UNIT-1

First Aid and Bandaging

LEARNING OBJECTIVES

- first aid
- Wounds
- Fractures
- Snake bites and other insect bites

INTRODUCTION:

First aid is complex and situation specific, so the more informed and better trained you are the more prepared you are to deal with any unexpected illness or injury. When someone suffers an injury or sudden illness, first aid is your initial course of action. But first aid is more than having a properly stocked first-aid kid; it is being able to prevent, prepare for, recognize, and easily take care of small accidents, and knowing what to do in the case of an emergency. You can treat most common illnesses and injuries when you know what to do, but first you must decide if first aid will be adequate or if you need professional help. And when the condition warrants measures beyond first aid, knowing how to act until help arrives can save someone's life

In order to properly administer first aid, you will need a good first-aid kit. The better stocked and organized your first-aid kit is, the more likely you are to effectively respond to emergencies in your home. Keep a written list of kit supplies in your home, along with your emergency plan, and be sure to restock the kit as needed and replace items with expired dates, items that have been used, or anything with an open package or broken seal that is supposed to be sterile. Keep a first-aid manual like this on with your kit, along with your list of emergency phone numbers, your list or chart of family's medical conditions and medications, and a flashlight.

The Right Container: Use a container with a strong handle that can be closed securely, and clearly mark it "First-Aid Kit." Commercial kits can be purchased from many sources, but any large, well-built plastic fishing-tackle box or toolbox works great, and is usually much cheaper. Ideally, you want your kit to be light enough to carry, but large enough to hold all necessary items in an organized and easily accessible format. It should be dust proof, waterproof, and sturdy enough to resist damage from falling or crushing

The Right Location: Store your kit safely in a cool, dry location inside your home. Avoid storing it in the garage or laundry room because of the potential harm to its contents from moisture and temperature extremes. Pick a location in your home that is central and accessible to everyone who will be using the kit.

The Right Contents: The ideal kit that will prepare you for most injuries and household emergencies should include the following items:

- Benadryl (generic Diphenhydramine)
- Antibiotic ointment or cream Activated charcoal (only use if instructed by the Poison Control Center) Antacid (liquid)
- Calamine lotion
- Antihistamine cream
- 1% hydrocortisone cream
- Povidone-iodine solution
- Aspirin, acetaminophen, and ibuprofen
- Sterile eye-wash solution
- Epinephrine auto-injector kit (if prescribed by your doctor)
- Extra prescribed medications (such as inhalers)

Your kit should also contain bandages and dressing supplies including:

- Commercial Band-Aid bandages
- Sterile cotton balls
- Cotton-tipped swabs
- Sterile gauze (pads and rolls)
- Elastic bandage rolls
- Extra bandage clips
- Butterfly bandages
- Sterile eye patches
- Regular adhesive bandages (multiple sizes)
- Adhesive tape (waterproof and stretchable)
- Triangular bandages
- Large foil-lined bandage

Additionally, you should include tools and other items such as:

- Bulb syringe Medicine spoon (transparent tube marked with typical dosage amounts)
- Small paper cups
- Clean cloths and tissues Hand sanitizer
- Digital thermometer (and rectal thermometer for babies less than one year old)
- Small jar of petroleum jelly
- Sterile disposable gloves
- Disposable CPR face mask
- Safety pins Scissors (the sharp, angular style with rounded end)
- Tweezers Tooth-preservation kit
- Space blanket
- Penlight
- Small pad of paper and pencil
- Emergency candle and waterproof matches
- Disposable self-activating cold and hot packs
- Magnifying glass
- Whistle

Wounds:

A wound is a small but deep hole caused by such things as fangs, pins, sticks, staples, nails, or any object capable of penetrating the skin deeply. Puncture 56 | The Everything First Aid Book wounds don't usually bleed a lot, but can cause internal injury, and it's difficult to estimate how deep the wound may be.

First Aid for Wounds:

Always assume that a puncture wound is dirty. To treat minor wounds:

1. Wash your hands with soap and water and wear gloves.
2. Clean the wound under a stream of running water, using soap followed by povidone-iodine.
3. Bandage loosely and monitor the wound daily for signs of infection such as increased swelling, redness, or discharge.

