. The narrowest portion of the mask is placed over the bridge of the victim's nose.

APPLICATION OF THE POCKET MASK

- Apply the rim of the mask first between the casualty's lower lip and chin, thus retracting the lower lip to keep the mouth open under the mask.
- Position the end marked 'nose' over the casualty's nose.
- Use a C-Clamp to seal the mask completely.
- Blow slowly into the mask until the chest rises.
- After blowing, remove your mouth to allow exhalation.



After using the Pocket Mask, the user has to change the disposable replacement valves with a new piece. Also, the mask must be cleaned thoroughly with alcohol swabs.

BREATHING DIFFICULTIES

The **Respiratory System** is the system of the body that deals with breathing. The body breathes air from the atmosphere which is drawn in through the nose or mouth and down through the trachea (windpipe). The trachea is then divided into two tubes called bronchi. As it progresses deeper into the lungs, the bronchi branches out into smaller tubes called bronchioles, until finally they reach small air sacs called alveoli. The alveoli are where the exchange of gases occurs. The diaphragm is the breathing muscle that controls the breathing.The **LUNGS only absorb 5-6%** oxygen inhaled from the 21% oxygen in atmospheric air and expel the remaining oxygen together with carbon dioxide during exhalation.

NOTES:

1. INTRODUCTION

Heart Attack

blood clot in coronary artery

cold sweat

chest pain - may spread to neck, jaw & arm

nausea

breathlessness

RISKS

smoking

poor diet

obesity

family history

PREVENTION

good diet

exercise

regular check ups

2. CARDIAC ARREST

Heart attack can lead to cardiac arrest.

INDICATIONS

no breathing

no heartbeat

CAUSES INCLUDES

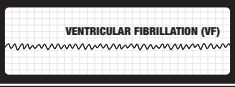
electrocution

drowning

drug abuse

4-6min of cardiac arrest ➔ brain death

Cardiac arrest victim may experience Ventricular Fibrillation (VF)



8 - 10 mins of Ventricular Fibrillation = Asystole

Survival rate drops by 7 - 10% for every min of delay

3. CHAIN OF SURVIVAL

1. Early Access

• Identify quickly • Call ambulance • Provide help

2. Early CPR

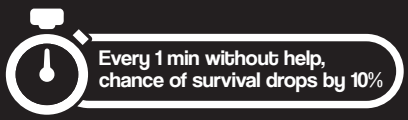
• CPR (Cardio Pulmonory Resuscitation) • Stabilize circulation
• Delays brain death • Keeps organs alive

3. Early Defibrillation

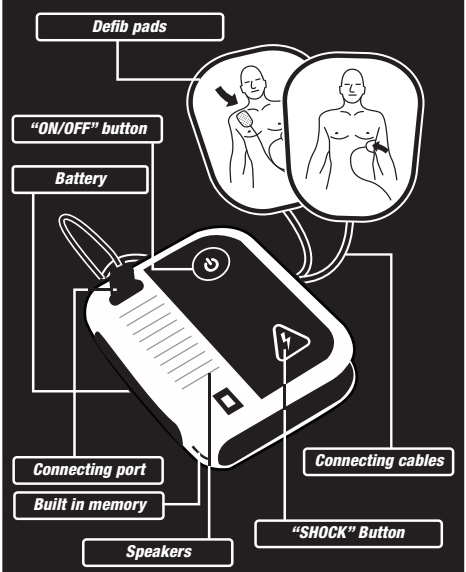
• Identifly VF (shockable rythm) • Deliver shock
• Restore normal heartbeat

4. Early Advanced Care

• Advanced airway devices • Resuscitation drugs



4. AUTOMATED EXTERNAL DEFIBRILLATOR



5. CPR + AED STEPS

Cardiopulmonary Resuscitation (CPR)

