This document can be used in conjunction with the General First Aid training.

Supplement - First Aid or Sudden Illnesses

Asthma Attacks

Asthma is a chronic illness involving the respiratory system in which the airway occasionally constricts and becomes inflamed, often due to one or more triggers.
An acute episode of asthma is often called an "attack" or "flare." Some people develop asthma symptoms in very cold weather (cold allergy). Others develop symptoms during strenuous exertion (exercise-induced asthma).

Other triggers of asthma include:

- Allergies
- Air pollution
- Infections
- Emotional excitement and stress
- Crying or laughing too hard
- Smoke.

Asthma varies a great deal from one person to another, ranging from mild to severe, and can be life threatening. Episodes can occur infrequently or very often.

Look for:

- Coughing
- Bluish skin
- Victim unable to speak in complete sentences without pausing for breath
- Nostrils flaring with each breath
- Wheezing (a high-pitched whistling sound during breathing).

What to do:

- The victim should rest and take physician-prescribed asthma medicines.
- Help the victim if he is unable to use his inhaler or administer prescribed medication without assistance.
- Help the victim into a comfortable breathing position, which is usually sitting upright.
- In the case of a severe prolonged episode, seek medical attention immediately.

Anaphylaxis

Anaphylaxis is a severe allergic reaction. It can be especially dangerous because it can develop quickly and cause extreme, life-threatening breathing difficulties.

Anaphylaxis is an emergency condition requiring immediate professional medical attention. CPR and other lifesaving measures may be required. This may include placing a tube through the nose or mouth into the airway (endotracheal intubation) or emergency surgery to place a tube directly into the trachea (tracheotomy).

Symptoms include:

- Rashes
- Hives
- Itching or burning skin
- Difficulty breathing
- Wheezing
- Low blood pressure
- Swelling of hands, tongue, and pharynx.

Expectations

Anaphylaxis is a severe disorder with a guarded prognosis (expected outcome). Symptoms may resolve with prompt treatment. However, death may occur even with treatment.

What to Do

Antihistamines, such as diphenhydramine, may be given to reduce symptoms if vital signs are normal, there are no difficulties breathing, and the only symptoms include itching, hives, and/or rash

Epinephrine is the most effective treatment for anaphylaxis. It is given by injection and/or inhalation. This opens the airways and raises the blood pressure by constricting blood vessels. Some patients may have prescribed epinephrine (usually an epi-pen). Assist the patient if they are not able to use the epinephrine injector or inhaler themselves.

Use epinephrine and call for an ambulance if there is wheezing; swelling of the pharynx, soft palate, or tongue; or signs of low blood pressure, confusion, weak pulse, or a rapid heart beat.

Complications:

- Cardiac arrest (no effective heartbeat)
- Shock
- Respiratory arrest (absence of breathing).

Anaphylaxis Reactions

Anaphylaxis is a severe allergic reaction. It can be especially dangerous because it can develop quickly and cause extreme, life-threatening breathing difficulties.

Common causes include insect bites/stings, horse serum (used in some vaccines), food allergies, and drug allergies. Pollens and other inhaled allergens rarely cause anaphylaxis. Some people can have an anaphylactic reaction with no identifiable cause.

Symptoms of anaphylaxis include:

- Rashes
- Hives
- Itching or burning skin
- Difficulty breathing
- Wheezing
- Low blood pressure
- Swelling of hands, tongue, and pharynx.

What to Do

Avoid known allergens. Any person experiencing an allergic reaction should be monitored, although monitoring may occur at home in many cases. Occasionally, people who have a history of drug allergies may safely be given the offending medication after pretreatment with

corticosteroids (prednisone), antihistamines (diphenhydramine), and/or epinephrine. People who have a history of allergy to insect bites/stings may be instructed to carry (and use) an emergency kit consisting of injectable epinephrine and/or an epinephrine inhaler.

Symptoms (Note: These few symptoms may develop rapidly, often within seconds or minutes)

- Abdominal pain or cramping
- Abnormal (high-pitched) breathing sounds
- Anxiety
- Confusion
- Cough
- Diarrhea
- Difficulty breathing
- Dizziness
- Generalized itching
- Hives
- Nasal congestion
- Nausea or vomiting
- Blueness of the skin (cyanosis), including the lips or nail beds
- Rapid pulse
- Skin redness or inflammation
- Slurred speech
- Wheezing.