Never seal the puncture wound and do not use antibiotic ointments because sealing the wound may actually increase the chance of infection. Don't attempt to clean a major puncture wound as this may cause more serious bleeding. Never try to remove an imbedded object from a puncture wound. Depending on where the wound is located, this can cause further damage, bleeding, and even immediate death. Never probe or remove debris from a wound, attempt to push body parts back in, or breathe on a wound or dressing because doing so may cause serious infection later. Call 911 immediately for any serious puncture wound. If the wound is bleeding heavily, apply direct pressure until help arrives

Snakebites:

Rattlesnakes, copperhead, cottonmouth (water moccasin), coral snake, and cobras are some of the many poisonous snakes.

Symptoms of a snakebite include:

- Fang marks in the skin
- Bleeding
- Blurred vision
- Warmth and burning at the sight of the bite
- Seizures
- Diarrhea
- Dizziness
- Sweating
- Fainting
- Fever
- Increased thirst
- Loss of muscle coordination
- Weakness
- Nausea and vomiting
- Numbness and tingling
- Rapid heart rate
- Severe pain at the site of the bite
- Skin discoloration and swelling

A nonpoisonous snakebite will usually produce a horseshoe-shaped ring of tooth marks on the person's skin, producing mild pain and possibly swelling. First-aid treatment of a nonpoisonous snake bite includes:

1. Washing the bite with soap and water

2. Covering the site with a sterile bandage or dressing If you are unsure of the date of your last tetanus shot, consult with your doctor about a booster shot. Bites that begin to swell and change color are usually indicative of a poisonous snake. Take the following steps for a poisonous snakebite

1. Call 911 and the Poison Control Center immediately so that antivenom can be ready when the person arrives at the emergency department.
2. Calm the person, limit movement, and keep the affected area below heart level to reduce circulation of venom.
3. Remove jewelry or other constricting items and apply a loose splint to help restrict movement.
4. Monitor temperature, pulse, rate of breathing, and blood pressure if you are able.

Do not bring the dead snake in unless it can be done safely, and know that snakes can bite for up to an hour after they are dead. Don't allow the person who has been bitten to exert himself; carry him if you have to transport him. Don't apply a tourniquet or any cold compresses to the bite. Never cut into a bite or try to suction the venom by mouth. Don't allow any medications unless instructed by a doctor and don't give the person any food or drink.

Animal Bites:

Cats and dogs cause most animal bites. Cat bites can cause very deep puncture wounds and present a serious risk of infection because punctures cause bacteria to be forced deep into the skin and tissues. Dog bites also carry a risk of infection and increased incidence of damage to affected tissues. These bites usually produce marks that have broken the skin and sometimes bleeding, depending upon the severity and location of the bites. Redness and swelling typically occur within twenty-four to forty-eight hours

For animal bites, check with a veterinarian for related health risks and have the wounds looked at by a physician. Your doctor may want to administer a tetanus shot and in some cases antibiotics. Keep the pet safe and secured in your custody until a doctor has evaluated the bite and the proper health authorities have ruled out any transmittable diseases.

For severe bites or when the injured person loses consciousness, check for airway, breathing, and circulation and begin CPR , call 911, and manage for shock until help arrives. For minor bites, take the following steps:

1. Wash your hands with soap and water and wash the bite under running water for at least five minutes.
2. Clean the bite with soap and water, saline solution, or povidone-iodine.
3. Stop bleeding with direct pressure and treat the bite as outlined for cuts and lacerations.
4. For unbroken skin, apply a cold pack.
5. Raise the wounded limb above the level of the person's heart (if possible) to reduce any swelling.

6. Check the bite site daily for signs of infection such as increased swelling, redness, or discharge. Large and deep puncture wounds require medical attention. Always seek medical help for bites involving the neck, face, and hands due to the risk of serious infection and/or scarring

Insect Stings:

Insect stings only produce a mild reaction in most people. Multiple stings, stings in the mouth and throat, and stings to persons with adverse allergic reactions to the venom, however, can produce anaphylactic shock and must be treated immediately

First aid for stings includes:

1. Wash the sting site with soap and water.
2. Use a cold pack if needed to reduce swelling.
3. Keep the site of the sting below the person's heart if possible

Additionally, using calamine lotion and Benadryl (diphenhydramine hydrochloride) can relieve itching and swelling. Also a paste of baking soda and water, or uncoated aspirin, will help reduce the stinging pain and reduce inflammation.

