**Basic First Aid**

- Early Access "911"
- Early CPR or First Aid
- Early Defibrillation
- Early Advanced Care
- EMS on scene
- EMS in Hospital

Pay attention to:
- HISTORY: what happened; from the casualty or bystanders
- SYMPTOMS: what only the casualty can tell you
- SIGNS: what you can see for yourself

**Universal Precautions for Airborne & Bloodborne Pathogens**

- HIV & Hepatitis
- Tuberculosis

Gloves & Respiratory Barrier device are a must to prevent transmission of diseases

**Fundamentals of First Aid**

- Activate EMS System "911"
  - 1. ABC (airway-breathing-circulation)
  - 2. Control bleeding
  - 3. Treat for Shock (medical emergencies)
  - 4. Open wounds & Burns
  - 5. Fractures & Dislocations
  - 6. Transportation

**Chain of Survival**

In order for a person to survive:

**Call 911 for help prior to starting CPR on an adult and after a minute on a child. Before we learn what to do in an emergency, we must first emphasize what not to do:**

- DO NOT leave the victim alone.
- DO NOT try make the victim drink water.
- DO NOT throw water on the victim's face.
- DO NOT prompt the victim into a sitting position.
- DO NOT try to revive the victim by slapping his face.

Provide operator with:
1. Your location
2. Your phone number
3. Type of emergency
4. Victim's condition

**Adult CPR is performed on any person over the age of 8.**

- Before you start any rescue efforts, you must remember to check the victim for responsiveness.
- If you suspect that the victim has sustained spinal or neck injury, do not move or shake him. Otherwise, shake the victim gently and shout "Are you okay?" to see if there is any response. If the victim is someone you know, call out his name as you shake him.
- If there is no response, immediately dial 9-1-1 and check the airway.
"B" is for BREATHING. Gently support the victim's chin so as to keep it lifted up and the head tilted back. Place your nose to prevent air from escaping once you begin to ventilate and place your hand over the victim's chest. Breath into the victim's mouth at a rate of 1 to 2 breaths per second. If there is no response, repeat the process.

Airway Obstructions

"A" is for AIRWAY. If the victim is unconscious and is unresponsive, you need to be sure that his airway is clear of any obstructions. If you determine that the victim is not breathing, then something may be blocking his air passage. The tongue is the most common airway obstruction in an unconscious person.

With the victim lying flat on his back, place your hand on his forehead and your other hand under the tip of the chin (Figure 1). Gently tilt the victim's head backward. In this position the weight of the tongue will force it to shift away from the back of the throat, opening the airway (Figure 2). If the person is still not breathing on his own after the airway has been cleared, you will have to assist him breathing.

1. Tilt head
2. Open airway

"C" is for CIRCULATION. In order to determine if the victim's heart is beating, place two fingertips on his carotid artery, located in the depression between the windpipe and the neck muscles (Figure 1), and apply slight pressure for several seconds.

If there is no pulse, then the victim's heart is not beating, and you will have to perform chest compressions.

Compressions

1. Give two breaths
2. Let victim exhale

1. Tilt head
2. Open airway

The depth of compressions should be approximately 1½ to 2 inches - remember: 2 hands, 2 inches. Press down and return all the way up. Do not bounce or rock.

Provide 15 chest compressions counting as follows: "1, and 2, and 3, and 4, and 5, ... , and 10, 11, 12, 13, 14, 15."

After 15 compressions, provide 2 rescue breaths. Repeat the sequence of 15 compressions and 2 rescue breathes 4 times, or for about 1 minute.

Then reassess - checking for breathing and circulation.

If there still is no breathing or circulation, continue to provide chest compressions and rescue breaths, reassessing the victim every couple of minutes (as their condition could change).

Continue to provide CPR until either help arrives, the victim recovers, or you physically can't help any more.
**Diabetic emergencies**

Find out if victim has past diabetic history

**Insulin Shock (Hypoglycemia)**
Result of insufficient sugar - Fast onset
- Cold clammy skin, pale, rapid respirations and pulse, incoherent
- Treat by giving sugar bases products

**Diabetic coma (Ketoacidosis)**
Too much sugar or insufficient insulin - Slow onset
- Warm, dry skin, slow respirations, smell of rotten fruit on breath
- True medical emergency, activate EMS system immediately

**Bite Wounds**

If the victim was bitten by an unprovoked undomesticated animal such as a raccoon or a squirrel, an immediate shot may be necessary to prevent the possibility of a rabies infection.
- A bite from a domestic pet can be painful but rarely requires a visit to the emergency room and unless obvious bodily harm was sustained, a simple precautionary treatment will suffice.
- Use anti-bacterial soap and water to thoroughly clean the bite wound.
- Apply antibiotic ointment such as Neosporin to prevent infection.
- If the injury resulted in broken skin, dress it with a sterile bandage and replace the dressing frequently.
- If the bite is deep, the victim may need to be treated for a puncture wound.