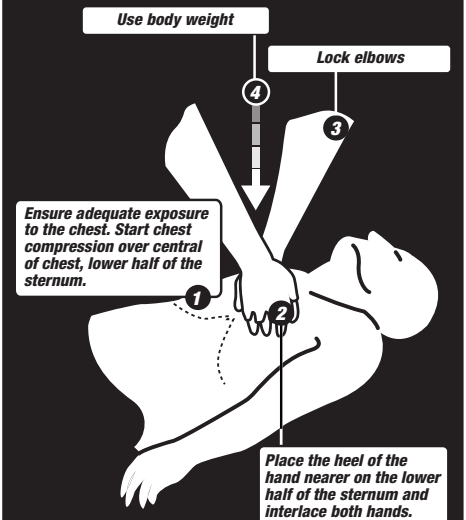
- **D** — *Check for DANGER*
- **R** — *Check for RESPONSE : Tap shoulders and shout: "Hello! Hello! Are you ok?"*
- **S** — *SHOUT: "Call ambulance 995 and get the AED!"*
- **A** — *Open AIRWAY: Head tilt, chin lift*
- **B** — *Check for BREATHING: Look for rise & fall of chest (up to 10 secs)*
- **C** — *Start CHEST COMPRESSIONS*

CPR - 30 COMPRESSIONS: 2 BREATHS

Automated External Defibrillator (AED)

- **S** — *SWITCH on AED*
- **P** — *apply PADS*
- **F** — *FOLLOW prompts*

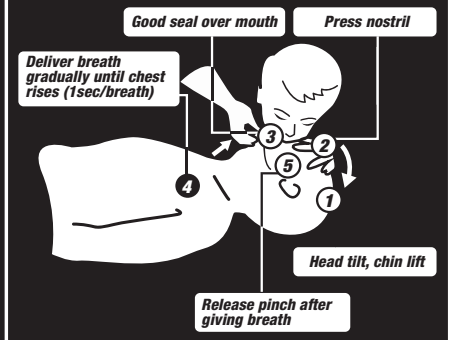
6. COMPRESSIONS



WHEN DOING COMPRESSION...

- *Push to a depth of 4-6cm*
- *Rate of 100-120 compression per min*
- *Ensure full chest recoil*

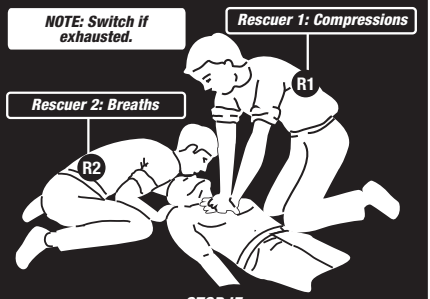
7. GIVING BREATHS



COMPRESSIONS ONLY CPR

If unwiling to give breaths, perform continuous chest compressions at a rate of 100-120 compressions per min.

8. 2 RESCUERS CPR



STOP IF:
a) breathing returns b) AED prompts to stop
c) medical care takes over

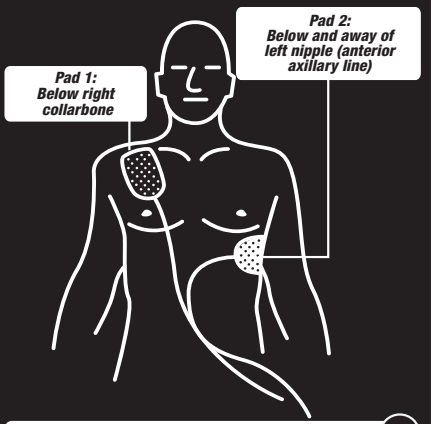
MINIMIZE INTERRUPTIONS TO CPR

9. WHEN AED ARRIVES

R1 • Continue CPR.

R2 • Check for additional danger such as METAL or WET surface and explosive GASES.

R2 • Switch "ON" the AED
• Apply pads directly to chest.



