

Introduction to First Aid

First aid is the immediate and temporary care given to someone who is injured or suddenly taken ill, before the arrival of professional and capable medical assistance. The primary objective of first aid is:

- Stop life-threatening dangers.
- Keep the person safe from further harm.
- Get proper medical attention for the person.

"Do not do anything if you do not know what to do."

- First Aid's Golden Rule

Steps in Administering First Aid[†]

- **Safety First.** Your safety is more important. Check if it is safe to approach the injured person. If it is unsafe, find ways to make it safe, otherwise do not approach the area and place yourself in danger.
- **Approach with Calm.** Accidents can happen, so take caution as you approach the injured person. Do not be too excited and do not panic. Analyze the situation very carefully and decide on the appropriate actions.
- **Establish Unresponsiveness.** Tap the injured person lightly on the shoulders while calling out the person's name if possible with a calm voice: *"Sir, are you okay sir?"* If the injured person responds you can ask them about their injuries and specifics about the accident. Otherwise, you have just established that the person is unresponsive and possibly unconscious, and should proceed to check the ABC of first aid.
- **Airway.** Do the *Head-Tilt Chin-Lift Maneuver (HCM)* to open up the airway. If you suspect neck or spine injury, use the *Jaw-Thrust without Head-Tilt Maneuver (JHM)*, you will need another person to perform JHM. Remove any obstruction in the mouth.
- **Breathing.** While holding on the HCM or JHM, place your ear just above the mouth and nose while looking directly at the injured person's chest for 3-5 seconds to *Look, Listen, and Feel (LLF)*. If the person is not breathing give two initial blows or the *Initial Ventilatory Maneuver (IVM)*, using mouth-to-mouth, mouth-to-nose, or mouth-to-stoma.



[†] The **Proper Steps in Administering First Aid** will take precedence over any other procedure discussed in this handout. This particularly hold true for getting medical attention for the person. Whenever possible, activating emergency medical assistance (EMA) shall be prioritize over specific injury treatment that will be discussed in the succeeding pages. In the succeeding pages, getting medical assistance is placed last on the list of each procedure for the sake of uniformity and as a reminder that medical attention is required. It does not denote that getting medical assistance as being the last step.

- **Circulation.** Using two fingers, feel the carotid pulse if it is present. If you are doing the HCM, one hand should maintain the head-tilt. Take about 5-10 seconds to check the pulse.

Pulse	Breath	Action Needed
Positive	Positive	Look for other injuries
Positive	Negative	Artificial Respiration (AR)
Negative	Negative	Cardio-Pulmonary Resuscitation (CPR)
Negative	Positive	Impossible to Happen

- **Get Medical Attention.** Activate *Emergency Medical Assistance* (EMA). Ask another person to do this for you. If you are the only one present with the injured person, move on with the next steps.
- **Check for Injuries.** Begin treating life-threatening injuries (e.g. severe bleeding). Check for other injuries after you have completely treated the life-threatening ones.
- **Treat for Shock.** This should be done even if the symptoms of shock are not present.
- **Transport.** If necessary, transport the person.
- **Keep the Injured Person Safe.** While waiting for professional and capable medical assistance, regularly check the person's condition. Keep the person warm and away from further harm.

First Aid for a Number of Injuries

Anaphylactic Shock

Anaphylactic shock is a major allergic reaction within the body as a result of insect bites, drug intake, or ingestion of food. Food such as peanuts or egg can cause anaphylactic shock if a person is allergic to it. A person's allergy can be as severe as a reaction by just being within close proximity to the allergen. The blood vessel dilates causing blood pressure to drop, which in turn causes body organs to receive less oxygen. Air passage may swell causing breathing difficulties or stoppage.

Procedure.

- If conscious, assist the person to sit in a position that relieves breathing difficulty.
- If unconscious, follow the proper steps of first aid administration.
- Get professional medical help or bring the injured person to a hospital.

Animal Bite

Bites from sharp pointed teeth are serious puncture wounds. Warm-blooded animals may suffer from rabies that can be communicated through the animal's saliva to the blood. Puncture wounds of this type are very vulnerable to infections such as tetanus.

Procedure for General Animal Bites.

- For non-serious bites, wash the wound thoroughly with soap and warm water. Remove saliva and dirt. Dry it with a clean cloth.
- If there is severe bleeding, it should be controlled.
- Cover the wound with sterile dressing.
- Get professional medical help or bring the injured person to a hospital.

Procedure for Poisonous Snake Bites.

- Let the injured person lie down.
- Constrict 2 to 4 inches above the bite (between the injury and the heart) to slow the spread of the venom.
- Get professional medical help or bring the injured person to a hospital.

This is not a movie. Do not incise the wound and attempt to suck out the venom with your mouth. You are simply adding another injury and placing yourself in danger of poisoning.