**Snake & Spider bites**

- **Rattlesnake**
- **Copperhead**
- **Black Widow**
- **Brown Recluse**

**Limit activity**
- **Constricting bandage above**
- **Cold application**
- **Advanced medical attention**

**Review**

1. **Check for responsiveness** by shouting and shaking the victim. Do not shake or move the victim if you suspect he may have sustained spinal injury.
2. **Call 9-1-1.**
3. **Remember your A-B-C:**
   - **Airway:** tilt the head back and lift the neck to clear the airway.
   - **Breathing:** pinch the victim’s nose and give 2 breaths, watching for the chest to rise with each breath.
   - **Circulation:** if there is no pulse, perform 15 chest compressions - 2 hands, 2 inches.
4. **Re-asses - check for pulse and if necessary perform the cycle again.**

Until an ambulance arrives, you can increase that chance by 40% simply by remembering and effectively administering CPR.
Cuts and scrapes
- Thoroughly clean the wound with mild anti-bacterial soap & water.
- Use sterilized tweezers to remove any debris that remains embedded in the wound. If debris is abundant or can't be removed for some reason, a trip to the emergency room will be necessary. Water may induce bleeding by thinning the blood. If while rinsing the wound, you notice increased blood flow, use gauze or a clean cloth to apply gentle, continuous pressure until the blood stops.
- Although hydrogen peroxide is commonly used as a disinfectant for minor cuts and scrapes, it is actually not very effective and may even delay the healing process by irritating the person's living cells. An antibiotic ointment such as Neosporin is a better alternative - it will keep the wound from getting infected and speed up the healing process.
- Dress the wound with a bandage or sterile gauze to keep dirt and bacteria out. Change the dressing frequently and rinse the wound as often as necessary to keep it free of dirt.
- Continue to monitor the wound for several days. If the injured area turns red or purplish, or if excessive pain persists, then it may have become infected and will require a physician's attention. If the wound is very deep or the bleeding is profuse, it may require stitches in order to heal properly.

Brises
- A typical bruise is a contusion caused by traces of blood escaping from small vessels that lie close to the skin's surface. Since our blood vessels become more fragile with age, the elderly tend to bruise easier than healthy adults and children. Conversely, if a child sustains excessive bruising, it may be an indication of a more serious injury and should be treated accordingly. If the bruise is on the victim's head, he may have sustained and should be checked for head trauma.
- To reduce the bump and minimize the pain, have the victim elevate the injured area and apply a commercial ice pack or ice cubes wrapped in a towel for 30 to 45 minutes. Depending on the extent of the injury, this process should be repeated for a few days or until the swelling and the pain begin to dissipate.

Head injury
A sharp blow to the head could result in a concussion, a jarring of the brain inside its protective, bony covering. A more serious head injury may result in contusions, or bruises to the brain.

OTHER SYMPTOMS TO LOOK FOR IF YOU SUSPECT A VICTIM MAY HAVE A BRAIN INJURY:
- Clear or reddish fluid draining from the ears, nose, or mouth
- Difficulty in speaking
- Headache
- Unequal size of pupils
- Pale skin
- Paralysis of an arm or leg (opposite side of the injury) or face (same side of the injury)

PROPER CARE:
1. While waiting on help to arrive, keep the victim lying down in the recovery position.
2. Control any bleeding and be sure that he is breathing properly.
3. Do not give the victim any liquids to drink.
4. Do not leave the victim unattended.
5. If the victim loses consciousness, you may need to perform CPR.
6. If the victim becomes unconscious or any amount of time has elapsed, call this information so that you can report him when medical help arrives.

Burns
- 1st degree burns are usually accompanied by redness and some swelling of the skin.
  - Cooling the affected area
  - Keep the injury under cool running water for at least 10 minutes.
  - Or place the burn in a container of cold water
  - Or use a cool, wet compress made of clean cloth

Keeping the burn cool will reduce pain and minimize the swelling. If the injury is on the part of a body where swelling or snug clothing is present, carefully remove them before it begins to swell. Apply a moisturizing lotion or Aloe Vera extract and dress the burnt area with a loosely wrapped sterile gauze.

- 2nd degree burns will result in deeper, more intense redness of the skin as well as swelling and blistering. Treat just as a 1st degree burn extra care should be taken to avoid infection and excessive scarring.
  - Replace the dressing daily and keep the wound clean. If a blister breaks use mild soap and warm water to rinse the area. Apply antibiotic cream such as Neosporin to prevent infection before redressing in sterile gauze.

Direct Pressure
- Dress the wound with a bandage or sterile gauze to keep dirt and bacteria out. Change the dressing frequently and rinse the wound as often as necessary to keep it free of dirt.
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Pressure bandage
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**Burns**

- 3rd degree burns may appear and feel deceptively harmless as the victim may not feel much pain due to complete destruction of all layers of skin and tissue as well as nerve endings. The damaged area may appear charred or ash-color and will instantly start to blister or “peel”.
- Douse with non-flammable liquid if on fire.
- Don't remove burnt clothing from the victim as this will expose open wounds to the elements and potential infection.
- Cover the victim's injuries with wet sterile cloth to reduce the pain and swelling. If you notice that the victim is going into shock and loses consciousness, you will need to perform CPR.