If the person has received a bee sting:

1. Quickly and carefully scrape the stinger away with a knife, credit card, or fingernail without touching the sack that's attached; this sack will still be pumping venom into the wound.
2. Do not use tweezers or squeeze the sack, as this may inject even more venom into the person.
3. Wash the site with soap and water and apply a cold pack, keeping the sting site below the level of the person's heart if possible

Watch for signs of an allergic reaction that can develop up to twenty-four hours after a bee sting. If the site becomes infected, seek medical attention

In case of allergic reaction, anaphylactic shock, or sustained multiple stings, call 911 or go to an emergency department for treatment and observation. Multiple stings can produce life-threatening reactions in otherwise healthy people

First Aid for Broken Bones (FRACTURES):

Remember to stay calm. Broken bones require medical attention, and fractures that are a result of a major trauma or injury require emergency care. Do not move the injured person, but do keep them warm.

1. Until medical help arrives, check for ABCs, treat for shock, and begin CPR if needed.
2. Apply pressure to any wounds with a sterile bandage, clean cloth, or clean piece of clothing to control and stop any heavy bleeding.
3. Use covered ice packs to reduce swelling.

How to Make a Splint:

If you think the bone is broken but it is not piercing the skin (closed fracture), you need to splint the limb before moving the injured person. It's important to immobilize the joint above and below where you believe the fracture site to be.

Look around for something stiff and hard to use as a splint, such as a heavy, rigid stick. Or, you can use a rolled blanket or pack that will maintain a rigid state. If you have no other option, you can secure the injured body part to another, uninjured, body part to keep it stabilized and immobile (tape an injured finger to an adjacent, uninjured, finger)

Also keep the following in mind: In case of a broken bone that pierces the skin (open or compound fracture), you must apply pressure in order to control bleeding, but avoid pushing on any bone that is protruding through the skin. This is when those sanitary napkins you packed come in handy.

- Don't ever try to straighten a broken, open-fractured limb; replace bone fragments; or return the limb to a natural position.
- Don't touch or try to clean the wound; just fasten a sterile or clean pad or cloth securely in place over the wound and secure it with bandages or cloth strips (belts, scarves, neckties).
- The splint must extend beyond the injured area to keep the limb from moving. Try to cover the joint below and the joint above the injury with the splint; do not overtighten, which can cut off the circulation.
- Continue to check the area frequently for swelling, paleness, or numbness, and loosen the splint if needed.

Wait for professional help and continue to monitor the area, be alert for signs of shock, and keep the injured person warm. If you are not able to call for help, you must prepare to carry the person to safety.

Aftercare Your doctor may immobilize some fractures with a splint to keep the bone from moving, kept in place with Velcro or wrapped with gauze or a bandage. Most fractured bones are placed in a cast made with either plaster of Paris or synthetic fiberglass material. For any pain in the first few days, use acetaminophen or ibuprofen, unless your pain is severe—then ask your doctor for a prescription pain medication. Sometimes there is swelling after the cast is applied, causing it to be too tight, so you need to notify your doctor immediately if your fingers or toes turn white, purple, or blue or if the skin around the edges of the cast gets red or raw, as the cast is probably too wet inside from water or sweat. Try to avoid picking at and removing any padding from the edges of fiberglass casts because the edges will then rub on the skin and cause irritation

Fractures of the Pelvis:

Your pelvis is the ring of bone that supports the weight of your upper body, including the two major bone commonly called hipbones. Pelvic fractures or "broken hips," however, are a common and unfortunate occurrence in the elderly. A serious pelvic fracture may also involve damage to nearby internal organs. Most pelvic fractures are the result of high-speed accidents or falls from great heights, as well as occurring during athletic activities such as hockey, skiing, football, and long-distance running. Pelvic fractures can also occur for no obvious reason or after a minor fall in

elderly people, particularly due to diseases such as osteoporosis that cause the bones to weaken

The main symptom of a pelvic fracture is groin, hip, or lower-back pain that may worsen when moving the legs. Other symptoms include:

- Abdominal pain
- Bleeding from the vagina
- Numbness or tingling in the groin, legs, urethra (urine tube), or rectum
- Difficulty urinating

Stress fractures that occur during jogging also often cause pain in the buttocks or thighs

First Aid for Pelvic Fractures:

If you suspect a serious pelvic fracture, due to witnessing a high-velocity accident or high fall for instance, call 911. Follow the steps outlined below until help arrives:

1. Don't attempt to move the injured person, particularly if the person is in severe pain or has any signs of possible nerve injury such as numbness.
2. Cover the person with a blanket or something similar in order to maintain body heat.

