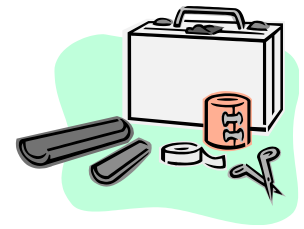


# **FIRST AID BOOKLET**

# **FIRST AID INDEX OF TOPICS**

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# FIRST AID



## ANAPHYLAXIS

A life-threatening allergic reaction (anaphylaxis) can cause shock, a sudden drop in blood pressure and trouble breathing. In people who have an allergy, anaphylaxis can occur minutes after exposure to a specific allergy-causing substance (allergen). In some cases, there may be a delayed reaction or anaphylaxis may occur without an apparent trigger.

### **If you're with someone having an allergic reaction with signs of anaphylaxis:**

1. Immediately call 911 or your local medical emergency number.
2. Ask the person if he or she is carrying an epinephrine autoinjector to treat an allergic attack (for example, EpiPen, Twinject).
3. If the person says he or she needs to use an autoinjector, ask whether you should help inject the medication. This is usually done by pressing the autoinjector against the person's thigh.
4. Have the person lie still on his or her back.
5. Loosen tight clothing and cover the person with a blanket. Don't give the person anything to drink.
6. If there's vomiting or bleeding from the mouth, turn the person on his or her side to prevent choking.
7. If there are no signs of breathing, coughing or movement, begin CPR. Do uninterrupted chest presses of about two a second until paramedics arrive.
8. Get emergency treatment even if symptoms start to improve. After anaphylaxis, it's possible for symptoms to recur. Monitoring in a hospital setting for several hours is usually necessary.

If you're with someone having signs of anaphylaxis, don't wait to see whether symptoms get better. Seek emergency treatment right away. In severe cases, untreated anaphylaxis can lead to death within half an hour. An antihistamine pill, such as diphenhydramine (Benadryl, others), isn't sufficient to treat anaphylaxis. These medications can help relieve allergy symptoms, but work too slowly in a severe reaction to help.

### **Signs and symptoms of anaphylaxis include:**

- Skin reactions including hives, itching, and flushed or pale skin
- Swelling of the face, eyes, lips or throat
- Constriction of the airways, leading to wheezing and trouble breathing
- A weak and rapid pulse
- Nausea, vomiting or diarrhea
- Dizziness, fainting or unconsciousness

Some common anaphylaxis triggers include:

- Medications (especially penicillin)
- Foods such as peanuts, tree nuts, fish and shellfish
- Insect stings from bees, yellow jackets, wasps, hornets and fire ants



If you've had any kind of severe allergic reaction in the past, ask your doctor if you should be prescribed an epinephrine auto-injector to carry with you.

# **BLEEDING: SEVERE**



If possible, before you try to stop severe bleeding, wash your hands to avoid infection and put on synthetic gloves. Don't reposition displaced organs. If the wound is abdominal and organs have been displaced, don't try to push them back into place — cover the wound with a dressing.

For other cases of severe bleeding, follow these steps:

1. **Have the injured person lie down and cover the person to prevent loss of body heat.** If possible, position the person's head slightly lower than the trunk or elevate the legs. This position reduces the risk of fainting by increasing blood flow to the brain. If possible, elevate the site of bleeding.
2. **While wearing gloves, remove any obvious dirt or debris from the wound.** Don't remove any large or more deeply embedded objects. Don't probe the wound or attempt to clean it at this point. Your principal concern is to stop the bleeding.
3. **Apply pressure directly on the wound until the bleeding stops.** Use a sterile bandage or clean cloth and hold continuous pressure for at least 20 minutes without looking to see if the bleeding has stopped. Maintain pressure by binding the wound tightly with a bandage (or a piece of clean cloth) and adhesive tape. Use your hands if nothing else is available. If possible, wear rubber or latex gloves or use a clean plastic bag for protection.
4. **Don't remove the gauze or bandage.** If the bleeding continues and seeps through the gauze or other material you are holding on the wound, don't remove it. Instead, add more absorbent material on top of it.
5. **Squeeze a main artery if necessary.** If the bleeding doesn't stop with direct pressure, apply pressure to the artery delivering blood to the area of the wound. Pressure points of the arm are on the inside of the arm just above the elbow and just below the armpit. Pressure points of the leg are just behind the knee and in the groin. Squeeze the main artery in these areas against the bone. Keep your fingers flat. With your other hand, continue to exert pressure on the wound itself.
6. **Immobilize the injured body part once the bleeding has stopped.** Leave the bandages in place and get the injured person to the emergency room as soon as possible.