CONSIDERATIONS

• hairy - shave
• jewelry - move away
• wet - dry up
• medication patch - remove and clean area
• pacemaker - 4 fingers away

R2 • Follow prompts:
"Analysing, Charging..."
↳ Hands up, don't touch
↳ Shout "Stand clear!"
↳ Visual check clear
↳ Push ⚡ button

10. AED PROTOCOL

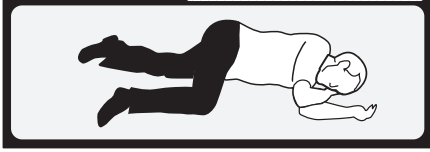
1 If SHOCK advised, deliver shock ⚡

Start CPR

2 If NO SHOCK advised, check breathing

No breathing, continue CPR

3 If breathing, put to Recovery Position

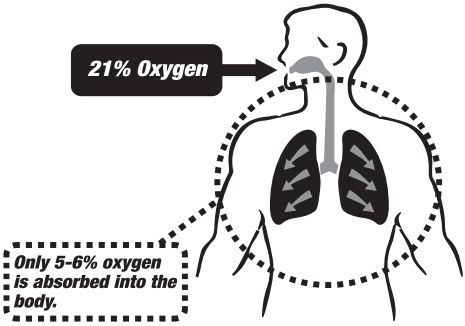


11. HANDING OVER / MAINTENANCE

A • Ambulance time
N • Name of rescuers/victim
T • Time of cardiac arrest, CPR/AED applied etc
S • Shocks delivered

D • Replace Defib pads
A • Replace used Accessories eg: scissors, gauzes, gloves, shavers
B • Battery check/replace
S • Safety tests if applicable

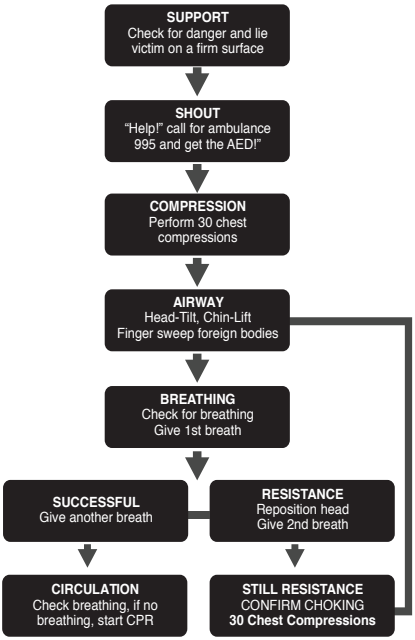
NOTES:



SIGNS OF BREATHING DIFFICULTIES

- Rapid breathing
- Unable to speak in complete sentences
- Skin appears pale or bluish, cold and sweaty
- Abnormal breathing sounds like wheezing
-

Continue until	1) object is successfully dislodged or 2) victim stops responding unconscious.
If the victim turns unconscious, proceed with the steps below	

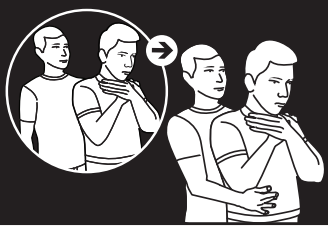


8. CHOKING

For normal size victim

1

- *Choking victim cannot SPEAK, BREATH or COUGH*
- *Victim displays the Universal Sign of Choking*
- *Ask "Are you choking? I can help!"*



2

- *Move behind the victim and place one leg between the victim's legs.*
- *Place 2 fingers above the navel*

3

- *Place clenched fist, thumb side inwards above fingers*
- *Lean the victim forward*
- *Wrap the other hand around your fist*

4

- *Give 5 successive inwards and upward thrusts, followed by a quick check*
- *Continue until the object is dislodged or casualty turns unconscious*

For obese or pregnant victim

1

- *On the breastbone along armpit line*
- *Place clenched fist thumb side inwards*
- *Wrap the other hand around your fist*

2

- *5 successive backwards thrusts, followed by a check*
- *Continue until the object is dislodged or casualty turns unconscious*

9. UNCONSCIOUS CHOKING

SUPPORT

Check for danger and lie victim on a firm surface

SHOUT

"Help! Call for ambulance 995 and get the AED!"