Stroke

Stroke occurs when the brain cells are damaged because of an insufficient supply of oxygen. This happens when a blood vessel breaks or is blocked. People with high blood pressure have a higher risk of stroke. Have your blood pressure checked regularly and follow your doctor's advice if your blood pressure is high.

What to Look For

- Paralysis on one side of the body, of arms or legs, or of side of face
- Sudden onset of weakness
- Difficulty with speech
- Blurred vision
- Headache may be present, but not always
- Pupil of eyes may be different sizes
- Patient may be unconscious or may seem drowsy or disoriented.

What to Do

- Call an ambulance.
- Keep patient calm and be reassuring.
- Keep the patient's airway open. Keep the head from falling forward in sitting patient; if patient is unconscious, open the airway.
- Monitor the patient's pulse and breathing.

What NOT to Do

- DO NOT leave the patient alone.
- DO NOT give the patient anything to eat or drink.

Seizures

A seizure is usually defined as a sudden alteration of behavior due to temporary changes in the electrical functioning of the brain. Symptoms may vary depending on the part of the brain that is involved, but seizures often cause unusual sensations, uncontrollable muscle spasms, and loss of consciousness.

What to Look For

- Uncontrolled jerking movements. The patient may fall to the floor.
- The patient may have a high fever or evidence of a head injury.
- The body may become stiff, and teeth may be clenched. There may be foam at the mouth.
- A medical identification tag, bracelet, or necklace indicating that the patient has epilepsy or another chronic disease.

What to Do

- If seizure is prolonged or patient has one right after another, call an ambulance immediately.
- Lay the patient flat with his face to one side to allow any saliva or vomitus to drain from the mouth.
- Check for breathing, as the airway could become blocked.
- Clear the area of any objects that the victim could hurt themselves with, and protect the head from injury.
- Allow the patient to rest after the attack.
- Stay calm.

What NOT to Do

- DO NOT restrain the patient's movement more than necessary to prevent harm.
- DO NOT force any objects between teeth. Never put your fingers in the patient's mouth.
- DO NOT give anything to eat or drink until the patient has fully recovered.
- DO NOT allow bystanders or friends to crowd around.

Diabetic Emergencies

Diabetes is a condition in which the body does not produce insulin or does not use insulin properly. Insulin is a hormone that helps the body to convert sugar and starches into energy. The body is continuously balancing sugar and insulin.

Hypoglycemia

Hypoglycemia (low blood sugar) can be caused by an insulin reaction, which can occur when a person with diabetes takes too much insulin or eats too little food after taking insulin or other diabetes medications. Quick action is needed for this condition.

What to Look For

An insulin reaction can be difficult to recognize and can be confused with other medical conditions. Look for a medical alert tag.

The American Diabetes Association lists the following signs and symptoms of hypoglycemia:

- Shakiness
- Dizziness
- Sweating
- Hunger
- Headache
- Pale skin color
- Sudden moodiness or behavior changes, such as crying for no apparent reason
- Clumsy or jerky movements
- Seizure
- Difficulty paying attention, or confusion
- Tingling sensations around the mouth.

What to Do

If the victim is conscious

- Provide sugar (e.g., sugar cube, soda, hard candy, or fruit juice).
    - DO NOT use diet drinks; they often do not contain sugar.
- If the person is not better in 10 to 15 minutes, seek medical attention immediately.

If the victim is unconscious

- Check ABCs (Airway, Breathing, Circulation).
- Seek medical attention immediately.
- Treat any seizures.

If you are in a remote setting or if medical attention is some distance away, place sugar under the victim's tongue to dissolve.

- If you are uncertain whether high or low blood sugar exists, give food or drink containing sugar.
- Give fluids.
- If the victim does not get better in 15 minutes, the victim needs medical attention. Take the victim to the hospital.

