SURVIVAL MEDICINE GUIDE

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Prevent before you treat

Emergency situations can occur at any time. We cannot control them, but what we can do is be prepared.

With a fair amount of basic medical knowledge, you can make a difference in your life and the lives of many. And since qualified medical personnel is not always available, it is you who must know what to do to stay alive.

It has been proved that people's ability to treat themselves in emergency situation increased their morale and helped them survive. This guide will help you acquire enough knowledge to be ready to ensure proper medical care whenever needed.

Before you learn how to treat medical emergencies, you must however learn how to stay away from such situations, according to the well-known rule: Prevention is better than cure!

Personal Hygiene

In any situation, cleanliness is an important factor in preventing infection and disease. It becomes even more important in a survival situation. Poor hygiene can reduce your chances of survival.

A daily shower with hot water and soap is ideal, but you can stay clean without this luxury. Use a cloth and soapy water to wash yourself. Pay special attention to the feet, armpits, crotch, hands, and hair as these are prime areas for infestation and infection. If water is scarce, take an "air" bath. Remove as much of your clothing as practical and expose your body to the sun and air for at least 1 hour. Be careful not to sunburn.
If you don't have soap, use ashes or sand, or make soap from animal fat and wood ashes, if your situation allows.

To make soap:

- Extract grease from animal fat by cutting the fat into small pieces and cooking them in a pot.
- Add enough water to the pot to keep the fat from sticking as it cooks.
- Cook the fat slowly, stirring frequently.
- After the fat is rendered, pour the grease into a container to harden.
- Place ashes in a container with a spout near the bottom.
- Pour water over the ashes and collect the liquid that drips out of the spout in a separate container. This liquid is the potash or lye. Another way to get the lye is to pour the slurry (the mixture of ashes and water) through a straining cloth.
- In a cooking pot, mix two parts grease to one part potash.
- Place this mixture over a fire and boil it until it thickens.
- After the mixture--the soap--cools, you can use it in the semiliquid state directly from the pot. You can also pour it into a pan, allow it to harden, and cut it into bars for later use.

Keep Your Hands Clean

Germs on your hands can infect food and wounds. Wash your hands after handling any material that is likely to carry germs, after visiting the latrine, after caring for the sick, and before handling any food, food utensils, or drinking water. Keep your fingernails closely trimmed and clean, and keep your fingers out of your mouth.

Keep Your Hair Clean

Your hair can become a haven for bacteria or fleas, lice, and other parasites. Keeping your hair clean, combed, and trimmed helps you avoid this danger.

Keep Your Clothing Clean

Keep your clothing and bedding as clean as possible to reduce the chance of skin infection as well as to decrease the danger of parasitic infestation. Clean your outer clothing whenever it becomes soiled. Wear clean underclothing and socks each day. If water is scarce, "air" clean your clothing by shaking, airing, and sunning it for 2 hours. If you are using a sleeping bag, turn it inside out after each use, fluff it, and air it.

Keep Your Teeth Clean

Thoroughly clean your mouth and teeth with a toothbrush at least once each day. If you don't have a toothbrush, make a chewing stick. Find a twig about 20 centimeters long and 1 centimeter wide. Chew one end of the stick to separate the fibers. Now brush your teeth thoroughly.

Another way is to wrap a clean strip of cloth around your fingers and rub your teeth with it to wipe away food particles. You can also brush your teeth with small amounts of sand, baking soda, salt, or soap. Then rinse your mouth with water, salt water, or willow bark tea. Also, flossing your teeth with string or fiber helps oral hygiene.

If you have cavities, you can make temporary fillings by placing candle wax, tobacco, aspirin, hot pepper, tooth paste or powder, or portions of a ginger root into the cavity. Make sure you clean the cavity by rinsing or picking the particles out of the cavity before placing a filling in the cavity.

Take Care of Your Feet

To prevent serious foot problems, break in your shoes before wearing them on any mission. Wash and massage your feet daily. Trim your toenails straight across. Wear an insole and the proper size of dry socks. Powder and check your feet daily for blisters.

If you get a small blister, do not open it. An intact blister is safe from infection. Apply a padding material around the blister to relieve pressure and reduce friction. If the blister bursts, treat it as an open

wound. Clean and dress it daily and pad around it. Leave large blisters intact. To avoid having the blister burst or tear under pressure and cause a painful and open sore, do the following:

Obtain a sewing-type needle and a clean or sterilized thread.
Run the needle and thread through the blister after cleaning the blister.

Detach the needle and leave both ends of the thread hanging out of the blister. The thread will absorb the liquid inside. This reduces the size of the hole and ensures that the hole does not close up.
Pad around the blister.

