SURVIVE ANY CRISIS

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Time to prepare

We are now all inside this dangerous circle. Our economy slowly slips into chaos as our planet seems to become more and more angry, with disasters hitting us when we least expect.

On top of this, we have been lulled into a false sense of security. Addicted to comfort and convenience we are suffocating in that comfort zone. We have become a society so ensconced in the interdependence of modern technology that we have lost our personal strengths. We have abandoned nature's skill set: self-confidence, resourcefulness and adaptability.

Some of you may have already been dramatically affected by these disasters, because you simply thought there's no need to prepare and when danger was close, you had no idea what to do. Others just live in fear, hoping this will never happen to them.

And then, there's the third category and I strongly believe more and more people will adhere to it. I'm talking about those concerned with the safety of their families. They are ready to accumulate all the information needed to ensure a happy and fulfilled future for their loved ones. For them, I have written this book.

1. Nuclear or other wars, riots, looting, bomb threats, terrorism.

Violence is continuing to increase. Even if a conflict is happening in another location, the effects can affect us sharply in the form of rationing, economic unrest and possible loss of loved ones. Should violence break out in your area, there are several things your family should know and consider.

Before:

1. Learn about the effects of violence in your area.
2. Contact local authorities for their emergency plan of action. (Evacuation, fallout shelters, etc.)
3. Know your evacuation plan.
4. Have your 3-day evacuation kit accessible.
5. Know your disaster plan.
6. Lock doors and windows at night and when you are away.
7. Designate a safe place in your home for shelter that is:
    - Away from windows.
    - Has an exit.
    - Safe from fallout.
    - Equipped with protective devices for your family's defense.
    - Equipped with extra supplies. (Food, water, fuel, etc.)
8. Practice family evacuation plan.

9. Have some training in First Aid & CPR if possible.

During: Find safety—safely!!!

1. Nuclear War:

A. You may be warned in one of many ways:

- See a flash
- Hear a blast
- Feel the heat
- Hear a warning signal on the radio, TV or city siren.

Note: Any one of these dangers can be fatal within a few seconds after the explosion even if it is many miles away. Never look at the flash.

B. Dangers if the explosion is some distance away:

- Heat wave could arrive within 5 seconds and can cause serious burns.
- Blast wave within as little as 30 seconds causing serious injury.
- Fallout/radiation arrives later causing other serious injuries.

C. Find cover immediately so that you are not:

- Burned by the heat.
- Thrown by the blast.
- Struck by flying debris.

D. Take cover in one of the following to increase your chances of survival:

- Inside a building.
- Cellar.
- Ditch or culvert.
- Parked car, truck, train, etc.
- Freeway under or over pass.
- Any object that is stable and not flammable.

E. After the heat and blast waves have passed:

- 1 Go to the closest shelter that is safe from fallout. (Designated area in your home, city, school, etc.)
- 2 Be prepared to stay there for at least 48 hours to 2 weeks.

Shelters: You may have a fallout shelter located in your community or you can build one out of dirt or concrete. By placing as little as 2.4 inches of concrete or 3.6 inches of dirt over your shelter, radiation levels can be reduced by half.

Note: The dangers from fallout radiation will decrease over time. 2 hours - radiation level drops about 50%. 7 hours - radiation level drops 10 times. 48 hours - radiation level drops 100 times.

2. Hazardous chemical spill

This can be harmful to the environment as well as to our health. There are many chemicals that can be a threat to us. Usually they

become hazardous to us and our surroundings if they are uncontrollably released in one of the following ways:

- Transportation accidents involving trucks or trains.
- Accidental spill including faulty valves, explosions, ruptures due to natural disasters.
- Intentionally dumped.

The dangers!

- Fires
- Explosions
- Toxic gases that can be disabling or fatal.
- Possible contamination of the area.