Asphyxiation

Asphyxiation is the medical term for the condition of suffocation or *asphyxia*. It is the condition when life is threatened because the air breathed in is deficient of oxygen. Causes are airway obstruction such as a plastic bag or by contamination of the air with fumes such as carbon monoxide.

Procedure.

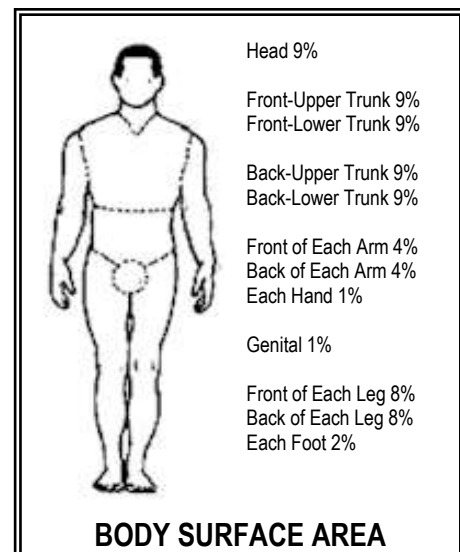
- Remove airway obstruction or move the person to open air.
- If the person is not breathing, begin artificial respiration.
- Get professional medical help or bring the injured person to a hospital.

Burns and Scalds

Burns are caused by over exposure to heat and not merely by direct contact to open flame. Burns that are caused by hot liquid or vapors are called scalds. An instant contact to extreme heat can cause serious and sometimes fatal injuries. Burns are classified as: *Thermal, Electrical, and Chemical* and by their depth: *First Degree (Superficial), Second Degree (Partial-Thickness), and Third Degree (Full-Thickness or Burn-Black)*.

WHAT IS RABIES?

Rabies is a potentially fatal viral infection of the nervous system communicated through the saliva of an infected animal. The animal should be examined and observed to confirm the presence of rabies.



Procedure for First and Second Degree Burns.

- Place injury under cool running water until pain is bearable or completely gone.
- Remove any object that restricts the flow of blood to prevent swelling.
- Blisters should be left alone.
- Cover the area with sterile dressing or any clean non-fluffy material to prevent infection.
- Second degree burn covering 1% or more of the body must be seen by a doctor.

📖 COOL, NOT COLD
Make sure that you use cool running water out of the tap and not cold or ice-water from the refrigerator. Cold water can limit the circulation of blood and cause swelling.

Procedure for Third Degree Burns.

- Cover the injury site with sterile dressing to prevent infection. Use a blanket if the entire body is the extent of the injury.
- Be ready to resuscitate the person.
- Get professional medical help or bring the injured person to a hospital.

Procedure for Electrical Burns.

- Break the electrical contact.
- If the injured person is unconscious, check the airway, breathing, and circulation.
- Identify the exit and entry point of current and identify the depth and extent of burn.
Entry and exit points should be treated as third-degree burns.
- Cover the injury site with sterile dressing to prevent infection.
- Get professional medical help or bring the injured person to a hospital.

📖 HIGH VOLTAGE!!!
Do not attempt to break the electrical contact if you do not know how to do it properly.

Procedure for Chemical Burns.

- Removed the injured person from the area, being careful not to get yourself in contact with the chemicals.
- Flood the injury site with water to disperse the chemicals and stop the burning. Do this for at least 20 minutes.
- Gently and carefully, remove any contaminated clothing, while continuing to flood the injury with water.
- Get professional medical help or bring the injured person to a hospital.

📖 PRETEND GENIUS
Do not attempt to neutralize the chemicals with another chemical unless you are trained to do so. Never delay treatment trying to find an antidote.

In all cases of burns, keep the injured person hydrated. Stop re-hydration if the person vomits. Never attempt to give an unconscious person water.

Choking

A foreign object that is stuck at the back of the throat causes choking. Adults can choke on food that has been inadequately chewed and/or swallowed hurriedly. If the person can still

speak, he can manage. Assistance will be required if the person is unable to speak or cough, or is already unconscious.

Procedure.

- Bend the person forward and apply five sharp slaps between the shoulder blades.
- If the back flap fails, use the Heimlich maneuver. Apply five sharp upward thrusts. Do not apply the Heimlich maneuver to an unconscious person, extremely obese, or in her late pregnancy.
- Give five sharp chest thrusts if the Heimlich maneuver cannot be used.
- Get professional medical help or bring the injured person to a hospital.

Diarrhea

Likely to be caused by food poisoning, contaminated water, allergy, or eating unusual and exotic food. It is normally considered as a minor inconvenience by many, but it is serious enough to kill someone because of dehydration. When it is coupled with vomiting the risk of dehydration is increased.