Get Sufficient Rest

You need a certain amount of rest to keep going. Plan for regular rest periods of at least 10 minutes per hour during your daily activities. Learn to make yourself comfortable under less than ideal conditions. A change from mental to physical activity or vice versa can be refreshing when time or situation does not permit total relaxation.

Keep Camp Site Clean

Do not soil the ground in the camp site area with urine or feces. Use latrines, if available. When latrines are not available, dig "cat holes"

and cover the waste. Collect drinking water upstream from the camp site. Purify all water.

Water

Your body loses water through normal body processes (sweating, urinating, and defecating). During average daily exertion when the atmospheric temperature is 20 degrees Celsius (C) (68 degrees Fahrenheit), the average adult loses and therefore requires 2 to 3 liters of water daily. Other factors, such as heat exposure, cold exposure, intense activity, high altitude, burns, or illness, can cause your body to lose more water. You must replace this water.

Dehydration results from inadequate replacement of lost body fluids. It decreases your efficiency and, if injured, increases your susceptibility to severe shock. Consider the following results of body fluid loss:

A 5 percent loss of body fluids results in thirst, irritability, nausea, and weakness.
A 10 percent loss results in dizziness, headache, inability to walk, and a tingling sensation in the limbs.
A 15 percent loss results in dim vision, painful urination, swollen tongue, deafness, and a numb feeling in the skin.
A loss greater than 15 percent of body fluids may result in death.
The most common signs and symptoms of dehydration are--

Dark urine with a very strong odor.
Low urine output.

Dark, sunken eyes.
Fatigue.
Emotional instability.
Loss of skin elasticity.
Delayed capillary refill in fingernail beds.
Trench line down center of tongue.
Thirst. Last on the list because you are already 2 percent dehydrated by the time you crave fluids.
You replace the water as you lose it. Trying to make up a deficit is difficult in a survival situation, and thirst is not a sign of how much water you need.
Most people cannot comfortably drink more than 1 liter of water at a time. So, even when not thirsty, drink small amounts of water at regular intervals each hour to prevent dehydration.
If you are under physical and mental stress or subject to severe conditions, increase your water intake. Drink enough liquids to maintain a urine output of at least 0.5 liter every 24 hours.

In any situation where food intake is low, drink 6 to 8 liters of water per day. In an extreme climate, especially an arid one, the average person can lose 2.5 to 3.5 liters of water per hour. In this type of climate, you should drink 14 to 30 liters of water per day.

With the loss of water there is also a loss of electrolytes (body salts). The average diet can usually keep up with these losses but in an extreme situation or illness, additional sources need to be provided. A mixture of 0.25 teaspoon of salt to 1 liter of water will provide a concentration that the body tissues can readily absorb.

Of all the physical problems encountered in a survival situation, the loss of water is the most preventable. The following are basic guidelines for the prevention of dehydration:

- Always drink water when eating. Water is used and consumed as a part of the digestion process and can lead to dehydration.
- Acclimatize. The body performs more efficiently in extreme conditions when acclimatized.
- Conserve sweat not water. Limit sweat-producing activities but drink water.
- Ration water. Until you find a suitable source, ration your water sensibly. A daily intake of 500 cubic centimeter (0.5 liter) of a sugar-water mixture (2 teaspoons per liter) will suffice to prevent severe dehydration for at least a week, provided you keep water losses to a minimum by limiting activity and heat gain or loss.

You can estimate fluid loss by several means. A standard field dressing holds about 0.25 liter (one-fourth canteen) of blood. A soaked T-shirt holds 0.5 to 0.75 liter.

You can also use the pulse and breathing rate to estimate fluid loss. Use the following as a guide:

- With a 0.75 liter loss the wrist pulse rate will be under 100 beats per minute and the breathing rate 12 to 20 breaths per minute.
- With a 0.75 to 1.5 liter loss the pulse rate will be 100 to 120 beats per minute and 20 to 30 breaths per minute.
- With a 1.5 to 2 liter loss the pulse rate will be 120 to 140 beats per minute and 30 to 40 breaths per minute. Vital signs above these rates require more advanced care.

Food

Although you can live several weeks without food, you need an adequate amount to stay healthy. Without food your mental and physical capabilities will deteriorate rapidly, and you will become weak.

Food replenishes the substances that your body burns and provides energy. It provides vitamins, minerals, salts, and other elements essential to good health. Possibly more important, it helps morale. The two basic sources of food are plants and animals (including fish). In varying degrees both provide the calories, carbohydrates, fats, and proteins needed for normal daily body functions.

Calories are a measure of heat and potential energy. The average person needs 2,000 calories per day to function at a minimum level. An adequate amount of carbohydrates, fats, and proteins without an adequate caloric intake will lead to starvation and cannibalism of the body's own tissue for energy.