COMPRESSION

Perform 30 chest compressions

AIRWAY

Head-Tilt, Chin-Lift & Open Mouth
Check for Foreign Body,
Perform Finger Sweep.

BREATHING

Check for breathing.
If absent, give 1st breath.

SUCCESSFUL

Give another breath

RESISTANCE

Reposition head
Give another breath

CIRCULATION

Check breathing, if no breathing, start CPR

STILL RESISTANCE CONFIRM CHOKING

30 Chest Compressions

NOTES:

FUME INHALATION

FUME INHALATION may be life-threatening as it can:
- be difficult to detect as some fumes have no odour or colour;
- be absorbed and cause harmful effects very quickly; and
- lead to poisoning, fits and even death

TREATMENT
- Call for ambulance at once.
- Bring the victim to a well-ventilated area.
- Place victim in a sitting position up.
- Encourage to breathe deeply.
- Administer oxygen if available.
- Monitor the victim closely as breathing may stop. If so, start CPR.

DROWNING

A DROWNING victim may
1. Experience difficulty in breathing; and
2. May stop breathing.

TREATMENT
- Use a buoy, float or rope to help the victim.
- Call for an ambulance, no matter how minor it seems.
- Do NOT try to pump the water out.
- Assist victim to sit up and breathe deeply.
- Provide victim with a towel or a blanket.
- If no breathing, begin CPR.

SUFFOCATION AND STRANGULATION

A person may:

1. **SUFFOCATE** when there is an obstruction to breathing, such as a plastic bag covering the nose and mouth, or in areas with low oxygen levels like in a smoke-filled room
2. **STRANGULATE** if there is external pressure on the throat

TREATMENT
- Remove the obstruction from the face or neck. Cut if necessary.
- Bring person to a well-ventilated area.
- Call for an ambulance.
- Get victim to sit up and breathe deeply.
- If no breathing, begin CPR.

HYPERVENTILATION

HYPERVENTILATION is a condition in which:

- the victim starts breathing very fast;
- is usually caused by stress, anxiety or anger; and
- the victim may experience cramps in the hands and feet.

TREATMENT
- Remove the victim from source if distress, if possible.
- Calm the victim in a kind but firm tone.
- Encourage the victim to breathe slowly.

NOTES:

ASTHMA

A victim who suffers an **ASTHMA** attack:

- experiences a narrowing of the airways; and
- feels breathless, chest tightness and wheezing during breathing.

TREATMENT
- Get victim in a sitting position up.
- Encourage victim to breathe deeply.
- If the victim has an inhaler, ask him to use it. Assist if needed.
- Monitor the victim after using the inhaler.
- If there is no relief after a few minutes, call for ambulance.

ALLERGIC REACTION

An **ALLERGIC REACTION:**

- occurs after consuming certain foods or medication, insect stings or contact with particular substances in the environment;
- can present with rashes, swelling of face and lips, puffiness of eyes; and
- can lead to severe breathlessness, shock and death.

TREATMENT
- Seek medical attention immediately.
- Advice the victim to sit up and deeply if breathless.
- If reaction becomes severe, call for an ambulance.

UNCONSCIOUS VICTIM

CAUSES OF UNCONSCIOUSNESS

- **A**lcohol – Alcohol intoxication
- **E**pilepsy – Fits
- **I**nsulin – Low blood sugar
- **O**verdose – Excessive drug intake
- **U**remia – Kidney failure
- **T**rauma – Head injury, spinal injury, loss of blood
- **I**nfection – Severe infections
- **P**sychiatric – Mental disorders
- **S**troke – Clotting or bleeding in the brain

TREATMENT
- Call for ambulance immediately.
- If victim is breathing and no spinal injury is suspected, turn to recovery position to keep the airway clear.
- Treat the source of unconsciousness, if possible.
- If the victim has stopped breathing, start CPR.