After being transported to the hospital and treated, it may take a few weeks to several months to heal, depending on the severity of the fracture. Treatment for minor fracture is often bed rest and OTC or prescription painkillers. The person may also need physical therapy and have to use crutches.

UNIT-2

LEARNING OBJECTIVE:

- Hemorrhage.
- respiration.
- Poisons
- burn injury, Shock

Bleeding:

When a blood vessel or vessels are damaged, bleeding occurs. Bleeding can be external, from a cut or wound, or it can be internal, when the skin isn't broken but blood vessels inside the body are damaged. There are three different types of bleeding, depending on what kind of vessel is damaged. Arterial bleeding from damaged arteries is bright red blood that gushes in a jet with each heartbeat. Venous bleeding comes from damaged veins and causes dark red blood loss that may not be as severe but may bleed steadily. Capillary bleeding comes from tiny blood vessels found throughout the body and normally causes only slight blood loss. The seriousness of any injury depends in part on how deep a cut is, how much bleeding there is, how long it takes to control the bleeding, and the type of blood vessels that are damaged. In any bleeding injury, there is also a risk of infection, particularly if the injury results in a foreign object stuck in the wound. Many injuries and events require basic first aid, but some also require additional assessment and special care. A small cut is relatively easy to take care of, but a serious life-threatening wound such as a gunshot wound has other critical considerations. On any given day you may be the first to happen upon a motor-vehicle accident, you may witness an accident that may have caused a spinal injury, or you may see a family member having a stroke. It's critical to know how to recognize the seriousness of all injuries, and to respond quickly, carefully, and efficiently in order to prevent further injury and to help save lives.

First Aid for Bleeding:

Even though blood loss may not be severe, some people do not handle the sight of blood well, and this can cause them to behave irrationally, faint, or even go into shock.

1. Try to keep the person as calm as possible, even if it calls for mundane conversation.
2. Remember to monitor the person's ABCs and have him lie down and manage for shock if necessary.
3. Apply direct pressure to most bleeding wounds, except those that are caused by an object such as glass or those that have protruding bone. For those types of wounds, press down firmly on either side of the object, keeping the injured body part above the level of the heart

Controlling Severe Bleeding:

Arterial bleeding may be life threatening and is often difficult to control. The first and most effective method to control bleeding is by applying direct pressure. To do this, you should:

1. Place a sterile dressing or clean cloth over the injury and secure it with tape, or tie something around the wound just tight enough to control the bleeding.
2. If bleeding doesn't stop, place another dressing over the first or apply direct pressure over the wound as outlined below.
3. Never remove a dressing once it has been applied to a severe wound.
4. Elevate an injured arm, leg, or head above the level of the heart to help control the bleeding.
5. Don't elevate or move an area of the body if you suspect a broken bone (fracture) until you have applied a splint and you are sure that movement will cause no further injury

When the use of direct pressure and elevation are not controlling the bleeding, you can use indirect pressure by applying pressure to the appropriate pressure point. Pressure points are areas where you can control blood flow by pressing the artery against an underlying bone with your fingers, thumb, or heel of the hand. Use pressure points with caution because you may cause damage to an extremity due to inadequate blood flow from the nearby pressure. Never apply pressure to the neck (carotid) pressure points because it may reduce or stop circulation to the brain, and can also cause cardiac arrest.