Before:

- Know what could happen in your area.
- Have your 3-day evacuation kit easily accessible.
- Have on hand a 14-day supply of food, water, fuel, etc.
- Know your disaster plan.
- Know your evacuation plan.
- Have some training in First Aid and CPR if possible.
- Know your local warning signal and evacuation route.

- Have and know how to use your fire extinguisher. (House, car, office.)

During:

- STAY away from the scene of the accident
- DON'T inhale gases, fumes or smoke.
- DON'T touch the spilled material.
- LISTEN to local authorities. Follow your evacuation plan if told to do so.
- If the spill can't be identified, stay away from any accident victim until the authorities arrive.
- Treat victims if it is safe to do so.
- Take your 3-day evacuation kit with you if you are evacuated.
- Protect your food, water and clothing from becoming contaminated.

3. Earthquakes

Before:

- Have your 3-day evacuation kit accessible.
- Know your disaster plan.
- Know and rehearse your evacuation plan with family members.

- Practice family earthquake drills from different rooms so everyone knows what to do, and where the safest places are in your home, school and work.
- Have some training in First Aid & CPR if possible.
- Prevent possible damage by completing the "How Safe is Your Home?"
- Consider earthquake insurance.

During:

Remain calm and think through the consequences before acting.

1. If indoors:

- Stay indoors.
- Find protection. Stand in a doorway, stand against an inside wall, get under a sturdy desk, table or bed.
- Stay away from: Windows, mirrors, skylights, chimneys, light fixtures, high book cases, or other fixtures that might fall.

2. If outdoors:

- Get away from buildings, walls, utility poles and lines.
- If possible, move to an open area away from hazards and stay there until it is safe.

3. If in a car:

- Get away from hazards. (Overpasses, buildings, etc.)

- Stop as quickly as safety permits.
- Stay in the vehicle until it is safe.

- **After:**

Make a safety inspection:

- Check for injuries and administer First Aid.
- Check for fires and other hazards.
- DON'T use matches, lighters, open flame appliances, or any electrical switches until you are sure there are no gas leaks.
- If you smell gas, open windows and shut off the main gas valve and electrical switch.
- Grab your 3-day evacuation kit.
- Get out of the building immediately and report the damaged utilities to the utility companies.
- Once outdoors:

A. STAY AWAY from hazardous areas.
(Downed power lines, broken gas pipes, fires, buildings, etc.)

B. Be prepared for additional after-shocks.

C. Turn on radio and follow instructions from your local authorities.

D. Locate family members and contact your out-of-state Contact person.

- Before using the toilet, shower or sink, check to see if sewage lines are intact.

4. Extreme weather

Hurricane: Winds in a wide circular motion

Tornado: A whirlwind accompanied by a funnel shaped cloud.

Winter storms: Extreme snow, ice and sleet.

Lightning & thunder: A discharge of electricity within the storm cloud, accompanied by heavy amounts of rain or hail. It can cause tornadoes and flash flooding.

Drought: Long period of time that passes without any substantial rainfall.

Extreme heat: Temperatures are at least 10 degrees above the average high temperature lasting for several weeks or more.

Before:

- Have your 3-day evacuation kit accessible.
- Have on hand a 14 day supply of food, water, fuel, etc.
- Have emergency tools in car. (Shovel, bag of sand, blankets, etc.)
- Know your disaster plan.
- Know your evacuation plan.

- Have some training in First Aid & CPR if possible.
- Know your local warning signal & evacuation route.
- Secure objects that could be blown away. (Boats, sheds, dog house, etc.)
- Tie down or bring indoors items that can't be tied down. (Toys, patio furniture, trash cans, etc.)
- Protect glass windows & doors by boarding up, taping or closing the shutters if high winds are suspected.
- Have a secure shelter.
- Listen to local authorities. If told to evacuate, follow their instructions and remember the steps to your evacuation plan.
- Have adequate insurance.