**If you suspect internal bleeding, call 911 or your local emergency number. Signs of internal bleeding may include:**

- Bleeding from body cavities, such as the ears, nose, rectum or vagina
- Vomiting or coughing up blood
- Bruising on neck, chest, abdomen or side (between ribs and hip)
- Wounds that have penetrated the skull, chest or abdomen
- Abdominal tenderness, possibly accompanied by rigidity or spasm of abdominal muscles
- Fractures
- Shock, indicated by weakness, anxiety, thirst or skin that's cool to the touch



# **BURNS**

To distinguish a minor burn from a serious burn, the first step is to determine the extent of damage to body tissues. The three burn classifications of first-degree burn, second-degree burn and third-degree burn will help you determine emergency care:

## **First-degree burn**

The least serious burns are those in which only the outer layer of skin is burned, but not all the way through. The skin is usually red, with swelling, and pain sometimes is present. Treat a first-degree burn as a minor burn unless it involves substantial portions of the hands, feet, face, groin or buttocks, or a major joint, which requires emergency medical attention.

## **Second-degree burn**

When the first layer of skin has been burned through and the second layer of skin (dermis) also is burned, the injury is called a second-degree burn. Blisters develop and the skin takes on an intensely reddened, splotchy appearance. Second-degree burns produce severe pain and swelling.

If the second-degree burn is no larger than 3 inches (7.6 centimeters) in diameter, treat it as a minor burn. If the burned area is larger or if the burn is on the hands, feet, face, groin or buttocks, or over a major joint, treat it as a major burn and get medical help immediately.

**For minor burns**, including first-degree burns and second-degree burns limited to an area no larger than 3 inches (7.6 centimeters) in diameter, take the following action:

- **Cool the burn.** Hold the burned area under cool (not cold) running water for 10 or 15 minutes or until the pain subsides. If this is impractical, immerse the burn in cool water or cool it with cold compresses. Cooling the burn reduces swelling by conducting heat away from the skin. Don't put ice on the burn.
- **Cover the burn with a sterile gauze bandage.** Don't use fluffy cotton, or other material that may get lint in the wound. Wrap the gauze loosely to avoid putting pressure on burned skin. Bandaging keeps air off the burn, reduces pain and protects blistered skin.
- **Take an over-the-counter pain reliever.** These include aspirin, ibuprofen (Advil, Motrin, others), naproxen (Aleve) or acetaminophen (Tylenol, others). Use caution when giving aspirin to children or teenagers. Though aspirin is approved for use in children older than age 2, children and teenagers recovering from chickenpox or flu-like symptoms should never take aspirin. Talk to your doctor if you have concerns.

Minor burns usually heal without further treatment. They may heal with pigment changes, meaning the healed area may be a different color from the surrounding skin. Watch for signs of infection, such as increased pain, redness, fever, swelling or oozing. If infection develops, seek medical help. Avoid re-injuring or tanning if the burns are less than a year old — doing so may cause more extensive pigmentation changes. Use sunscreen on the area for at least a year.

## **Caution**

- **Don't use ice.** Putting ice directly on a burn can cause a burn victim's body to become too cold and cause further damage to the wound.
- **Don't apply butter or ointments to the burn.** This could cause infection.
- **Don't break blisters.** Broken blisters are more vulnerable to infection.

## **Third-degree burn**

The most serious burns involve all layers of the skin and cause permanent tissue damage. Fat, muscle and even bone

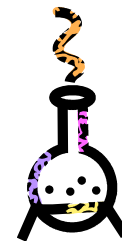
may be affected. Areas may be charred black or appear dry and white. Difficulty inhaling and exhaling, carbon monoxide poisoning, or other toxic effects may occur if smoke inhalation accompanies the burn.

**For major burns,** call 911 or emergency medical help. Until an emergency unit arrives, follow these steps:

1. **Don't remove burned clothing.** However, do make sure the victim is no longer in contact with smoldering materials or exposed to smoke or heat.
2. **Don't immerse large severe burns in cold water.** Doing so could cause a drop in body temperature (hypothermia) and deterioration of blood pressure and circulation (shock).
3. **Check for signs of circulation (breathing, coughing or movement).** If there is no breathing or other sign of circulation, begin CPR.
4. **Elevate the burned body part or parts.** Raise above heart level, when possible.
5. **Cover the area of the burn.** Use a cool, moist, sterile bandage; clean, moist cloth; or moist towels.