Procedure.

- Advise the person to rest.
- Give plenty of water or unsweetened fruit juices.
- Keep the person on a light diet and away from dairy products, caffeine, and greasy food.

POWER DRINKS

Power drinks such as Gatorade or Powerade can be given to hasten rehydration. Sports drink should not be used as a substitute to water or other electrolyte replacement formulas.

Extreme Heat

If the body becomes dangerously overheated due to high fever or prolonged exposure to heat, heat stroke or heat exhaustion can occur. This can cause the person to lose consciousness in minutes.

Procedure.

- If possible, move the person to a cool place. Remove or loosen as much outer clothing as much as possible.
- Wrap the person in a cool and wet sheet, and keep it until the temperature normalizes.
- Replace the wet sheet with dry ones once temperatures are back to normal. Repeat the cooling process if necessary.
- Get professional medical help or bring the person to the hospital if necessary.

GENDER ISSUES?

Before removing or loosening someone's clothing, make sure you explain clearly why this is being done. The person might not easily accept your actions especially if they are of the opposite gender. Being careless might place you in a legal liability of sexual assault.

Fainting

It is also called *syncope*. It is a brief loss of consciousness caused by temporary reduction of oxygen supply to the brain. There can be numerous underlying causes including asphyxia or

an abnormal blood pressure. Unlike shock, the pulse slows down and will soon return to normal in time. It should be noted however that a person in shock can also faint due to lack of oxygen as well.

Procedure.

- Bring the person to open air or a well-ventilated area.
- If the person remains unconscious, check the airway, breathing, and circulation.
- Lay the person on his back.
- Raise and support the legs up to increase blood flow to the brain.
- Treat any injuries sustained, be aware of the possibility of fractures, contusions, or internal bleeding resulting from the fall if one did occur.

Fever

It is when the body temperature is above the normal level of 37°C (98.5°F). Fever can be caused by viral or bacterial infection. Moderate fever is rarely life threatening, but temperature nearing 40°C (104°F) should be alarming and very dangerous. It should be remembered that a fever is not a disease; it is a symptom to an underlying condition.

Procedure.

- Allow the person to rest comfortably in cool surrounding, preferably in bed with light covers.
- Give plenty of water or fruit juices to replace lost fluids.
- Check the person's temperature regularly.
- Give the appropriate dose of medication as prescribed by a physician.

Foreign Object in the Eye

This can be as simple as dust or loose eyelid, to as serious as significantly larger objects such as sawdust or other objects that gets into contact with the eye.

Procedure.

- Advise the person not to rub his eye(s). Allow the person so sit down facing the light.
- Gently open the eyelid and examine it visually.
- If there is a visible foreign body on the white portion of the eye, wash it out with clean running water.
- If the object is on the colored portion or it is a slightly larger object that cannot be removed by water bring the hospital. Cover both eyes with eye-pads to prevent eye movement.

PLAYING DOCTOR

Dust or loose eyelids floating on the white portion of the eye is easily removed. But anything on the colored portion or slightly larger object that can't be washed out should be left alone for professional medical help.

Fractures

Fracture is a break in the bone or cartilage as a result of injuries. It can also be caused by some bone disease that led to its weakening such as osteoporosis. Fractures are rarely life threatening but poor handling can lead to serious complications.

Classification of Fractures.

- **Green Stick.** A split in the bone common in children. Similar to split on fresh green plant stem where it is broken but not completely split apart.
- **Transverse.** A clean break in the bone. Break is almost perpendicular to the bone. This is mostly caused by direct or indirect blow.
- **Oblique.** A diagonal break in the bone. Also caused by direct or indirect blow.
- **Spiral.** As the term implies, a spiral like breaking caused by twisting the bone.
- **Comminuted.** The breakpoint of the bone is virtually shattered into many pieces.
- **Compound.** Can be any of the above breaks coupled with a wound where the bone is protruding out.

Procedure.

- Immobilized the injured area by splinting.
- Get professional medical help or bring injured person to the hospital.

Hypothermia

It is when the body temperature falls below 35°C (95°F). This develops when the body's core temperature becomes too low and a bodily function slows down.

Procedure.


- Replace any wet clothing with warm dry ones.
- Cover the person's entire body to protect from cold and trap heat in.
- Give warm drinks or high-energy food such as chocolate.
- Get professional medical help or bring person to the hospital.

Marine Creature Injuries

Sea creatures such as jellyfish inflict painful stings. The venom of these sea creatures is contained in cells called nematocysts which stick to the injured person's skin. Spiny creatures such as sea urchins can cause puncture wounds with the possibility of spines being embedded on the sole of the foot. Anaphylactic shock can result as a reaction to the venom.

Procedure for Stings.