During:

- Have your 3-day evacuation kit wherever you are.
- Stay inside a secure and stable building.
- Continue to listen to local authorities.
- Stay away from glass windows, doors, skylights, etc.
- One of the safest places to go during a destructive windstorm is in the corner of the building next to the wall, away from glass.

- In a **hurricane**, be aware of the "Eye" of the hurricane. The storm may calm down for a few minutes then could become worse than before the "Eye" had passed.
- In a **tornado**, don't stay in your car, trailer or mobile home. Find a secure and stable building or lie in a ditch and shield your head. Cover your face with clothing to prevent suffocation from the dust.
- In a **winter storm**, don't drive unless needed. Be aware of the snow load on your roof and other areas that could collapse by the weight.
- In a **lighting storm**:

A. Get out of and away from any water. (Lake, ocean, river, etc.)

B. Don't use any electrical appliances.

C. Only use the telephone for emergencies.

D. Stay away from large metal objects.

E. If outdoors, find protection down low. Don't be the tallest object in the area.

F. If your hair stands up or your skin tingles, DROP to the ground immediately. Lightning may strike any second.

G. If a person is struck by lightning, treat them immediately. (First aid, CPR, shock) They will not shock you and are safe to touch.

- In the event of **drought and extreme heat**

A. The dangers are:

- Heat strains on the body. This occurs when your body core temperature is above 99 degrees.
- Heat impairment occurs when your body temperature is around 102 degrees.
- Heatstroke, heart attacks, and collapsing from water depletion all occur when over exposed to the heat for a long period of time.
- Prolonged drought can damage agricultural production and seriously impact the community economy.

B. Treat the dangers:

- Wear loose fitting & porous clothes. Also a hat with a wide brim.
- Drink lots of water to keep body fluid & salt level close to normal.
- Rest regularly and stay in the shade.
- In the event of a drought, conserve water to avoid depletion of supplies.

After:

- Administer First Aid to those in need.
- Stay sheltered until notified by officials that it is safe.
- Stay in contact with local authorities for other instructions.

- Stay away from damaged areas.
- Be aware of and report any hazards to proper authorities.
    - Damaged roads, bridges, buildings
    - Broken gas, water and sewer lines and downed power lines.
- Don't use electrical appliances or turn on the electricity if the area is wet. Don't stand in water when working with electricity.
- Don't go sightseeing in the disaster areas.
- Use caution when driving through affected areas.
- Don't use open flame if you suspect a gas line to be broken.
- Inspect food for contamination. Discard if contaminated.
- Check water supplies for contamination. Purify water if in doubt.

5. Fires

Before:

- Have your 3 day evacuation-kit accessible.
- Know your disaster plan.
- Know your evacuation plan.
- Practice family fire drills from different rooms so everyone knows what to do and how to escape a fire.

- Have some training in First Aid and CPR if possible.
- Prevent possible damage by completing the Home Hazard List.
- Have fire insurance.

During:

If indoors:

- Call the Fire Department.
- Contain the fire if possible. If not, get outdoors immediately.
- DON'T HIDE.
- Execute your evacuation-plan and practiced fire drills.
- Warn others with your whistle.
- Stay low to the ground if the room has smoke in it.
- Feel any closed doors to see if they are hot before you open them.
- If the door is hot, escape through the window or another exit.
- If you catch on fire, DON'T RUN. Drop to the ground and roll over and over to smother the flames.
- Go to the family's predetermined meeting place in the yard and take roll call.

- If you couldn't call the fire department from inside, send someone to call now.
- If possible, turn off gas and electricity from outside the building.

If outdoors:

- STAY OUTDOORS!
- Call fire department.
- Meet other family members at your predetermined meeting place.
- Watch little children so they don't go back inside.
- If you see someone on fire, wrap them in a blanket or coat to smother the flames. DON'T use your bare hands.

After:

1. DON'T re-enter the building until proper officials have given permission.

6. Plagues

A plague is an epidemic on a larger scale. It may be transmitted by other people, small animals, rats, mice, flies or mosquitoes. The results can affect large groups of people in the same area or could be spread worldwide.