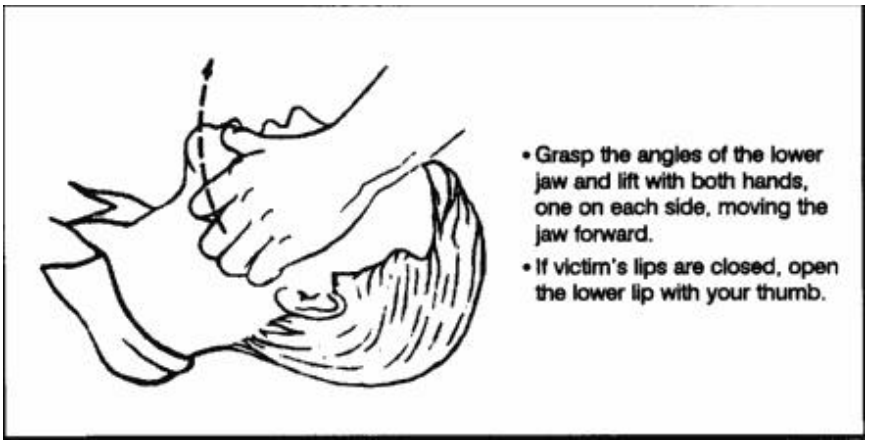
Save a life – first steps

You can open an airway and maintain it by using the following steps.

Step 1. Check if the victim has a partial or complete airway obstruction. If he can cough or speak, allow him to clear the obstruction naturally. Stand by, reassure the victim, and be ready to clear his airway and perform mouth-to-mouth resuscitation should he become unconscious. If his airway is completely obstructed, administer abdominal thrusts until the obstruction is cleared.

Step 2. Using a finger, quickly sweep the victim's mouth clear of any foreign objects, broken teeth, dentures, sand.

Step 3. Using the jaw thrust method, grasp the angles of the victim's lower jaw and lift with both hands, one on each side, moving the jaw forward. For stability, rest your elbows on the surface on which the victim is lying. If his lips are closed, gently open the lower lip with your thumb.



Step 4. With the victim's airway open, pinch his nose closed with your thumb and forefinger and blow two complete breaths into his lungs. Allow the lungs to deflate after the second inflation and perform the following:

Look for his chest to rise and fall.
Listen for escaping air during exhalation.
Feel for flow of air on your cheek.

Step 5. If the forced breaths do not stimulate spontaneous breathing, maintain the victim's breathing by performing mouth-to-mouth resuscitation.

Step 6. There is danger of the victim vomiting during mouth-to-mouth resuscitation. Check the victim's mouth periodically for vomit and clear as needed.

Control Bleeding

In a survival situation, you must control serious bleeding immediately because replacement fluids normally are not available and the victim can die within a matter of minutes. External bleeding falls into the following classifications (according to its source):

Arterial. Blood vessels called arteries carry blood away from the heart and through the body. A cut artery issues bright red blood from the wound in distinct spurts or pulses that correspond to the rhythm of the heartbeat.

Because the blood in the arteries is under high pressure, an individual can lose a large volume of blood in a short period when damage to an artery of significant size occurs. Therefore, arterial bleeding is the most serious type of bleeding. If not controlled promptly, it can be fatal.

Venous. Venous blood is blood that is returning to the heart through blood vessels called veins. A steady flow of dark red, maroon, or bluish blood characterizes bleeding from a vein. You can usually control venous bleeding more easily than arterial bleeding.

Capillary. The capillaries are the extremely small vessels that connect the arteries with the veins. Capillary bleeding most commonly occurs in minor cuts and scrapes. This type of bleeding is not difficult to control.
You can control external bleeding by direct pressure, indirect (pressure points) pressure, elevation, digital ligation, or tourniquet.

How to treat an open wound

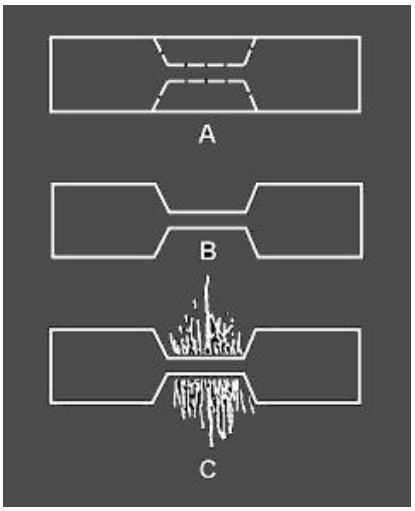
Open wounds are serious in a survival situation, not only because of tissue damage and blood loss, but also because they may become infected. Bacteria on the object that made the wound, on the individual's skin and clothing, or on other foreign material or dirt that touches the wound may cause infection.