**Get a tetanus shot.** Burns are susceptible to tetanus. Doctors recommend you get a tetanus shot every 10 years. If your last shot was more than five years ago, your doctor may recommend a tetanus shot booster.

## **CHEMICAL BURNS**



**If a chemical burns the skin, follow these steps:**

1. **Remove the cause of the burn** by first brushing any remaining dry chemical and then rinsing the chemical off the skin surface with cool, gently running water for 20 minutes or more.
2. **Remove clothing or jewelry** that has been contaminated by the chemical.
3. **Wrap the burned area loosely** with a dry, sterile dressing or a clean cloth.
4. **Rewash the burned area** for several more minutes if the person experiences increased burning after the initial washing.
5. **Take an over-the-counter pain reliever.** These include aspirin, ibuprofen (Advil, Motrin, others), naproxen (Aleve) or acetaminophen (Tylenol, others). Use caution when giving aspirin to children or teenagers. Though aspirin is approved for use in children older than age 2, children and teenagers recovering from chickenpox or flu-like symptoms should never take aspirin. Talk to your doctor if you have concerns.

**Get a tetanus shot.** All burns are susceptible to tetanus. Doctors recommend you get a tetanus shot every 10 years. If your last shot was more than five years ago, your doctor may recommend a tetanus shot booster. Minor chemical burns usually heal without further treatment.

**Seek emergency medical assistance if:**

- The person shows signs of shock, such as fainting, pale complexion or breathing in a notably shallow manner
- The chemical burn penetrated through the first layer of skin, and the resulting second-degree burn covers an area more than 3 inches (7.6 centimeters) in diameter
- The chemical burn occurred on the eye, hands, feet, face, groin or buttocks, or over a major joint
- The person has pain that cannot be controlled with over-the-counter pain relievers

If you're unsure whether a substance is toxic, call the poison control center at 800-222-1222. If you seek emergency assistance, take the chemical container or a complete description of the substance with you for identification.

# **CHEMICAL IN THE EYE**



**If a chemical splashes into your eye, take these steps immediately:**

**Flush your eye with water.** Use clean, lukewarm tap water for at least 20 minutes, and use whichever of these approaches is quickest:

- Get into the shower and aim a gentle stream of lukewarm water on your forehead over your affected eye. Or direct the stream on the bridge of your nose if both eyes are affected. Hold your affected eye or eyes open.
- Put your head down and turn it to the side. Then hold your affected eye open under a gently running faucet.
- Young children may do best if they lie down in the bathtub or lean back over a sink while you pour a gentle stream of water on the forehead over the affected eye or on the bridge of the nose for both eyes.

**Wash your hands with soap and water.** Thoroughly rinse your hands to be sure no chemical or soap is left on them. Your first goal is to get the chemical off the surface of your eye, but then you must remove the chemical from your hands.

**Remove contact lenses.** If they don't come out during the flush, then take them out.

## **Caution:**

- Don't rub the eye — this may cause further damage.
- Don't put anything except water or contact lens saline rinse in the eye, and don't use eyedrops unless emergency personnel tell you to do so.

## **Seek emergency medical assistance**

After following the above steps, seek emergency care or, if necessary, call 911 or your local emergency number. Take the chemical container or the name of the chemical with you to the emergency department. If readily available, wear sunglasses because your eyes will be sensitive to light.

# CPR



Cardiopulmonary resuscitation (CPR) is a lifesaving technique useful in many emergencies, including heart attack or near drowning, in which someone's breathing or heartbeat has stopped. Ideally, CPR involves two elements: chest compressions combined with mouth-to-mouth rescue breathing.

However, what you as a bystander should do in an emergency situation really depends on your knowledge and comfort level.

The bottom line is that it's far better to do something than to do nothing at all if you're fearful that your knowledge or abilities aren't 100 percent complete. Remember, the difference between your doing something and doing nothing could be someone's life.