Before:

- Learn what health hazards could affect your family
- Have everyone current with their immunization shots.
- Learn about good hygiene and cleanliness.
- Keep your body healthy. Don't smoke, drink alcohol, eat too much, etc.

During:

- STAY away from contaminated areas. Avoid unclean areas and groups of people where disease and germs may be.
- Continue to watch your diet and personal hygiene.
- Keep your home and surrounding area free of rodents as much as possible.
- Contact local professional medical authorities for additional help.

7. Floods

Before:

- Have your 3-day evacuation kit accessible.
- Know your disaster plan.
- Find out if your location is above possible flood levels and where are the nearest and safest areas.
- Know your evacuation plan.
- Consider flood insurance.

During:

- Take your 3-day evacuation kit.
- Follow your evacuation plan.
- Listen to the radio for local instructions.
- Stay in the safest area possible.
- Don't attempt to cross through a waterway that is above your knees, extremely swift water or that is above the middle of your wheels.
- Don't attempt to drive through waterways or flooded areas unless you are certain the roadway is safe.
- Be aware of any hazards.

After:

1. Be aware of and report any hazards to proper authorities.
    - Damaged roads & bridges
    - Damaged buildings
    - Broken gas, water and sewer lines
    - Downed power lines
2. Don't use electrical appliances or turn on the electricity if the area is wet. Don't stand in water when working with electricity.
3. Don't go sightseeing in the disaster areas.
4. Use caution when driving through affected areas.
5. Don't use open flame if you suspect a gas line to be broken.
6. Inspect food for contamination. Discard if contaminated.
7. Check water supplies for contamination. Purify water if in doubt.
8. Stay in contact with local authorities for other instructions.

How to start a fire

The four items needed to start a flint and steel fire are:

1. Flint, or some other hard rock.
2. A fire steel.
3. Something to catch sparks.
4. Tinder.

Flint has been the traditional stone because it is hard, and breaks into keen edged fragments. Other stones will work, particularly the quartz based minerals. Look for stones that break into relatively flat sections with sharp edges.

The steel is struck against the sharp edge of a hard stone which shaves off very small splinters of steel which are heated white hot by friction.

To strike a fire hold the char on Top of the flint, close to the edge and strike the stone with a long sweeping downward stroke of the steel. Char cloth can be wrapped around the stone. When a spark catches in the char, a small glowing spot will appear. Blow on the spot gently and it will spread into the char material.

The most critical is number 3, the spark catching material. The most common material is charred cotton or linen cloth.

Char cloth is produced by heating in a low oxygen environment, producing a charcoal like substance. Get a metal can that can be resealed. Put the cloth to be charred in the can and seal it. Punch a small hole in the can and put the whole mess in a fire. Watch for smoke escaping through the hole in the can. When the smoke decreases slightly, remove the can from the fire and stopper the hole

with a nail or something. After the can cools, look at the cloth. If it's dark brown, it wasn't heated long enough. If it falls apart at the slightest touch, it was heated to long.

Experiment. The cloth needs to be 100% cotton, and free of dyes and other synthetics. The heavier the cloth, the better.

Another good material to treat in this way is very rotten punk wood. Wood so rotten that it can be broken off with your hands. Maple is the preferred wood, but others work well also. Gather several different types and see what works well.

Experiment. Charred punk is not as consistent as cloth, some will catch sparks very well, some won't at all. If it does catch, it is next to impossible to kill. Don't throw away the charred punk that won't catch sparks, it'll be useful later.

Char material will glow, but it does not produce an open flame. That is the job of the tinder. Lay the glowing char in a birds next of fine dry tinder. Shredded paper, dry grass, and cedar bark all work well. Gently blow on the ember until the tinder bursts in to a flame.

On sunny days, a magnifying glass will get an ember going in the char material very easily. From there to getting the tinder going is no problem. The charred punk that you couldn't light with a spark will start this way.