By taking proper care of the wound you can reduce further contamination and promote healing. Clean the wound as soon as possible after it occurs by:

- Removing or cutting clothing away from the wound.
- Always looking for an exit wound if a sharp object, gunshot, or projectile caused a wound.
- Thoroughly cleaning the skin around the wound.
- Rinsing (not scrubbing) the wound with large amounts of water under pressure. You can use fresh urine if water is not available.

The “open treatment” method is the safest way to manage wounds in survival situations. Do not try to close any wound by suturing or similar procedures. Leave the wound open to allow the drainage of any pus resulting from infection. As long as the wound can drain, it generally will not become life-threatening, regardless of how unpleasant it looks or smells.

Cover the wound with a clean dressing. Place a bandage on the dressing to hold it in place. Change the dressing daily to check for infection. If a wound is gaping, you can bring the edges together with adhesive tape cut in the form of a “butterfly” or "dumbbell"



Use this method with extreme caution in the absence of antibiotics. You must always allow for proper drainage of the wound to avoid infection.

In a survival situation, some degree of wound infection is almost inevitable. Pain, swelling, and redness around the wound, increased temperature, and pus in the wound or on the dressing indicate infection is present. If the wound becomes infected, you should treat as follows:

- Place a warm, moist compress directly on the infected wound.
- Change the compress when it cools, keeping a warm compress on the wound for a total of 30 minutes.
- Apply the compresses three or four times daily.
- Drain the wound.
- Open and gently probe the infected wound with a sterile instrument.
- Dress and bandage the wound.
- Drink a lot of water.
- In the event of gunshot or other serious wounds, it may be better to rinse the wound out vigorously every day with the cleanest water available.
- If drinking water or methods to purify drinking water are limited, do not use your drinking water.
- Flush the wound forcefully daily until the wound is healed over. Your scar may be larger but your chances of infection are greatly reduced.
- Continue this treatment daily until all signs of infection have disappeared.

If you do not have antibiotics and the wound has become severely infected, does not heal, and ordinary debridement is impossible, consider maggot therapy as stated below, despite its hazards:

- Expose the wound to flies for one day and then cover it.
- Check daily for maggots.
- Once maggots develop, keep wound covered but check daily.
- Remove all maggots when they have cleaned out all dead tissue and before they start on healthy tissue.
- Increased pain and bright red blood in the wound indicate that the maggots have reached healthy tissue.
- Flush the wound repeatedly with sterile water or fresh urine to remove the maggots.
- Check the wound every 4 hours for several days to ensure all maggots have been removed.
- Bandage the wound and treat it as any other wound. It should heal normally.

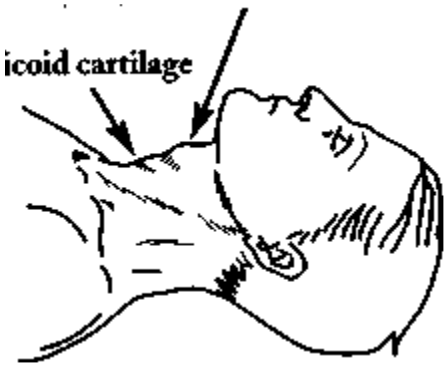
How to perform a tracheotomy

This procedure, technically called a cricothyroidotomy, should be undertaken only when a person with a throat obstruction is not able to breathe at all—no gasping sounds, no coughing—and only after you have attempted to perform the Heimlich maneuver three times without dislodging the obstruction. If possible, someone should call for paramedics while you proceed.

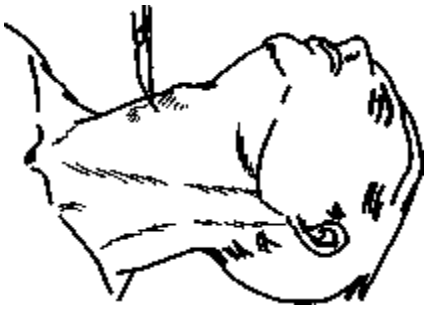
What you will need

• A first aid kit, if available
• A razor blade or very sharp knife
• A straw (two would be better) or a ballpoint pen with the inside (ink-filled tube) removed.

If neither a straw nor a pen is available, use stiff paper or cardboard rolled into a tube. Good first aid kits may contain "trache" tubes. There will not be time for sterilization of your tools, so do not bother; infection is the least of your worries at this point.



Find the indentation between the Adam's apple and the cricoid cartilage.



Make a half-inch horizontal incision about one half inch deep.

Pinch the incision or insert your finger inside the slit to open it.

Insert your tube into the incision, roughly one-half to one inch deep.

How to proceed

Find the person's Adam's apple (thyroid cartilage).
Move your finger about one inch down the neck until you feel another bulge.
This is the cricoid cartilage. The indentation between the two is the cricothyroid membrane, where the incision will be made.
Take the razor blade or knife and make a half-inch horizontal incision.
The cut should be about half an inch deep. There should not be too much blood.
Pinch the incision open or place your finger inside the slit to open it.
Insert your tube in the incision, roughly one-half to one inch deep.