**Choking**

- Keep the victim calm in order to determine whether your assistance is truly necessary.
- Asking the person if he is choking: if he is able to answer then he is probably not choking. A choking victim will not be able to speak since oxygen cannot reach his lungs. But if after asking the person if he's choking all he can do is gesture or point to his throat and you notice his face starting to turn blue, then he is most likely choking and you will need to perform the Heimlich Maneuver immediately.
- Find the proper stance behind the victim with one of your feet planted firmly between the victim’s feet.
- Place your hand in a closed fist slightly above his belly button.
- Place your other hand directly on top of the first.
- Squeeze the victim’s abdomen in quick upward thrusts as many times as it is necessary to dislodge the object in his windpipe. Since oxygen cannot reach his lungs. But if after asking the person if he’s choking all he can do is gesture or point to his throat and you notice his face starting to turn blue, then he is most likely choking and you will need to perform the Heimlich Maneuver immediately.

**Fractures**

A fracture (broken bone) may not always be obvious as most breaks do not result in compound fractures (bone protruding through the skin). It is important not to misdiagnose a break and mistake it for a bruise or sprain. Typical symptoms of a fracture are:

- Immediate and excessive swelling
- Injured area appears deformed
- The farthest point of the injured limb turns blue or is numb to the touch
- Even slight movement or contact to the injured area causes excessive pain

**Heimlich Maneuver**

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**Splints**

- A functional splint can be made of almost any material (wood, plastic, etc.) as long as it is rigid and is longer than the broken bone.
- To apply the splint simply lay it along the broken bone and wrap it against the limb with gauze or a length of cloth. starting at a point farthest from the body. Do not wrap it too tight as this may cut off blood flow.
- If the break is in the forearm, loosely wrap a magazine or a thick newspaper around the break and use a sling fashioned from gauze or a strip of cloth to keep the elbow immobilized.
**Dislocations**
The most common dislocations occur in the shoulder, elbow, finger, or thumb.

**LOOK FOR THESE SIGNS:**
1. swelling
2. deformed look
3. pain and tenderness
4. possible discoloration of the affected area

**IF A DISLOCATION IS SUSPECTED...**
1. Apply a splint to the joint to keep it from moving.
2. Try to keep joint elevated to slow blood flow to the area.
3. A doctor should be contacted to have the bone set back into its socket.

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**Nosebleed**
A nosebleed may be caused by a fall, a strike to the nose, or even from breathing excessively dry air. If the nosebleed is not a symptom of a more serious injury, it is rarely dangerous and can usually be stopped by applying continuous pressure.

- Do NOT tilt the victim's head backward.
- Have the victim sit or stand upright to slow down the flow of blood.
- Loosen any tight clothing around the victim's neck.
- If possible, have the victim spit out excess saliva - swallowing may disturb the clot and cause nausea.
- Pinch the nostrils shut and press the tip of the nose against the bones of the face.
- Maintain pressure for 5 to 10 minutes.
- Once the bleeding has stopped, the victim should avoid blowing his nose or otherwise straining himself for at least an hour.
- If the victim's nose continues to bleed or if the blood flow appears to be excessive, or if the victim feels weak or faint, the damage may be more serious than it appears. You should call 9-1-1 or take him to the nearest emergency room as soon as possible.

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**Heat Stroke**
Heat stroke is potentially fatal. In this condition, the body's temperature regulation center in the brain has been rendered inoperable, and the temperature continually rises, causing eventual brain damage. Immediate active intervention is necessary to avoid coma and death.

**SIGNS AND SYMPTOMS**
- flushed, hot, dry skin
- the casualty has ceased sweating
- rapid, strong pulse (sometimes irregular)
- irrational or aggressive behavior
- staggering gait
- visual disturbances
- vomiting
- collapse and seizures
- coma - death

**CARE AND TREATMENT**
- urgent ambulance transport
- complete rest in shade
- remove casualty's clothing
- cool casualty with any means possible
- be prepared to resuscitate as required
- nothing by mouth - dehydration is required by intravenous fluids administered by a doctor or ambulance crew

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**Heat Exhaustion**
Heat exhaustion is caused by exertion accompanied by heat and high humidity. It particularly affects the very young and the elderly.

**SIGNS & SYMPTOMS**
- pale, clammy skin
- profuse and prolonged sweating
- cramps in the limbs and/or abdomen
- nausea and/or vomiting
- headache
- lethargy

**CARE & TREATMENT**
- complete rest in the shade, no further exertion
- cool casualty by sponging with tepid water
- when nausea passes, give cool water to drink (cautiously)
- ensure casualty has assistance when recovered