HEAT-RELATED EMERGENCIES

- Prolonged exposure to hot conditions may lead to:

1. **SUNBURNS AND RASH** – to the skin causing discomfort
2. **HEAT CRAMPS** – cramps in the legs or abdomen
3. **HEAT EXHAUSTION** – nausea, giddiness, cool skin, fainting
4. **HEAT STROKE** – very hot dry skin, confusion, unconsciousness

TREATMENT
- Remove the victim from source of heat and loosen clothing.
- Sponge and fan victim and provide water or isotonic drinks.

- If victim feels like fainting, lie him down and elevate legs above his heart level.
- If the condition worsens, call for an ambulance immediately.
- If the victim turns unconscious, place in recovery position.

COLD-RELATED EMERGENCIES

Prolonged exposure to cold conditions may lead to:

- **FROSTBITE** is cold injury to part of the body.
- **HYPOTHERMIA** is cold injury to the whole body.

Do NOT rub frostbitten skin.

FROSTBITE
- Move the victim to a warm place and call for an ambulance.
- Remove wet clothes and tight constrictors from the frostbite.
- Do not attempt to thaw if refreezing may occur again.

HYPOTHERMIA
- Remove wet clothing and dry the victim.
- Call for ambulance immediately.
- Cover with blankets/ towels under and around the victim, and cover the head but not the face.

DROWNING

A **DROWNING** victim may:
- Experience difficulty in breathing; and
- Stop breathing.

TREATMENT
- Alert the lifeguard if available.
- Rescue the victim using a buoy, float or rope.
- Call for an ambulance, no matter how minor it seems.
- Do NOT try to pump the water out.
- Instruct victim to sit and breathe deeply.
- Cover with a towel or a blanket.
- If no breathing, begin CPR.

ELECTRIC SHOCK

An **ELECTRIC SHOCK** may:
1. pass an electric current through the body
2. cause nerve, muscle and tissue damage
3. lead to cardiac arrest

TREATMENT
- Shut off main supply.
- Call for an ambulance, no matter how minor it seems.
- Take spinal precaution – do not move the casualty unnecessarily
- If no breathing, begin CPR.

HEAD AND NECK INJURY

HEAD AND NECK INJURY from direct or indirect trauma can cause:
1. nausea and vomiting;
2. severe headache;
3. blood or fluid flowing from the nose, ears or mouth;
4. unable to move or feel limbs;
5. confusion or drowsiness;

NOTES:

NOTES:

6. fits, unconsciousness and even death.

TREATMENT
- Call for ambulance immediately.
- Stop any external bleeding.
- Prepare a plastic bag for the victim to vomit.

FITS

FITS may present with an uprolling of the eyes, biting, jerking and frothing from the mouth.

TREATMENT
- Clear surrounding objects and pad the victim's head.
- Call for an ambulance, even if the fits has already stopped.
- If the fitting stops, check if the victim is breathing. If breathing is present, place the victim in a recovery position.
- If the victim has a fever, sponge down with tepid water.

FAINTING

A person who experiences **FAINTING**
1. when he stands for too long, suddenly stands after squatting or bending or receives bad news; and
2. may experience light-headedness, blurred vision and cold skin.

TREATMENT
- **LIE the victim** and **ELEVATE** the legs above the heart level.
- **Loosen clothing** like collars, ties and cuffs.
- **Cover** with a blanket if the victim feels cold.
- If victim turns **unconscious**, call for an **ambulance** and turn to r**ecovery position**.

STROKE

A person suffering from **STROKE:**

1. experiences a blocked blood vessel or bleeding in the brain; and
2. may experience symptoms such as sudden numbness, weakness or paralysis of one side of the body, drooling, slurred speech, vision problems, seizures and unconsciousness.