Breathe into the tube with two quick breaths.
Pause five seconds, then give one breath every five seconds.
You will see the chest rise and the person should regain consciousness if you have performed the procedure correctly.
The person should be able to breathe on their own, albeit with some difficulty, until help arrives.

How to use a defibrillator to restore a heartbeat

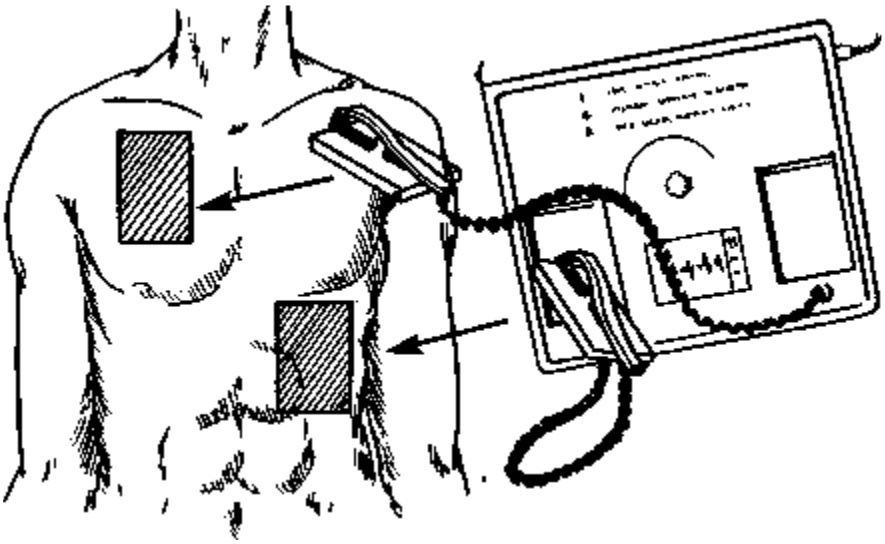
Defibrillation is the delivery of a powerful electrical shock to the heart. (The defibrillator is the device used in movies and TV shows: two handheld pads are placed on the victim's chest while an actor yells "Clear!")

In the past, defibrillators were very heavy, expensive, needed regular maintenance, and were mostly found only in hospitals. Now there are more portable units available. A defibrillator should be used only for a Sudden Cardiac Arrest (SCA), an electrical problem that cannot be helped by CPR.

How to use a defibrillator

Turn on the defibrillator by pressing the green button.
Most machines will provide both visual and voice prompts.
First, remove the person's shirt and jewelry, then apply the pads to the chest as shown in the diagram displayed on the machine's LED panel.
One pad should be placed on the upper right side of the chest, one on the lower left.

Apply one pad to the upper right of the patient's chest, the other pad to the lower left.



Plug the pads into the connector.
The defibrillator will analyze the patient and determine if he needs a shock. Do not touch the patient at this time.
If the machine determines that a shock is needed, it will direct you—both audibly and with visual prompts—to press the orange button to deliver a shock.
Do not touch the patient after pressing the button.
The machine will automatically check to see whether or not the patient needs a second shock and if so will direct you to press the orange button again.

Check the patient's airway, breathing, and pulse.
If there is a pulse but the patient is not breathing, begin mouth-to-mouth resuscitation. If there is no pulse, repeat the defibrillation process.

Be Aware
A defibrillator should be used for a person experiencing sudden cardiac arrest (SCA), a condition where the heart's electrical signals become confused and the heart ceases to function. A person experiencing SCA will stop breathing, the pulse will slow or stop, and consciousness will be lost.

How to treat frostbite

Frostbite is a condition caused by the freezing of water molecules in skin cells and occurs in very cold temperatures. It is characterized by white, waxy skin that feels numb and hard. More severe cases result in a bluish black skin color, and the most severe cases result in gangrene, which may lead to amputation.

Affected areas are generally fingertips and toes, and the nose, ears, and cheeks. Frostbite should be treated by a doctor. However, in an emergency, take the following steps.

Remove wet clothing and dress the area with warm, dry clothing.
Immerse frozen areas in warm water (100—105° F) or apply warm compresses for ten to thirty minutes.
If warm water is not available, wrap gently in warm blankets.
Avoid direct heat, including electric or gas fires, heating pads, and hot water bottles.
Never thaw the area if it is at risk of refreezing; this can cause severe tissue damage.

Do not rub frostbitten skin or rub snow on it.