The two main pressure points most commonly used are in the groin and upper arm. The femoral artery starts in the lower abdomen and goes down into the thigh, and the pressure point is the front, center part of the crease in the groin that supplies the majority of blood to each leg. This artery can be found by locating the pulse on the inner part of the thigh and pressing it up against the pelvic bone. The brachial artery is found on the upper, inside arm just below the bicep, about halfway between the shoulder and elbow. Apply pressure to the inside of the arm over the bone using your fingers or thumb. For any severe bleeding of the thigh and lower leg, place the injured person on her back, kneel on the side opposite the wounded leg, press the heel of your hand directly on the femoral-artery point, and lean forward to apply pressure. If the bleeding is still not controlled, use the flat surface of your fingertips and press directly over the artery, applying additional pressure on the fingertips using the heel of your other hand. Tourniquets may cause tissue damage and loss of extremities and are only to be used when bleeding is uncontrollable by other methods. You can use a strap, belt, necktie, towel, or any piece of cloth folded to about three or more inches wide and six to seven layers thick. Never use anything that may cut into the skin such as wire or cord

The steps to apply a tourniquet are:

1. Position the tourniquet between the heart and the wound while still maintaining the proper pressure point and allowing two or more inches of unharmed skin between the tourniquet and wound Put a pad or roll of gauze over the artery.
2. Wrap the tourniquet twice around the extremity and tie a half-knot (the first step in tying a shoe lace) on the upper surface.
3. Put an object like a small stick on the half-knot and complete the knot (square knot).
4. Twist the stick gently to tighten until bleeding has stopped, then secure the stick. 6. Leave the tourniquet uncovered.
5. Use marker (such as lipstick) to write a "T" on the person's forehead indicating that a tourniquet was applied, and the time the tourniquet was applied

Internal Bleeding/Blunt Trauma:

Everyone can almost always identify external bleeding, but internal bleeding is more difficult to detect and to treat. Losing blood inside the body may lead to insufficient blood flow to the tissues and organs, and dangerously low or loss of blood pressure due to insufficient volume of blood or plasma, called hypovolemic shock, which will result in death if untreated.

Internal bleeding can be the result of such things as motor-vehicle accidents and domestic violence, causing internal trauma and fractures; bleeding duodenal or gastric ulcers; brain hemorrhage; and ectopic pregnancy (pregnancy occurring outside the uterus that is life threatening and requires immediate medical attention). Severe internal bleeding is usually caused by a blunt trauma, a violent force such as in motor-vehicle accidents, or from puncture wounds such as knife or gunshot wounds. Whenever signs of shock are present, you must suspect internal bleeding

The more common signs of internal bleeding are:

- Bruises (contusions), which may indicate deeper damage
- Anxiety and restlessness
- Excessive thirst
- Nausea and vomiting
- Rapid breathing (tachypnea)
- Cold and clammy skin
- Pale ashen or bluish skin
- A rapid, weak pulse (tachycardia)
- Any bruising or discoloration at the area of injury Blood in the stool, or stool that appears black and tarlike
- Blood in the urine Swelling,
- distended (bloated) abdomen
- Vomiting dark red (resembling coffee grounds)
- Decreased level of consciousness
- Severe headache

First Aid for Internal Bleeding:

Use the following steps to treat internal bleeding:

- Apply a cold pack or ice pack covered with a cloth to bruises in order to reduce pain and swelling.
- Call 911 and place the injured person with legs elevated if there is no chest injury.
- In a case of chest injury, elevate the head and torso and keep the person warm until help arrives.
- Manage shock
- Don't allow the person to eat or drink or take any medication unless you are advised to do so by a doctor.

Poisoning:

A person may be poisoned by injecting, inhaling, coming in contact with, or swallowing a harmful substance. According to the CDC, about 2.5 million reported poisonings

occur in the United States every year. A package without a warning label isn't necessarily safe. Although symptoms of poisoning often take some time to develop, if you think someone has been poisoned, don't wait for symptoms, but get that person medical help immediately.