Temperature Emergencies

Frostbite

Frostbite is damage caused to skin and other tissues due to exposure to extreme cold. Hands, feet, nose, and ears are the body parts most likely to be affected by frostbite

Treatment

- Take the victim indoors, if possible.
- Remove any wet clothing they may be wearing.
- DO NOT try to warm the frostbitten area if there is any chance that it will refreeze.
- Immerse the frostbitten parts in warm (100 ° F to 105 ° F) water until they regain their pink color. If warm water is not available, wrap the affected parts gently in a sheet and warm blankets and keep the parts elevated.
- DO NOT rub or massage the frostbitten area. This could cause gangrene (decay of body tissue when the oxygen supply is obstructed) to set in.
- DO NOT try to warm the victim with a heat lamp or hot water bottle or place him near a hot stove. This could also cause gangrene.
- DO NOT break any blisters the victim may have because the blisters may become infected.
- If the victim is conscious and is not vomiting, give him warm liquids to drink to help the warming process.
- After the frostbitten parts are warmed, have the victim exercise them to maintain good circulation in those areas.
- If toes or feet are frostbitten, do not let the victim walk until they are warm. Walking with frostbitten tissue could cause gangrene just the same as rubbing can.
- A doctor should be seen as soon as possible to make sure the parts heal properly.

Hypothermia

Symptoms

The initial symptom of hypothermia is vigorous and uncontrollable shivering.

As hypothermia progresses:

- Dizziness
- Lightheadedness
- Muscular stiffness
- Difficulty in moving.

If no treatment is given:

- Slurred speech
- Slow pulse
- Memory loss.

If still no treatment is given, death can occur.

Treatment

- The body temperature must be raised slowly. Warming the victim's body too quickly could cause tissue damage.
- Take the victim indoors or to an area of shelter.
- If the victim's clothes are wet, remove them and replace them with warm, dry clothes as soon as possible.
- The victim may want to wrap up in a blanket and sit near a heater or fireplace until warm.
- Give the victim warm liquids (e.g., hot apple cider, soup, etc.) if they are fully conscious.
- The victim should not drink liquids that contain caffeine.
- Make sure the victim gets medical attention as soon as possible.

Heat Stroke

Hyperthermia, also known as heatstroke or sunstroke, is usually caused by excessive exposure to heat. The heat-regulating mechanisms of the body (mainly perspiration) become overwhelmed and body temperature climbs uncontrollably. This is a medical emergency that requires immediate attention.

Symptoms:

- high body temperature
- lack of sweating, with hot red or flushed dry skin
- rapid pulse
- difficulty breathing
- strange behavior
- agitation
- disorientation
- seizure.

Treatment:

- Cool the body of a heatstroke victim immediately.
- If possible put him in cool water; wrap him in cool, wet cloths; sponge his skin with cool water or use ice or cold packs.
- Once the victim's temperature drops to about 101°F, you may lay him in the recovery position* in a cool room.
- If the temperature begins to rise again, you will need to repeat the cooling process.
- If they are able to drink, you may give them some water.
- DO NOT give a heatstroke victim any kind of medication.
- You should watch for signs of shock while waiting for medical attention.

*To place someone in the recovery position:

- Kneel beside him or her. Take the arm closest to you and place it straight out from the side. Take the other arm and place the back of the victim's hand against the cheek nearest you.
- Bend the victim's far knee.
- Gently roll the victim toward you by pulling the far knee to the ground. Protect the head while performing this step.
- Tilt the head up slightly to open the airway. Ensure the hand is under the cheek. Remain with the victim until help arrives.

Abdomen, Blunt or Penetrating Injuries, and Protruding Organs

All abdominal injuries can be dangerous. In addition to the visible, external injuries, there are usually corresponding injuries to the internal organs. You should always seek medical attention for any abdominal injury.

A Blow to the Abdomen

A blunt blow to the abdomen can induce vomiting. Place the victim on the left side in a comfortable position. DO NOT give the victim any food or drink.

Penetrating Wound

Penetrating wounds likely damage internal organs as well. DO NOT remove the object. Stabilize the object in place and control bleeding by using bulky dressings around it.

Protruding Organs

DO NOT try to reinsert protruding organs inside the abdomen because this could lead to infection and could damage the intestines. Cover protruding organs with a sterile dressing or clean cloth. DO NOT cover the organs with any material that clings or disintegrates when wet or any material that could potentially cut or puncture the organs. Pour drinkable water on the dressing to keep the protruding organ from drying out.

Amputation of a Body Part

Symptoms

- Body parts completely or partially cut off
- Bleeding
- Pain
- Crushed body tissue.