Take a pain reliever such as aspirin or ibuprofen during rewarming to lessen the pain.
Rewarming will be accompanied by a severe burning sensation. There may be skin blistering and soft tissue swelling and the skin may turn red, blue, or purple in color. When skin is pink and no longer numb, the area is thawed.

Apply sterile dressings to the affected areas.
Place the dressing between fingers or toes if they have been affected. Try not to disturb any blisters, wrap rewarmed areas to prevent refreezing, and have the patient keep thawed areas as still as possible.
Get medical treatment as soon as possible.

After thawing the skin in warm water, sensation will return and it may be painful.
Apply sterile dressings to the affected areas, placing it between toes or fingers, if they have been frostbitten.

Severe frostbite may cause the skin to blister or swell. Wrap area to prevent refreezing, and seek medical treatment.

How to treat frostnip

Frostnip is the early warning sign of frostbite.
Frostnip is characterized by numbness and a pale coloring of the affected areas. It can be safely treated at home.
Remove wet clothing.
Immerse or soak affected areas in warm water (100-105° F).
Do not allow patient to control water temperature—numb areas cannot feel heat and can be burned.
Continue treatment until skin is pink and sensation returns.
How to avoid frostbite and frostnip

- Keep extremities warm and covered in cold weather.
- Use layered clothing and a face mask.
- Wear mittens instead of gloves, and keep the ears covered.
- Take regular breaks from the cold whenever possible to warm extremities.

How to treat a leg fracture

Most leg injuries are only sprains, but the treatment for both sprains and fractures is the same.
If skin is broken, do not touch or put anything on the wound.
You must avoid infection. If the wound is bleeding severely, try to stop the flow of blood by applying steady pressure to the affected area with sterile bandages or clean clothes.

Do not move the injured leg—you need to splint the wound to stabilize the injured area.

Find two stiff objects of the same length—wood, plastic, or folded cardboard—for the splints.
Put the splints above and below the injured area— under the leg (or on the side if moving the leg is too painful).

Tie the splints with string, rope, or belts—whatever is available. Alternatively, use clothing torn into strips. Make sure the splint extends beyond the injured area.
Do not tie the splints too tightly; this may cut off circulation.

Do not move the injured leg.

Find two stiff objects of the same length— wood, plastic, or folded cardboard.

Place the splints above and below the injured area.

Tie the splints with string, rope, or belts— whatever is available.

Do not tie the splints too tightly—you should be able to slip one finger under the rope, belt, or fabric.

You should be able to slip a finger under the rope or fabric. If the splinted area becomes pale or white, loosen the ties.
Have the injured person lie flat on their back.
This helps blood continue to circulate and may prevent shock.
Symptoms of a fracture, sprain, or dislocation

- Difficult or limited movement
- Swelling
- Bruising of the affected area
- Severe pain
- Numbness
- Severe bleeding
- A visible break of bone through the skin

What to avoid

• Do not push at, probe, or attempt to clean an injury; this can cause infection.
• Do not move the injured person unless absolutely necessary. Treat the fracture and then go get help.
• If the person must be moved, be sure the injury is completely immobilized first.
• Do not elevate a leg injury.
• Do not attempt to move or reset a broken bone; this will cause severe pain and may complicate the injury.

How to treat a bullet or knife wound

Do not immediately pull out any impaled objects.
Bullets, arrows, knives, sticks, and the like cause penetrating injuries. When these objects lodge in the vital areas of the body (the trunk or near nerves or arteries) removing them may cause more severe bleeding that cannot be controlled. The object may be pressed against an artery or other vital internal structure and may actually be helping to reduce the bleeding.

Control the bleeding by using a combination of direct pressure, limb elevation, pressure points, and tourniquets (in that order).

Direct pressure. You can control most bleeding by placing direct pressure on the wound. Attempt to apply pressure directly to bleeding surfaces. The scalp, for instance, bleeds profusely. Using your fingertips to press the edges of a scalp wound against the underlying bone is more effective than using the palm of your hand to apply pressure over a wider area. Use the tips of your fingers to control bleeding arterioles (small squirting vessels).

Attempt to apply pressure directly to bleeding surfaces.
Using fingertips rather than the palm is more effective for scalp wounds.
Attempt to promote clotting.
Press on bleeding arterioles (small squirting vessels).

If injury is in a limb, use pressure to control bleeding, and elevate limb. Dress the wound to prevent spread of infection.

Limb elevation. When a wound is in an extremity, elevation of the extremity above the heart, in addition to direct pressure, may reduce the bleeding further.
Never make people who are in shock sit up simply to elevate a bleeding wound.

Pressure points. To reduce blood flow you usually have to compress an artery (where you can feel the pulse) near the wound against an underlying bone.
Just pressing into the soft belly of a muscle does not reduce blood flow by this mechanism.