How to Build a Latrine

Things You'll Need

Shovel

Pick Axe

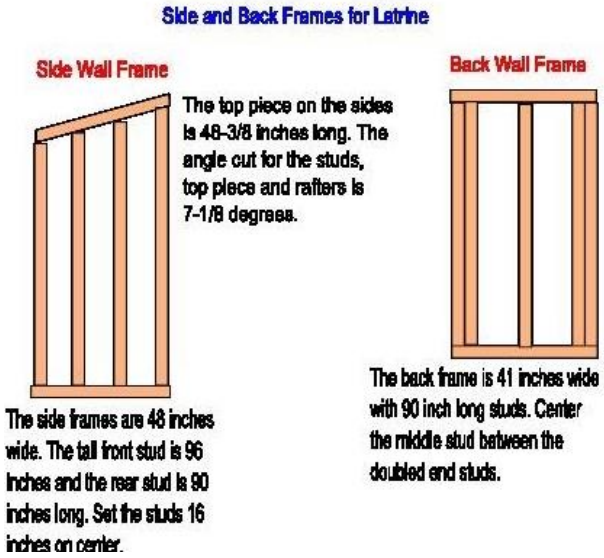
8 cement blocks for a foundation

Instructions

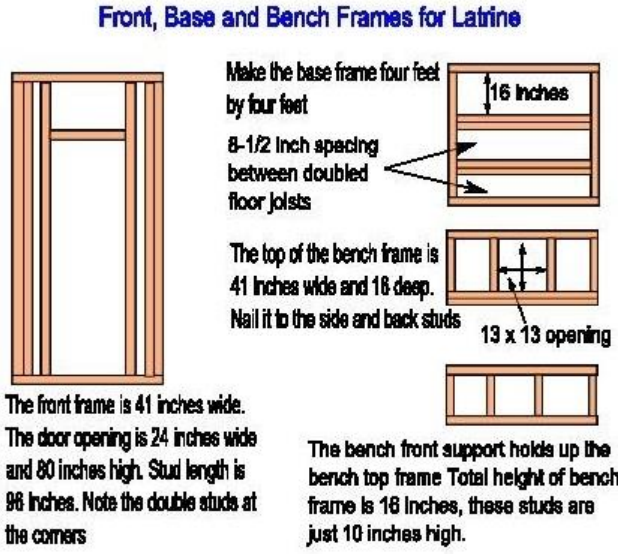
1. Dig a pit three and half feet square and at least four feet deep. Depending on usage requirements, a four foot deep pit will last up to five years. Place a cement block in each corner of the pit and roughly level them to each other. Add four more blocks, centered on each side.

2. Frame the left and right sides of the outhouse with two-by-four lumber. The side walls are angled at the top, pitching to the

back six inches from the front. See the framing illustration for dimensions.



3. Frame the back and front of the outhouse with two-by-four lumber. See the illustrations for dimensions.



4. Frame the base and bench of the latrine. Note the doubled two-by-four joists for support on the floor. The front of the bench

seat also has a doubled two-by-four. See the illustrations for dimensions.

5. Place the floor frame on the cement blocks. Join the side, front and back frames together on top of the floor frame, nailing them together at the corners to make a frame with the outside dimensions of 48 inches by 48 inches. The front and back fit between the sides. Nail through the end studs on the sides and into the end studs on the front and back.

6. Cover the entire base frame with three-fourth inch plywood for a floor, but cut out the entire back opening to the pit. Nail the floor to the base frame.

7. Cover the left, right and back sides of the outhouse with sheets of one-half inch plywood and nail in place. Measure for the door on the front and cut the door opening in a sheet of one-half inch plywood. The door will use the two-by-four studs and header as a door stop, so the opening must bisect the two-by-fours. After the front is nailed in place, use three hinges to attach the door.
8. Nail the front bench support to the floor along the opening to the pit. Add the bench frame and nail it to the front support

frame, back frame and side frame studs. At the sides of the bench top frame, there will be a three-and-one-half inch wide opening between the frame and the outside sheathing. Fill this gap with a two-by-four piece cut to length and nailed in place through the bench frame and the studs.