What to Do

- Call immediately for emergency medical assistance.
- Check the victim's airway (open if necessary); check breathing and circulation. If necessary, begin rescue breathing, CPR.
- Calm and reassure the victim.
- Control bleeding by applying direct pressure to the wound. If the bleeding continues, recheck the source of the bleeding and reapply direct pressure.
- Save and keep the severed body part with the patient.
- Remove contaminating material, but do not attempt to rinse or clean the severed part.
- Wrap the severed body part in a clean, dry cloth, place it in a sealed plastic bag and put on a bed of ice. Save it for the emergency employees or take it with the victim to the hospital. Cooling the severed part will keep it viable for about 18 hours. Without cooling, it will remain viable for only about 4 to 6 hours.

What NOT to Do

- Forget that saving the victim's life is more important than saving the body part.
- Attempt to push any body part back into place or decide that the body part is too small to save.
- Overlook less obvious injuries.
- Raise false hopes of reattachment of the body part.
- Immerse the severed part in cold water or ice.

Take steps to prevent shock.

- Once the bleeding at the site of the amputation is under control, examine the person for other signs of injury that require emergency treatment.
- Treat fractures, additional cuts, and other injuries appropriately.
- Stay with the victim until medical assistance arrives.

Bites and Stings from Snakes and Animals

- **Animal Bites**
- First control bleeding. Flush the wound immediately to remove saliva and cleanse thoroughly with mild soap and cool water for 5 minutes. Cover with a sterile pad or clean cloth. Instruct the victim not to move the affected area until a physician has been consulted. Consult the doctor for concerns on rabies and tetanus infection.
- If the victim has been bitten by an unknown animal, including cats, dogs, raccoons, coyotes, foxes, rats, mice, squirrels, skunks, or bats, the animal should be captured alive so that it can be tested for rabies. If necessary, notify police and animal control authorities. If the animal cannot be caught or is killed, the victim may have to undergo anti-rabies treatment.
- **Snakebites**
- Mild to moderate symptoms include mild swelling or discoloration, mild pain with tingling sensation at bite site, rapid pulse, weakness, blurred vision, nausea, vomiting, and shortness of breath.
- Severe symptoms include rapid swelling, numbness, severe pain at bite site, pinpoint pupils, slurred speech, shock, convulsions, paralysis, unconsciousness, and lack of breathing or pulse.
- **Caution:** Both poisonous and non-poisonous snakebites should have medical attention. The victim should be taken to a hospital as soon as possible, even in cases when snakebite is only suspected.
- DO NOT give alcohol, sedatives, aspirin or medications containing aspirin to relieve pain. DO NOT apply cold compresses, ice, or other methods of cold therapy.
- Get medical help immediately. Call the nearest hospital, Poison Control Center, or doctor for additional instructions. Have the victim lie down and keep as still and calm as possible. Adjust victim's body so that the bite site is below heart level. Be alert for breathing difficulties and begin rescue-breathing techniques, if necessary. If pulse is not present, begin CPR immediately if you are trained in it.
- Treat for shock if necessary.
- DO NOT apply suction to a snakebite. While suction may remove some venom, the amount is negligible. Suction may actually aggravate the injury by introducing bacteria into the wound.
- DO NOT make a tourniquet. In the case of a venomous snakebite, wrap a bandage snugly around the bitten extremity between the bite site and the heart. Check for a pulse to ensure the bandage is not too tight. Adjust the bandage so that fluid oozes from the wound. Immobilize the extremity and seek medical help.
- If the snake has been killed, take it with you to the hospital for identification. Be careful when transporting a snake that has been killed, however, as a dead snake can still deliver a bite reflexively.

Bites and Stings from Insects (Spiders, Hornets & Wasps)
Interventions should include responses to:

- Anaphylactic Shock
- Allergic Manifestations
- Tetanus Prophylaxis.

Bites from Ants, Bedbugs, Chiggers, Mosquitoes

Wash thoroughly with soap and cool water. Apply a paste made of baking soda and water or use calamine lotion. For swelling, cover the bite with a very cold wet cloth.

Bee Stings

Treat as for ant, bedbug, chigger, and mosquito bites. Remove and discard the stinging apparatus and venom sac. If there is a severe reaction, seek medical help.

Spider Bites

Black Widow : A shiny black spider with long legs, 3/4 of an inch in size, marked on the underside of the abdomen with a red hourglass-shaped spot. Symptoms may include severe pain, nausea and muscle cramps, fever, profuse sweating and breathing difficulties. A tingling or burning sensation may spread throughout the body.