TREATMENT
- Call for an ambulance immediately.
- Prevent the victim from walking or standing to avoid falls.
- Treat injuries, if any.
- If the victim does not respond and stops breathing, start CPR.

DIABETIC EMERGENCIES

Low blood sugar or **HYPOGLYCEMIA** occurs as a result of excessive:

1. diabetic medication, exercise or drinking; and
2. may cause drowsiness, confusion and even unconsciousness.

TREATMENT
- Prepare sugary liquids to help raise blood sugar back to normal.
- If conscious, let the victim sip the sugary liquids slowly.
- If unconscious, call for ambulance and place the victim in a recovery position.

High blood sugar or **HYPERGLYCEMIA**
- occurs because sugar is not controlled over a period of time;
- may cause fatigue, drowsiness, vomiting, low blood pressure, fever and sometimes, a fruity breath odour.

TREATMENT
- Call for ambulance.
- In the victim is unconscious, place in a recovery position.

ALCOHOL INTOXICATION

A person with **ALCOHOL INTOXICATION**
- will usually smell strongly of alcohol;
- may suffer from a head injury; and
- risk on choking on vomitus or blood.

TREATMENT
- Call for ambulance if head injury cannot be excluded.

If you do NOT suspect head injury, place the victim in recovery position

OCCUPATIONAL EYE INJURIES

The eye is one of the most precious organs and any accident involving the eye requires immediate first-aid.

TYPES OF OCCUPATIONAL EYE INJURIES

FOREIGN BODIES

FOREIGN BODIES such as sand particles, grit or dust may:
1. enter the eye and lodge on the eye or under the eyelids or
2. penetrate the eyeball.

TREATMENT
- Prevent the victim from rubbing his or her eye.
- Gently flush the object out with water.
- If flushing does not work, cover the injured eye with an eye dressing and an eye shield and bring to a doctor.

If the object is **embedded** on the eyeball,
- DO NOT TOUCH IT!
- Instruct the casualty to close both eyes.
- Place eye-shield on the injured eye and bandage both eyes.
- Rush to the hospital immediately.

BLACK EYE, CUTS OR SCRATCHES

BLACK EYE, CUTS OR SCRATCHES
1. are usually caused by direct trauma to the eye or face.
2. can be caused by certain types of skull fractures which can result in bruising around the eyes.

TREATMENT
- Gently apply cold compress around the swelling.
- DO NOT APPLY PRESSURE directly on the eye

Get medical help at once!

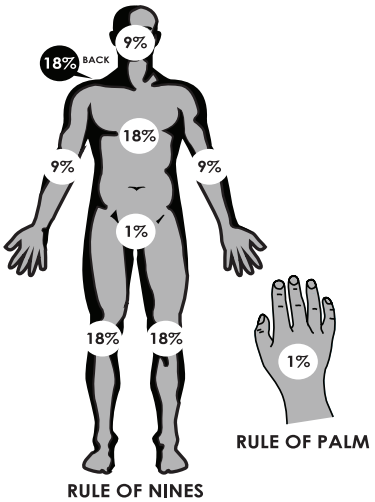
NOTES:

NOTES:

BURNS

TYPES OF BURNS:
1. Thermal burns – which include dry burns (flame) and scalds
2. Chemical burns – caused by corrosive action of chemicals
3. Electrical burns – caused by electrical shock
4. Radiation burns – caused by exposure to radiation

BURNS are classified as
1. 1st degree – Red, hot and painful
2. 2nd degree – Red, mottled with blisters
3. 3rd degree – White, leathery or charred and painless



Do NOT apply toothpaste or butter.