Tourniquets. A tourniquet is a wide band of cloth or a belt that is placed around an extremity and tightened (usually using a windlass) until the blood flow is cut off. The blood supply must be compressed against a long bone (the upper arm or upper leg) since vessels between the double bones in the lower arm and lower leg will continue to bleed despite a tourniquet.
The amount of pressure necessary typically causes additional vascular and nerve trauma that is permanent. A tourniquet should only be used as a last resort—to save a life at the expense of sacrificing a limb.

Immobilize the injured area.
Using splints and dressings to immobilize an injured area helps protect from further injury and maintain clots that have begun to form. Even if an injury to a bone or joint is not suspected, immobilization will promote clotting and help healing begin.

Dress the wound, and strive to prevent infection.

Use sterile (or at least clean) dressings as much as possible. Penetrating injuries may allow anaerobic (air-hating) bacteria to get deep into the tissue. This is why penetrating wounds are typically irrigated with sterile or antibiotic solutions in surgery.

While this is rarely practical outside of the hospital, it is important to remember that smaller penetrating wounds (nail holes in the foot and the like) should be encouraged to bleed for a short period to help "wash out" foreign material. Soaking an extremity in hydrogen peroxide may help kill anaerobic bacteria as well. Do not apply ointments or goo to penetrating wounds as these may actually promote infection.

Emergency Tip

Some data indicate that pure granular sugar poured into a penetrating wound can decrease bleeding, promote clotting, and discourage bacteria. You are not likely to see it used in your local emergency department, but it might be worth consideration if your circumstances are dire.
Get medical attention as soon as possible.

Be Aware
It should be noted that tourniquets are rarely helpful— it is uncommon to have life-threatening bleeding in an extremity that cannot be controlled by the methods described above. The areas that cause fatal bleeding (like the femoral arteries or intraabdominal bleeding) do not lend themselves to the use of a tourniquet. Even most complete amputations do not bleed all that much, and are controlled by direct pressure. Arteries that are severed only part of

the way through tend to bleed more profusely than those that are completely severed.

How to survive a poisonous snake attack

Because poisonous snakes can be difficult to identify— and because some nonpoisonous snakes have markings very similar to venomous ones—the best way to avoid getting bitten is to leave all snakes alone. Assume that a snake is venomous unless you know for certain that it is not.

How to treat a bite

Wash the bite with soap and water as soon as you can.
Immobilize the bitten area and keep it lower than the heart.
This will slow the flow of the venom.
Get medical help as soon as possible.

A doctor should treat all snakebites unless you are willing to bet your life that the offending snake is nonpoisonous. Of about eight thousand venomous bites a year in the U.S., nine to fifteen victims are killed.

A bite from any type of poisonous snake should always be considered a medical emergency. Even bites from nonpoisonous snakes should be treated professionally, as severe allergic reactions can occur. Some Mojave rattlesnakes carry a neurotoxic venom that can affect the brain or spinal cord, causing paralysis.

Immediately wrap a bandage tightly two to four inches above the bite to help slow the venom if you are unable to reach medical care within thirty minutes.

The bandage should not cut off blood flow from a vein or artery. Make the bandage loose enough for a finger to slip underneath.
If you have a first aid kit equipped with a suction device, follow the instructions for helping to draw venom out of the wound without making an incision.

Generally, you will need to place the rubber suction cup over the wound and attempt to draw the venom out from the bite marks.

What not to do

• Do not place any ice or cooling element on the bite; this will make removing the venom with suction more difficult.
• Do not tie a bandage or a tourniquet too tightly.
If used incorrectly, a tourniquet can cut blood flow completely and damage the limb.
• Do not make any incision on or around the wound in an attempt to remove the venom—there is danger of infection.
• Do not attempt to suck out the venom. You do not want it in your mouth, where it might enter your bloodstream.

Environmental injuries

Heatstroke, hypothermia, diarrhea, and intestinal parasites are environmental injuries you could face.

Heatstroke

The breakdown of the body's heat regulatory system (body temperature more than 40.5 degrees C [105 degrees F]) causes a heatstroke. Other heat injuries, such as cramps or dehydration, do not always precede a heatstroke. Signs and symptoms of heatstroke are:

Swollen, beet-red face.
Reddened whites of eyes.
Victim not sweating.
Unconsciousness or delirium, which can cause pallor, a bluish color to lips and nail beds (cyanosis), and cool skin.

Note: By this time the victim is in severe shock. Cool the victim as rapidly as possible. Cool him by dipping him in a cool stream. If one is not available, douse the victim with urine, water, or at the very least, apply cool wet com-presses to all the joints, especially the neck, armpits, and crotch. Be sure to wet the victim's head. Heat loss through the scalp is great. Administer IVs and provide drinking fluids. You may fan the individual.
Expect, during cooling:

Vomiting.
Diarrhea.
Struggling.