Brown Recluse : A brown spider, 1/2 to 5/8 of an inch in size with long legs and a dark brown fiddle-shaped marking on the back. Symptoms may include severe pain, possibly followed by chills, fever, joint pain, and nausea and vomiting.

Tarantula : A large hairy spider, which may accompany imports of bananas and fruits from South America. Symptoms may include severe wound, intense pain at the bite site; generalized body reactions are uncommon.

Treatment

- Keep the victim quiet and warm.
- Be sure the bite is below heart level.
- Watch closely for breathing difficulties.
- Begin rescue-breathing techniques, if necessary.
- Place a constricting band 2" to 4" above the wound.
- Be sure it does not bind too tightly.
- Check for a pulse below the bite site.
- If a pulse is not evident, loosen the constricting band until a pulse can be felt.
- Apply a very cold wet cloth to the affected area.
- Get medical help as soon as possible.

Ticks

- A tick is a small leathery black or dark brown insect that may attach itself to the skin or scalp. It may carry Lyme Disease, an inflammatory bacterial illness.
- ***Caution****:* If fever, headache, and chills develop a few days after finding an attached tick, consult your physician.
- ***Treatment:*** Remove a tick from your skin as soon as you notice it. Use fine-tipped tweezers to firmly grasp the tick very close to your skin. With a steady motion, pull the tick's body away from your skin. Avoid crushing the tick's body. Clean your skin with soap and warm water or alcohol. Don't use petroleum jelly, a hot match, nail polish, or other products to remove a tick.
- Scrub the area with soap and water for 5 minutes. Search the entire body for other possible tick sites.

Bleeding - External Bleeding

Apply direct pressure: Place a clean folded cloth over the injured area and firmly apply pressure. If blood soaks through the cloth, cover that cloth with another one and continue to apply pressure to the wound. If the bleeding is from the ear, place a clean bandage over the ear, lay the victim on his side, and allow the blood to drain out through the bandage.

Internal Bleeding

Internal bleeding results when blood vessels rupture, allowing blood to leak into body cavities. It could be a result of a direct blow to the body, a fracture, a sprain, or a bleeding ulcer. If a victim receives an injury to the chest or abdomen, internal bleeding should be suspected. He probably will feel pain and tenderness in the affected area.

Other Symptoms to Watch For

- Cold, clammy skin
- Pale face and lips
- Weakness or fainting
- Dizziness
- Nausea
- Thirstiness
- Rapid, weak, and irregular pulse
- Shortness of breath
- Dilated pupils
- Swelling or bruising at the site of injury.

The more symptoms that are experienced, the more extensive the internal bleeding is.

What to Do for the Victim

- Check for an open airway and begin rescue breathing, if necessary.
- Call for medical help as soon as possible, and keep the victim comfortable until help arrives.
- The victim may rinse his mouth with water, but DO NOT give a victim of internal bleeding anything to drink.

Burns

First-Degree Burns

First-degree burns damage the outer layer of skin (epidermis).

Characteristics

- Redness
- Mild pain
- Swelling.

Treatment

- Immediately submerge the affected part in cold water.
- Hold it under cold running water or place cold wet cloths on it until the pain decreases.
- Cover with clean dry gauze dressing for protection.

Second-Degree Burns

Second-degree burns go through to the second layer of skin (dermis).

Characteristics

- Blisters
- Rough and red skin
- Swelling
- Extreme pain.

Treatment

- Immerse in cold water or have cold wet cloths applied to it immediately.
- Gently blot area dry. DO NOT rub. Rubbing may break the blister, opening it to infection.
- Cover wound with dry sterile bandage.
- If burn is located on arm or leg, keep limb elevated as much as possible.
- Second-degree burns should heal within a few weeks.

Never put butter or greasy ointments on a burn. They seal heat into the wound and may cause infection.

Always seek medical attention, if:

- Victim is a child or elderly.
- The burn covers more than one body part.
- The burn is located on any sensitive area of the body (hands, face, feet, etc.).
- The burn is third degree.
- The burn is caused by chemicals.

Third-Degree Burns and Chemical Burns

Third-Degree Burns

Third-degree burns go through to the third layer of skin (subcutaneous).