- Pour diluted vinegar or seawater over the injury to incapacitate the stinging cells.
- Dust dry powder to make remaining sting cells stick together.
- Gently brush off the powder with a clean non-fluffy cloth.
- Get professional medical help or bring injured person to hospital.

 **NO ALCOHOL**
Use of alcohol will only aggravate the sting injury.

Procedure for Punctures.

- Do not remove the spine yourself.
- Put injured area in water as hot as the person can bear for at least 30 minutes.
- Add hot water if it cools, be careful not to scald the person.

- Get professional medical help or bring injured person to hospital.

Nose Bleed

Often not serious but should not be taken lightly.

Procedure.

- Pinch the nose on the bridge.
- Ask the person to place his head well forward and slightly tilted down.

TILT DOWN

A slight tilt of the head down is enough. Tilting forward too much will put pressure and aggravate the condition. Tilt up can cause blood to flow down and cause the person to choke.

Shock

Circulatory shock occurs when vital organs of the body are not receiving enough oxygen from the blood. Causes include severe loss of blood and high blood pressure. If not remedied, vital organs may fail which may lead to death.

Procedure.

- Determine the cause of shock and treat it if possible.
- Help the person lie down on a blanket to protect from the cold ground.
- Raise and support the legs to improve blood circulation to the vital organs.
- Remove any constriction that may restrict blood flow.
- Place blanket over the person for warmth.

FOOD OR DRINK?

No eating, drinking, or smoking. If the person is thirsty, moisten the lips with water.

Wounds

Any abnormal break in the skin or the body surface is called a wound. There are two general classification of wound: open and closed wound. Closed wound can be spotted by the appearance of bruises. Open wounds allow the lost of blood and fluids. Serious wounds can cause severe external or internal bleeding.

Classification of Open Wounds.

- **Incision.** Clean cut from a sharp edge such as a knife.
- **Laceration.** Caused by crushing or ripping force. Rough tears or jagged cuts.
- **Abrasion.** Superficial wound involving the top layer of the skin. Also called a *scrape* or *graze*.
- **Puncture.** Caused by stabbing force.
- **Bruise.** Caused by a blow rupturing the capillaries. Also called a *contusion*.
- **Gunshot.** Caused by bullet or projectile, characterized by an entry and sometimes an exit wound.

Classification of Bleeding.

- **Arterial.** Blood is bright red and spurts out in tune with the heartbeat. Major arterial injuries may cause blood to jet out several feet and reduce blood volume rapidly.
- **Venous.** Blood is dark red and gushes out. It may gush out profusely.
- **Capillary.** Initial bleeding may be brisk, but blood loss is slight. Oozing occurs at the site of the wound.

Procedure for Minor Open Wounds.

- If puncture, let it bleed a little.
- Wash the injury with running water and soap.
- Wipe it dry with clean non-fluffy material.
- To keep it from infection, wash it with Betadine solution or apply anti-bacterial ointment.
- Cover wound with adhesive bandage or sterile dressing.

Procedure for Serious Puncture Wounds.

- If puncturing object is still there, do not remove it. Remove it only when truly necessary.
- Wash the surrounding wound area with Betadine solution to prevent infection.
- Using gauze roll, stabilize the puncturing object in place without moving the object.
- Get professional medical help or bring injured person to hospital.

📖 PUNCTURES

Knowing that a puncture wound is serious. You can know that a puncture wound is serious if the injured person feels deep internal pain, numbness, nearby joints has not full mobility, infection is suspected, and/or continuous bleeding occurs.

Procedure 1 for Severe External Bleeding. Direct Pressure.

- Remove or cut clothing to expose wound.
- Place a sterile dressing over the wound, using your palm apply direct pressure. Never waste time hunting for a sterile dressing.
- Raise the injured limb and support it above the level of the heart. Handle very gently since the injury might involve a fracture.

An Object is Protruding. Check if it is an open fracture, if it is not then press firmly on both side of the protruding object and the wound. Do not attempt to remove the protruding object. Open fracture is beyond the scope of this handout.

Dressing is Soaked with Blood. If such a thing happens, do not remove the dressing. Instead, apply another dressing above the first dressing. Should the second dressing be soaked in blood, remove only the second dressing and apply another dressing over the first dressing.

Procedure 2 for Severe External Bleeding. Indirect Pressure.

- Hold on to direct pressure.
- Locate the artery pumping blood into the limb. Brachial for the arms and Femoral for the legs.
- Apply pressure on the concerned artery while holding on to direct pressure.

Wrapping Up for Both Procedures for Severe External Bleeding.

- Leave the dressing used for direct pressure and apply another sterile dressing.
- If there is a protruding object, place padding on both sides of the object high enough to bandage over it without pressing.

- Treat the person for shock and regularly check circulation.
- Get professional medical help or bring injured person to hospital.