Many household items including medicines (for example an aspirin overdose), household detergents and cleaning products, carbon monoxide, some household plants, paints, insecticides, chemicals, and even some foods can poison if a person has inadvertent exposure. Depending on the poison, symptoms will vary, but include

- Abdominal pain
- Bluish lips
- Chest pain
- Confusion
- Cough
- Diarrhea
- Difficulty breathing
- Blurred vision
- Dizziness
- Drowsiness
- Fever
- Headache
- Heart
- palpitations Muscle twitching
- Nausea and vomiting
- Tingling and numbness
- Seizures
- Skin rash and burns
- Stupor Loss of consciousness
- Unusual breath odor
- Weakness

First Aid for Poisoning Take the following steps if you suspect poisoning:

1. Check for ABCs, call 911, begin rescue breathing and CPR if necessary, and then call the Poison Control Center for advice.
2. Try to identify the poison and do not make the person throw up unless you are advised to do so by the Poison Control Center (note that parents should not use syrup of ipecac at home anymore).
3. If the person vomits on their own, take measures to clear their airway, but wrap a cloth around your fingers before sweeping out the mouth and throat.

4. If the person starts having a seizure, protect them from injury by laying them down gently on a soft surface. Do not restrain the person; instead, turn the head to one side in order to keep the airway open.
5. Roll unconscious persons onto their left side in the recovery position until help arrives.
6. Remove the person's clothes if any poison has spilled on them and flush the skin with water.

For inhalation poisoning call 911, and only if it is safe, remove the person from the danger of the gas, fumes, or smoke. Open all the windows and doors to remove the fumes, while holding your breath or holding a wet cloth over your nose and mouth.

Burns (Thermal, Chemical, and Other):

One of the most common and most painful injuries is a burn injury. Burns are caused by extreme heat (both wet and dry), chemicals, electricity, radiation, and even extreme cold. They can affect the skin, eyes, lungs, and other internal organs. The severity of a burn is generally classified in one of three categories, based on the depth of the burn and damage.

1. First-degree burns (usually referred to as superficial burns) involve only the outermost layer of skin, called the epidermis. If treated quickly and blisters do not The Everything First Aid Book form, first-degree burns usually heal very well. Sunburns are a common form of first-degree burns.
2. Second-degree burns (usually referred to as partial thickness burns) are more serious because a deeper layer of skin is affected and because they are easily infected. Second-degree burns are the most painful because more tissue is damaged, but the nerve endings are still preserved. These burns heal well and don't require medical attention unless they are larger than two to three inches in diameter or they occur on the hands, face, buttocks, penis, or vaginal area.
3. Third-degree burns (usually referred to as full-thickness burns) are the most serious burns, involving all of the layers of the skin. In third-degree burns, the skin may appear white, black, and or leathery-looking and there may be very little pain, although the areas surrounding the burn might be extremely painful. All third-degree burns require medical treatment. Call 911 for emergency rescue and transport or take the person to the nearest emergency room

Never apply adhesive dressings or any lotions, ointments, or creams to a first or second degree burn that you are treating at home unless the skin is broken. For any broken blisters, wash carefully with antibacterial soap and tepid water, apply antibiotic ointment, and re-bandage

When to Call for Help:

For all burns, if you are unsure of the seriousness, call 911 or go to an emergency department. All burns on children, as well as any of the following, need to be seen by a doctor:

- Third-degree burns
- Second-degree burns larger than an area the size of the palm of your hand
- First-degree burns larger than a five-palm-sized area
- Burns that extend all the way around an arm or leg Any "mixed" pattern of varying degrees of burns
- Burns to the genital area, face, hands, or feet

First Aid for Severe Burns:

Any burned person who is experiencing dizziness or confusion, weakness, fever or chills, or shivering needs immediate medical attention. For serious burns, always call 911 first, and then perform the following steps, remembering to stay safe, assess the situation, and use universal precautions if you are able to:

1. Extinguish the cause of the burn if you are able to with water or by wrapping the injured person in a heavy towel, coat, or blanket and rolling them on the ground. Make sure none of the smoldering materials are in contact with the injured person, but don't remove any burnt clothing.
2. Check for ABCs as outlined in Chapter 2, clear the airway if necessary, and begin CPR.
3. Cool the burned area with running water as outlined for treatment of minor burns, being careful not to overcool the injured person
4. Wait for help to arrive, or if transporting the person yourself, cover the burned area with a dry, sterile bandage or a clean nonfibrous cloth such as a sheet, not a blanket or towel, as fibers may stick to injured tissues. Don't apply ointments, creams, or lotions, and don't break any blisters

Second-degree burns that are two inches or larger in diameter and all third-degree burns require emergency medical assistance.