Third-degree burns actually are less painful than second-degree burns because the nerve cells in the affected tissue are destroyed, but the damage to the skin is much greater.

Characteristics

Whitish or charred appearance

Treatment

- DO NOT remove any clothing near or at the site of the burn.
- DO NOT apply cold water or medication to the burn.
- Place clean dry cloths (e.g., strips of a clean sheet) over the damaged area.
- If burns are on arms or legs, keep the limbs elevated above the level of the heart.
- If victim has burns on face, check frequently to make sure he is not having difficulty breathing.
- Get victim to a hospital at once.

Chemical Burns

- Remove clothing on or near the burn area. Never pull clothing over the head with a chemical burn. You may need to cut the clothing.
- Wash the area thoroughly with low-pressure water for at least 20 minutes.
- Apply a clean dressing to the area.
- Get medical attention as soon as possible.

Chemical Poisoning

- **What to Look For**
- Spilled liquid or dry chemical on skin.
- **What to Do**
- Call your Poison Control Center or EMS immediately. If poison, such as dry or wet chemicals, gets on the skin, flush the area with large amounts of water and continue flushing the area with water until EMS arrives.
- Unless advised by the Poison Control Center, **DO NOT** encourage the victim to drink water or milk.
- If the victim is unconscious, has convulsions, becomes nauseated, or vomits, do not force fluids. Call the Poison Control Center or professional medical help. Describe the poisonous substance and the victim's condition and ask for first aid instruction.
- **DO NOT** give any other first aid if victim is unconscious or is having convulsions. Get professional medical assistance. Apply emergency breathing techniques or CPR if necessary. If the victim is convulsing, protect them from further injury; loosen tight clothing if possible.
- If the victim is conscious, administer the antidote recommended by the Poison Control Center as soon as possible. Instructions for treatment on product labels may be wrong.
- **NOTE:** The syrup of Ipecac, often used to induce vomiting for cases of ingested poison, is no longer recommended for general household use. The FDA has stated that it has failed to show a clear benefit to victims of ingested poison. It can also cause adverse effects in some patients and is sometimes abused (e.g., among persons with eating disorders looking to induce vomiting). For these reaons, its use is no longer recommended in most cases. It is generally recommended now that it only be used in rare circumstances and only in consultation with poison control centers or toxicologists.
- Take the poison container (or vomitus if poison is unknown) with victim to hospital.

Chest Injuries, Rib Fractures, Flail Chest, and Penetrating Wounds
There are two types of chest injuries: lung injuries and chest wall injuries (ribs). Check the ABCs (Airway, Breathing, Circulation). Keep a conscious victim sitting up or with the head and shoulders elevated. Another option is to place the victim with the injured side facing down. This protects the uninjured side from blood inside the chest cavity and allows the healthy lung to expand. Seek medical attention for all chest injuries.

Broken Rib

- Pain when breathing, coughing, or moving can indicate a broken rib.

What to Do

- Stabilize the ribs by having the victim hold a pillow or similar soft object, or lightly wrap an elastic bandage to hold it against the injured area.
- Tell the victim to take deep breaths and to cough several times each hour to prevent pneumonia.

Flail Chest
Several ribs next to each other, broken in two or more places, is called a flail chest. The victim's chest may move in the opposite direction to the rest of the chest wall during breathing (known as "paradoxical breathing").

Stabilize the chest by one of several methods:

- Apply hand pressure. This is useful for a short time.
- Place the victim on the injured side with a blanket or clothing underneath.

Penetrating Chest Wound

- Stabilize the object in place with bulky dressings. DO NOT try to remove a penetrating object; this may cause bleeding and allow air into the chest cavity.

Sucking Chest Wound
This happens when a chest wound allows air to pass into and out of the chest with each breath. Have the victim take a breath and let it out; then seal the wound with anything available to stop air from entering the chest cavity. Plastic wrap or a plastic bag works well. Tape the plastic in place, leaving one corner untaped. This creates a flutter valve that prevents air from being trapped in the chest cavity. If the victim has trouble breathing or seems to be getting worse, remove the plastic cover to let air escape and then reapply.

Head, Neck, and Back Injuries

Important: Improper movement could injure the spinal cord and cause permanent paralysis.