THERMAL BURNS

TREATMENTS FOR **THERMAL BURNS**
- **C – COOL** with tepid water for at least 10 minutes
- **C – CONSTRICTORS** like rings and watches to be removed
- **C – COVER** lightly with a thin sheet or bandage
- **C – CONSULT** a doctor for treatment

CHEMICAL BURNS

TREATMENTS FOR **CHEMICAL BURNS**
- Call for ambulance immediately.
- Brush off as much powder or solid substance with your gloved hands.
- Flush with water for > 20 minutes
-

ELECTRICAL BURNS

TREATMENTS FOR **ELECTRICAL BURNS**
- May cause fatal heart rhythms
- Person may also be thrown back
- Turn off the power supply and call for ambulance immediately.
- If no breathing, start CPR

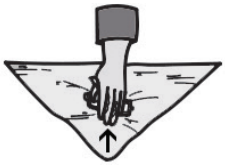
RADIATION BURNS

TREATMENTS FOR **RADIATION BURNS**

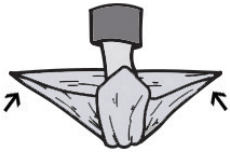
- Call for ambulance immediately.
- Flush with water copiously.

BANDAGING FOR BURNS

Hand and Foot Bandage:
To cover burns on hands or feet
(Using triangular bandage)



Start:
1. Place bandage over and under injury.

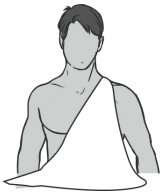


2. Wrap the two ends around the hand or foot.

3. Bring the ends to the top and tie them together.

End: 4. Tuck in any loose cloth.

Chest and Back Bandage:
to cover burns on the chest or back
(Using triangular bandage)



Start: 1. Place the larger part of the bandage over the burn.

2. Wrap the two ends around the hand or foot.

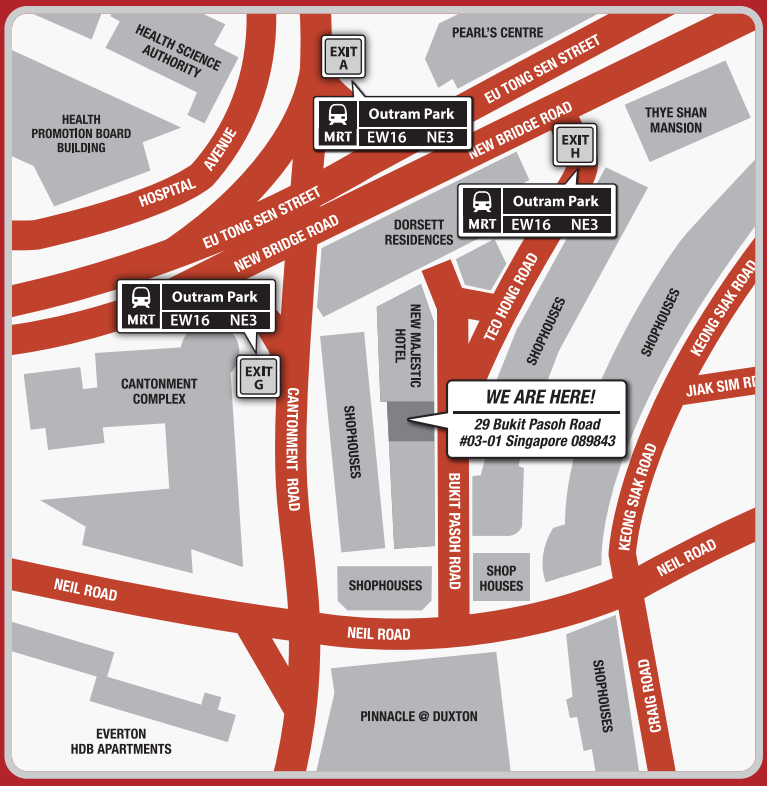
3. Bring the ends to the top and tie them together.

End: 4. Tuck in any loose cloth.

NOTES:

NOTES:

OUR LOCATION MAP



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