Treating Minor Burns:

Minor burns, or first-degree burns, and small second-degree burns can be treated properly at home with the following steps:

1. For chemical burns, remove chemical source and all clothing or jewelry having contact with the chemical.
2. Cool the burn under running water, immerse the burn in cold water, or cover it with cold

packs for about fifteen to twenty minutes in order to stop the burn from damaging

surrounding tissue and to reduce pain. Cover cold packs, and never apply ice directly to the skin.

3. After a first-degree burn has cooled completely, apply lotion or moisturizer to soothe and prevent dryness.
4. Cover the burn with a loosely wrapped sterile gauze bandage if necessary to keep pressure and air off the burn to reduce pain. If you can do so without causing irritation to the area, leave the burn uncovered because minor burns heal faster and more completely when they are not covered.
5. Use OTC pain relievers such as aspirin (adults only), ibuprofen, naproxen, and acetaminophen as needed for pain.
6. For any very tender, fluid-filled blisters, you may snip a tiny hole with small scissors that have been sterilized in alcohol. For these and any broken blisters, wash carefully with antibacterial soap and tepid water, apply antibiotic ointment, and rebandage.

As minor burns heal, keep the area moisturized with skin lotion and protect the area from exposure to sunlight with clothing or a UV-proof sunscreen for a period of about a year. Areas that scar may need permanent sun protection. Most minor burns will heal in as little as a week or up to a month, and if they are treated properly, most will not scar

Sunburn: Although sun poisoning is rarely fatal, sunburn hurts, can be disabling, and increases your risk of skin cancer. Sunburn is a burn on your skin caused by ultraviolet (UV) radiation that results in inflammation of the skin, also causing premature aging of the skin and wrinkles. Even with limited exposure to the sun, any recent exposure and prior sunburn increase your risk, although normal limited exposure to UV radiation produces beneficial vitamin D in the skin

First Aid for Sunburn: Prevent sunburn before it starts by getting out of the sun, covering exposed skin, staying out of tanning beds, and using sunscreen with a high SPF (Sun Protection Factor). SPF indicates the time it takes to produce a skin reaction on protected and unprotected skin. For example, SPF 30, in theory, allows you to be exposed thirty times longer than without sunscreen. But this is usually not true in practice, as there is a limit to amount of sun exposure without sun damage even if applying sunscreen regularly, and people seldom apply it adequately and properly.

Use OTC pain relievers for any discomfort. For mild sunburn, use a cool compress with equal parts milk and water, or a cold compress with Burrows Solution, which you can buy at a drugstore and use as directed. Moisturize with aloe-based lotions, or use juices from an aloe plant. Take cool (not ice-cold) baths, but avoid bath salts, oils, and perfumes to prevent sensitivity reactions. Don’t scrub or shave the skin or use lotions with topical anesthetic medications, because you can become sensitized and allergic to the medicine. Stay out of the sun while you are healing, and drink plenty of fluids

Shock:

shock is a critical condition brought on by the sudden drop in blood flow through the body. Shock may result from trauma, heatstroke, blood loss, an allergic reaction, severe infection, poisoning, severe burns or other causes. When a person is in shock, his or her organs aren't getting enough blood or oxygen. If untreated, this can lead to permanent organ damage or even death.

Signs and symptoms of shock vary depending on circumstances and may include:

- Cool, clammy skin
- Pale or ashen skin
- Bluish tinge to lips or fingernails (or gray in the case of dark complexions)
- Rapid pulse
- Rapid breathing
- Nausea or vomiting
- Enlarged pupils
- Weakness or fatigue
- Dizziness or fainting
- Changes in mental status or behavior, such as anxiousness or agitation

First aid of shock:

If you suspect a person is in shock, call 911 or your local emergency number. Then immediately take the following steps:

- Lay the person down and elevate the legs and feet slightly, unless you think this may cause pain or further injury.
- Keep the person still and don't move him or her unless necessary.
- Begin CPR if the person shows no signs of life, such as not breathing, coughing or moving.
- Loosen tight clothing and, if needed, cover the person with a blanket to prevent chilling.
- Don't let the person eat or drink anything.
- If the person vomits or begins bleeding from the mouth, and no spinal injury is suspected, turn him or her onto a side to prevent choking.