9. Cut a piece of plywood for the top of the bench. Use the toilet seat as a template to cut an opening centered side to side on the bench top, with the seat overhanging the front of the bench top about an inch. Nail the bench top in place. Cut a piece of plywood to cover the front of the bench. Cover this piece with two layers of tar paper and nail it in place.

10. Cut a roof from one-half inch plywood. Make the roof four feet wide and five feet long so it overhangs the front and back about a foot. Add two rafters cut from two-by-fours to help support the roof, running them between the front and back of the latrine walls. Place the roof on the outhouse and nail it down. Add tar paper and shingles to keep the rain out.
11. Fasten the seat over the hole in the bench with nails or screws through the hinges. Both the seat and the seat cover must open and close.

12. In a rear corner, cut a three inch hole in both the roof and the bench. Install a three inch vent pipe through the roof and down to the corner hole in the bench.

13. Cover the bench top and front with contact paper and ensure the front edge of the bench is smooth. Add a block wood handle to the outside of the door, a couple of nails to hang tissue paper rolls on and another to hang your coat. A simple hook and eye will serve for an inside lock. For a final, old-fashioned touch, cut a moon shape into the door and staple a piece of screen over it from the inside. Add some reading material and you are all set.

Tips & Warnings

- Keeping the seat and lid down will cause odors to vent through the vent pipe, rather than into the latrine. Although there will always be some odor, the vent pipe will greatly reduce it. Only use tissue paper that is suitable for septic systems. It will decompose quickly instead of filling in the pit. Fly paper is a necessity. A few spiders will help keep the flies under control too. Paint the latrine with a coat of primer and two coats of paint. Keep it painted and it will last a number of years. Using

pressure treated wood and plywood will make the latrine last a lot longer.

- Never use the pit as a dump for food scraps or other types of waste other than what it was dug for. Food scraps will attract unwanted animals and insects. Some local codes prohibit the building of a pit latrine or outhouse. Check your local codes before you begin. Methane, a by-product of decomposing waste, is flammable. Smoking in a poorly vented latrine or carrying a burning lantern into one could possibly result in a fire or explosion. Always wear safety glasses and a dust mask while cutting lumber. Wear safety glasses when pounding nails.

How to treat an open wound

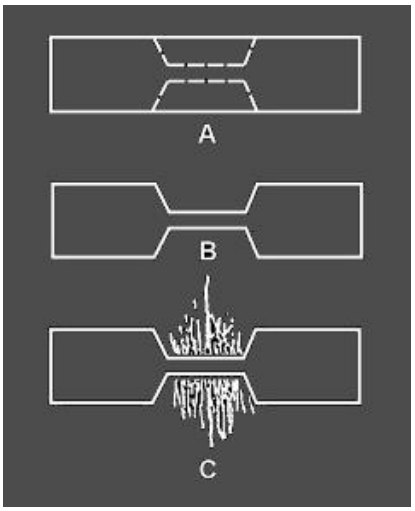
Open wounds are serious in a survival situation, not only because of tissue damage and blood loss, but also because they may become infected. Bacteria on the object that made the wound, on the individual's skin and clothing, or on other foreign material or dirt that touches the wound may cause infection.

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

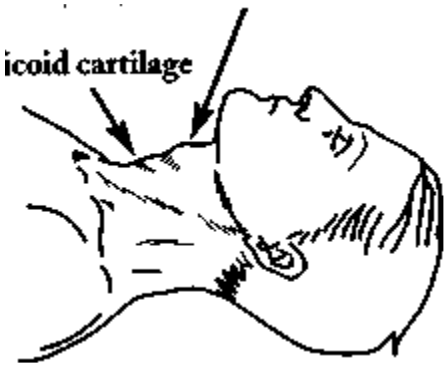
• A first aid kit, if available

• 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.