Shivering.
Shouting.
Prolonged unconsciousness.
Rebound heatstroke within 48 hours.
Cardiac arrest; be ready to perform CPR.
Note: Treat for dehydration with lightly salted water.

Hypothermia

Defined as the body's failure to maintain a temperature of 36 degrees C (97 degrees F). Exposure to cool or cold temperature over a short or long time can cause hypothermia. Dehydration and lack of food and rest predispose the survivor to hypothermia.

Unlike heatstroke, you must gradually warm the hypothermia victim. Get the victim into dry clothing. Replace lost fluids, and warm him.

Diarrhea

A common, debilitating ailment caused by a change of water and food, drinking contaminated water, eating spoiled food, becoming fatigued, and using dirty dishes. You can avoid most of these causes by practicing preventive medicine. If you get diarrhea, however, and do not have antidiarrheal medicine, one of the following treatments may be effective:

Limit your intake of fluids for 24 hours.

Drink one cup of a strong tea solution every 2 hours until the diarrhea slows or stops. The tannic acid in the tea helps to control the diarrhea. Boil the inner bark of a hardwood tree for 2 hours or more to release the tannic acid.

Make a solution of one handful of ground chalk, charcoal, or dried bones and treated water. If you have some apple pomace or the rinds of citrus fruit, add an equal portion to the mixture to make it more effective. Take 2 tablespoons of the solution every 2 hours until the diarrhea slows or stops.

Intestinal Parasites

You can usually avoid worm infestations and other intestinal parasites if you take preventive measures. For example, never go barefoot. The most effective way to prevent intestinal parasites is to avoid uncooked meat and raw vegetables contaminated by raw sewage or human waste used as a fertilizer.

However, should you become infested and lack proper medicine, you can use home remedies. Keep in mind that these home remedies work on the principle of changing the environment of the gastrointestinal tract. The following are home remedies you could use:

Salt water. Dissolve 4 tablespoons of salt in 1 liter of water and drink. Do not repeat this treatment.
Tobacco. Eat 1 to 1.5 cigarettes. The nicotine in the cigarette will kill or stun the worms long enough for your system to pass them. If the

infestation is severe, repeat the treatment in 24 to 48 hours, but no sooner.
Kerosene. Drink 2 tablespoons of kerosene but no more. If necessary, you can repeat this treatment in 24 to 48 hours. Be careful not to inhale the fumes. They may cause lung irritation.
Hot peppers. Peppers are effective only if they are a steady part of your diet. You can eat them raw or put them in soups or rice and meat dishes. They create an environment that is prohibitive to parasitic attachment.

Basic Medical Kit

This kit should contain:

Combat Dressings
Large gauze dressings
Small gauze squares
Roller Bandages elastic + cotton (2in/4in/6in)
Triangular Bandages
Band-Aids -assorted sizes and shapes (i.e. finger tips)
Sleek Tape 1 in. (waterproof, plastic/elasticated tape)
cotton buds (q-tips, cotton tips)
thermometer (rectal or pacifier for children)
Chlorhexidine and cetrimide (antiseptic) or Povidone-Iodine Antibacterial Soap
Lignocaine 1% (local anesthetic) (USA = Lidocaine)
Augmentin (antibiotic) (a broad spectrum antibiotic)
Acetaminophen (mild analgesic)

Dicolphenic (mod analgesic) (a nonsteroidal anti-inflammatory)
Oral Rehydration powder
Loperamide (anti-diarrhoeal)
Benedryl &/or Claratyne (antihistamines, short + long acting)
Adrenaline auto injector or Anakit (USA = epinephrine)
Morphine Sulphate (strong pain killer) if available
Gamma Benzene Hexachloride (lice/scabies tx)
Clotimoxazole (anti-fungal)
Contraceptive pills/Condoms
Paramedic scissors
Surgical scissors
Needle holder
Sm curved clamps
Tissue forceps
Scalpel blades
Emergency Obstetric Kit (includes bulb suction)
Vicryl 2/0 suture material

Your choice of suture material is up to you. Vicryl is a synthetic dissolvable one, but takes up to 4-6 weeks to dissolve, so I think it is the ideal survival thread. But a variety of non-dissolvable sutures are available which will last forever.
5ml syringes
20g needles
Oil of cloves (tooth ache)
Emergency dental kit (commercial preparation)
A smaller kit for your bug-out bag could be made up from the above. Include some combined dressings, a couple of bandages, Band-Aids, tape, some tylenol, Benedryl and some loperamide.

Conclusion

Survival medicine at times may be nothing more than common sense. It does not need to be fancy, just functional. By planning ahead for the types of survival medicine situations that may affect you and your family you'll find that you have removed a lot of stress that comes from being faced with a difficult situation.