Respiratory difficulties:

Breathing difficulties can range from:

- Being short of breath
- Being unable to take a deep breath and gasping for air
- Feeling like you are not getting enough air

Considerations:

Breathing difficulty is almost always a medical emergency (other than feeling slightly winded from normal activity, such as exercise).

Causes:

There are many different causes for breathing problems. Common causes include:

- Anemia (low red blood cell count)
- Asthma
- Being at a high altitude
- Blood clot in the lung
- Chronic obstructive pulmonary disease (COPD), sometimes called emphysema or chronic bronchitis
- Collapsed lung (Pneumothorax)
- Heart attack
- Heart disease or heart failure
- Injury to the neck, chest wall, or lungs
- Life-threatening allergic reaction
- Lung cancer or cancer which has moved to the lungs
- Near drowning (fluid in the lungs)
- Pericardial effusion (fluid surrounding the heart and not allowing it to fill properly)
- Pleural effusion (fluid surrounding the lungs and compressing them)
- Respiratory infections, including pneumonia, acute bronchitis, whooping cough, croup, and others

Symptoms:

A person with breathing difficulty may have:

- Bluish lips, fingers, and fingernails
- Chest moving in an unusual way as the person breathes (flail chest or paradoxical movement)
- Chest pain
- Confusion, lightheadedness, weakness, or sleepiness
- Cough
- Fever
- Gurgling, wheezing, or whistling sounds
- Muffled voice
- Need to sit up to breathe
- Swollen tongue

First Aid:

If someone is having breathing difficulty, immediately call 911 or your local emergency number, then:

- Check the person's airway, breathing, and pulse. If necessary, begin CPR.
- Loosen any tight clothing.
- Help the person use any prescribed medication (an asthma inhaler or home oxygen).
- Continue to monitor the person's breathing and pulse until medical help arrives. DO NOT assume that the person's condition is improving if you can no longer hear abnormal breath sounds, such as wheezing.
- If there are open wounds in the neck or chest, they must be closed immediately, especially if air bubbles appear in the wound. Bandage such wounds at once.
- A "sucking" chest wound allows air to enter the person's chest cavity with each breath. This can cause a collapsed lung. Bandage the wound with plastic wrap, a plastic bag, or gauze pads covered with petroleum jelly, sealing it except for one corner. This allows trapped air to escape from the chest, but it prevents air from entering the chest through the wound.

DO NOT:

- Give the person food or drink.
- Move the person if there has been a chest or airway injury, unless it is absolutely necessary.
- Place a pillow under the person's head. This can close the airway.
- Wait to see if the person's condition improves before getting medical help. Get help immediately.

Call 911 or your local emergency number if you or someone else has difficulty breathing, especially if you notice:

- Blue lips, fingers, or fingernails
- Chest pain
- Coughing up large amounts of blood
- Dizziness or lightheadedness
- Excessive drooling
- Facial, tongue, or throat swelling
- High-pitched or wheezing sounds
- Hives
- Inability to speak
- Nausea or vomiting
- Rapid or irregular heartbeat
- Sweating

Call your doctor right away if:

- Shortness of breath is brought on by coughing, especially productive coughing.
- Your child's cough has a barking sound.
- You have a fever, green or yellow phlegm, night sweats, weight loss, loss of appetite, or swelling in your legs.
- You are coughing up small amounts of blood.

Prevention:

Some things you can do to help prevent breathing problems:

- Wear a medical alert tag if you have a pre-existing breathing condition, such as asthma.
- If you have a history of severe allergic reactions, carry an epinephrine pen and wear a medical alert tag. Your doctor will teach you how to use the epinephrine pen.
- If you have asthma or allergies, eliminate household allergy triggers like dust mites and mold.
- DO NOT smoke, and keep away from secondhand smoke. DO NOT allow smoking in your home.
- If you have asthma, see the article on asthma to learn ways to manage it.
- Make sure your child obtains the whooping cough (pertussis) vaccine.
- When traveling by airplane, get up and walk around once in every few hours to avoid forming blood clots in your legs. Clots can break off and lodge in your lungs. If traveling by car, stop and walk around regularly.
- Lose weight. You are more likely to feel winded if you are overweight. You are also at greater risk for heart disease and heart attack.