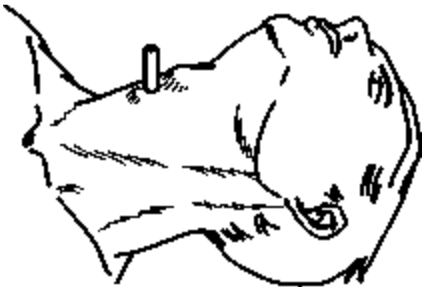
There will not be time for sterilization of your tools, so do not bother; infection is the least of your worries at this point.



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!")

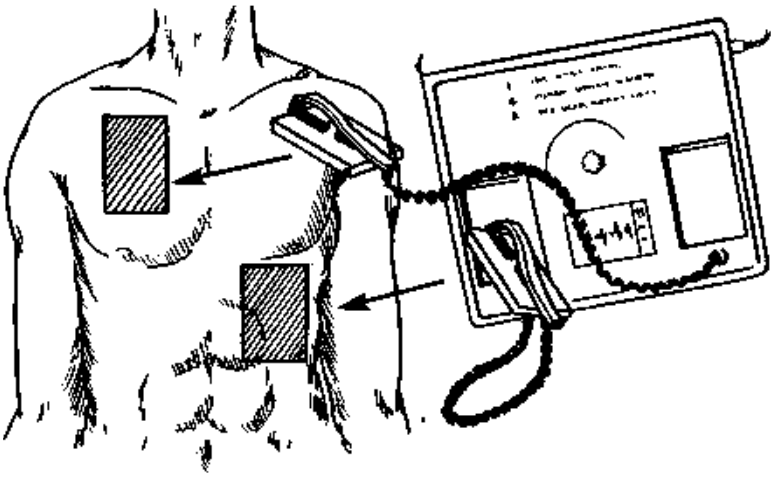
In the past, defibrillators were very heavy, expensive, needed regular maintenance, and were mostly found only in hospitals. Now there are more portable units available. A defibrillator should be

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.

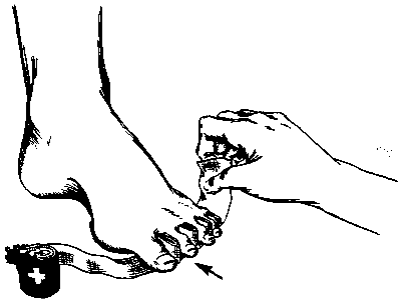
Apply sterile dressings to the affected areas.

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 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.

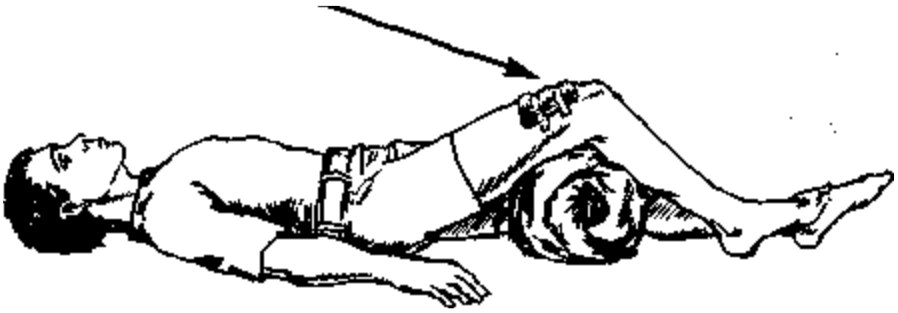
Bullets, arrows, knives, sticks, and the like cause penetrating injuries. When these objects lodge in the vital areas of the body (the trunk or near nerves or arteries) removing them may cause more severe bleeding that cannot be controlled. The object may be pressed against an artery or other vital internal 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.

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.