Head Injury

What to Look For

- May be present after blow to head
- Patient may be unconscious or disoriented and confused
- Double vision
- Back or Neck Injury
- Suspect possible back or neck injury in any head injury or force-related accident, such as a fall or auto accident
- Pain in back or neck area. Tingling, numbness, or inability to move arms or legs.

What to Do

- If patient was or is unconscious or if blood or fluid is coming from ears, nose, or mouth, call an ambulance.
- Cover open wounds lightly with sterile dressing.
- If nausea, vomiting, or double vision occurs, seek medical attention immediately.
- Keep patient from moving about. Try to keep them still, warm and reassured.

Back or Neck Injury

- Call an ambulance.
- If you must move the patient because of immediate danger, try to keep the head, neck, and back together as a unit; avoid twisting or bending the body; and do not let the head fall forward or backward.

What <u>NOT</u> to Do

- **DO NOT** move the patient unless they would be in greater danger if you did not. Only people specifically trained to do so should move the patient.

Foreign Bodies, Corneal Abrasions, and Lacerations of the Eye
You can treat many minor eye irritations by flushing the eye, but more serious injuries require medical attention. Injuries to the eye are the most common preventable cause of blindness; so when in doubt, err on the side of caution and call for help.
Routine irritations, such as dirt, sand, and other "foreign objects" on the eye surface:

- Do not try to remove any "foreign object" except by flushing.
- Wash your hands thoroughly before touching the eyelids to examine or flush the eye.
- Do NOT touch, press, or rub the eye, and do whatever you can to keep victim from touching it.
- Tilt your head over a basin or eye wash station with the affected eye down, and gently pull down the lower lid; open your eyes as wide as possible.
- Gently pour a steady stream of lukewarm water across the eye. Sterile saline solution can also be used.
- Flush the eye for up to 15 minutes, checking the eye every 5 minutes to see if the foreign object has been flushed out.
- Since a particle can scratch the cornea and cause an infection, a medical doctor should examine the eye if irritation continues.
- If a foreign object is not removed by flushing, it will probably be necessary for a trained medical practitioner to flush the eye.

Embedded foreign object (penetration of the globe of the eye):

- Call for emergency medical help.
- Cover both eyes if the object is small; use eye patches or sterile dressing for both. If the object is large, cover the injured eye with a small cup taped in place and cover the other eye with an eye patch or sterile dressing. Keep all pressure off the eye.
- Stay calm and comfortable as possible until help arrives.

Chemical burns of the eye:
Many chemicals can damage the eye. If you get a chemical in an eye and you know what it is, look on the product's container or material safety data sheets (MSDS) for an emergency number to call for instructions.

- Flush the eye with lukewarm water for 15 to 30 minutes. If both eyes are affected, wash them both.
- Call for emergency medical help.
- Call your local poison control center for specific instructions. Be prepared to give the exact name of the chemical, if available.
- Cover both eyes with sterile dressings and keep them covered until help arrives.
- Do not apply antibiotics without physician supervision.

Nose Injuries and Nose Bleeds

Causes (Nose Injury)

- Strenuous activity
- High blood pressure
- Exposure to high altitudes
- Blowing your nose too hard.

What to do if you get a nose bleed:

- Sit down.
- Lean slightly forward to prevent blood from running into your throat.
- Place cold and wet cloths on your nose to constrict the blood vessels in your nose and stop the bleeding.
- If blood is coming from only one nostril, press firmly at the top of that nostril.
- If the bleeding is the result of direct injury to the nose, only gentle pressure should be applied.
- If both nostrils are bleeding, pinch your nostrils together for at least 10 minutes.
- If bleeding continues, apply pressure for another 10 minutes.

Injuries to the Mouth and Teeth

If the injury does not involve the head, neck, or spine, have the victim sit with the head slightly tilted forward. If the victim is unable to reach this position, place the victim on their side. This ensures that blood drains from the mouth.

- If the injury has broken the lip, place a clean rolled dressing between the lip and gum. Applying cold can also help.

If a tooth is knocked out:

- Place a small roll of sterile gauze in the gap left by the missing tooth.
- Pick up the tooth by the crown (the part above the gum line), not by the root. Rinse with water (DO NOT scrub), and then put the tooth in a container with fresh milk. If milk is not available, use water.

Musculoskeletal Injuries and Dislocations
What to Look For
The most common dislocations occur in the shoulder, elbow, finger, or thumb.

- Swelling
- Misshapen or distorted appearance
- Pain and tenderness
- Possible discoloration of the affected area.

If a dislocation is suspected:

- Apply a splint to the joint to keep it from moving.
- Try to keep joint elevated to slow blood flow to the areas.
- A doctor should be contacted to have the bone set back into its socket.

Strains and Sprains
Difference in Sprains and Strains

- A **Sprain** involves injury to the ligaments around a joint.
- A **Strain** involves injury to a muscle or tendon.

Treatment
Rest: Avoid using the affected part to prevent further discomfort or injury. Gradually rebuild your exercise program once the injury has healed.

Ice: Apply ice (bags with crushed ice, cold packs, etc.) to the injured area for the first 24 to 48 hours to prevent or reduce swelling.

Compression: Wrap an elastic bandage around the injured area to secure the ice in place. Do not wrap it so tightly that the circulation is cut off. After 10 to 15 minutes, loosen the bandage and remove the ice. Ice may be reapplied for 15 to 20 minutes every one or two hours for the first six hours after the injury. As long as the injury is swelling, continue to apply ice 3 to 4 times a day.

Elevation: Elevate the injured area above the level of the heart to slow the blood flow to the injury.
Applying moist heat promotes healing but should not be applied to a muscle or ligament injury for at least 24 hours because heat will increase the swelling. After the swelling has gone, you should alternately apply cold compresses and moist heat to the injury.

To treat the injury with warm wet packs, place a water-dampened towel in a microwave oven for about 30 seconds. Check to make sure the towel is not too hot before placing it on the skin. If a microwave oven is not available, run a towel under very hot tap water, wring it out and apply it to the injury.

For lower back strain, rest will often bring relief to the strained muscle. If not, alternate cold compresses with moist heat, allowing a time of rest between the treatments.

Shock Due to Injury
Shock, which generally occurs to some degree after any injury, can be severe and cause death. A victim of shock may look dazed and confused. The person may be either pale or flushed, depending on the type of injury. The victim will probably be breathing irregularly, and breathing may be weak. The victim may also vomit. In severe cases, he or she will lose consciousness. Immediate medical help is needed.
Until that help arrives, do the following:

- Have the person lie down on his back.

- Keep the head level with the body or slightly elevated.
- Do not tilt the person so that the head is lower than the body.
- Loosen tight clothing at the chest and neck.
- If the skin is pale and cool, cover the person with one or more blankets to provide warmth, but be careful not to overheat the person.
- If the skin is hot and red, apply bath towels soaked in cool water until the skin returns to normal temperature and then cover the person with a blanket to keep him warm.
- Never give a person in severe shock anything to eat or drink.

Ingested Poison

This includes chemicals and other toxins, as well as alcohol, narcotics such as heroin and cocaine, tranquilizers, and amphetamines.

What to Look For

- Patient may be disoriented or unconscious or display a variety of symptoms depending on what they have taken.
- There may be empty bottles near the patient.

What to Do

- Call the Poison Control Center. Follow the center's directions. They will tell you whether to give anything and whether medical attention is needed.
- If patient starts to vomit, turn him on his side. Save vomit and give it to the emergency responders.
- Save any pill bottle and give it to medical employees.

What NOT to Do

- DO NOT leave the patient alone.

Inhaled Poisons

Employees should be instructed in the acute effect of chemicals used in their plants, the location of chemical inventories, material safety data sheets, chemical emergency information, and antidote supplies.

An assessment of the toxic potential of the environment to rescuers and the need for respirators must be made.

What to Look For

- Patient may be in enclosed car or garage with engine running. Carbon monoxide poisoning can also be caused by use of gasoline powered tools, a charcoal burner in poorly ventilated areas, defective furnaces, and gas leaks.
- Fires can generate fumes; fumes can also be found in silage and manure storage areas.
- Patient may be unconscious or disoriented.
- Skin color may be reddish or bluish.

What to Do

- Call an ambulance.
- Get the patient into fresh air.
- Check for breathing and pulse, start mouth-to-mouth breathing and CPR if necessary and if you are trained.

CAUTION: Be careful not to be overcome by fumes. You cannot help someone if you become another victim.

What NOT to Do

- DO NOT allow anyone to smoke in an area where gas may be leaking.