Here's advice from the American Heart Association:

- **Untrained.** If you're not trained in CPR, then provide hands-only CPR. That means uninterrupted chest compressions of about 100 a minute until paramedics arrive (described in more detail below). You don't need to try rescue breathing.
- **Trained, and ready to go.** If you're well trained, and confident in your ability, then you can opt for one of two approaches: 1. Alternate between 30 chest compressions and two rescue breaths. 2. Just do chest compressions. (Details described below.)
- **Trained, but rusty.** If you've previously received CPR training, but you're not confident in your abilities, then just do chest compressions at a rate of about 100 a minute. (Details described below.)

The above advice applies only to adults needing CPR, not to children.

CPR can keep oxygenated blood flowing to the brain and other vital organs until more definitive medical treatment can restore a normal heart rhythm.

When the heart stops, the absence of oxygenated blood can cause irreparable brain damage in only a few minutes. A person may die within eight to 10 minutes.

To learn CPR properly, take an accredited first-aid training course, including CPR and how to use an automatic external defibrillator (AED).

## **Before you begin**

Before starting CPR, check:

- Is the person conscious or unconscious?
- If the person appears unconscious, tap or shake his or her shoulder and ask loudly, "Are you OK?"
- If the person doesn't respond and two people are available, one should call 911 or the local emergency number and one should begin CPR. If you are alone and have immediate access to a telephone, call 911 before beginning CPR — unless you think the person has become unresponsive because of suffocation (such as from drowning). In this special case, begin CPR for one minute and then call 911.
- If an AED is immediately available, deliver one shock if instructed by the device, then begin CPR.

## Remember the ABCs

Think ABC — airway, breathing and circulation — to remember the steps explained below. Move quickly through airway and breathing to begin chest compressions.

### **Airway: Clear the airway**

1. Put the person on his or her back on a firm surface.
2. Kneel next to the person's neck and shoulders.
3. Open the person's airway using the head-tilt, chin-lift maneuver. Put your palm on the person's forehead and gently tilt the head back. Then with the other hand, gently lift the chin forward to open the airway.
4. Check for normal breathing, taking no more than five or 10 seconds. Look for chest motion, listen for normal breath sounds, and feel for the person's breath on your cheek and ear. Gasping is not considered to be normal breathing. If the person isn't breathing normally and you are trained in CPR, begin mouth-to-mouth breathing. If you believe the person is unconscious from a heart attack and you haven't been trained in emergency procedures, skip mouth-to-mouth rescue breathing and proceed directly to chest compressions.

### **Breathing: Breathe for the person**

Rescue breathing can be mouth-to-mouth breathing or mouth-to-nose breathing if the mouth is seriously injured or can't be opened.

1. With the airway open (using the head-tilt, chin-lift maneuver), pinch the nostrils shut for mouth-to-mouth breathing and cover the person's mouth with yours, making a seal.
2. Prepare to give two rescue breaths. Give the first rescue breath — lasting one second — and watch to see if the chest rises. If it does rise, give the second breath. If the chest doesn't rise, repeat the head-tilt, chin-lift maneuver and then give the second breath.
3. Begin chest compressions to restore circulation.

### **Circulation: Restore blood circulation with chest compressions**

1. Place the heel of one hand over the center of the person's chest, between the nipples. Place your other hand on top of the first hand. Keep your elbows straight and position your shoulders directly above your hands.
2. Use your upper body weight (not just your arms) as you push straight down on (compress) the chest 2 inches (approximately 5 centimeters). Push hard at a rate of 100 compressions a minute.
3. After 30 compressions, tilt the head back and lift the chin up to open the airway. Prepare to give two rescue breaths. Pinch the nose shut and breathe into the mouth for one second. If the chest rises, give a second rescue breath. If the chest doesn't rise, repeat the head-tilt, chin-lift maneuver and then give the second rescue breath. That's one cycle. If someone else is available, ask that person to give two breaths after you do 30 compressions. If you're not trained in CPR and feel comfortable performing only chest compressions, skip rescue breathing and continue chest compressions at a rate of 100 compressions a minute until medical personnel arrive.
4. If the person has not begun moving after five cycles (about two minutes) and an automatic external defibrillator (AED) is available, apply it and follow the prompts. Administer one shock, then resume CPR — starting with chest compressions — for two more minutes before administering a second shock. If you're not trained to use an AED, a 911 operator may be able to guide you in its use. Use pediatric pads, if available, for children ages 1 to 8. Do not use an AED for babies younger than age 1. If an AED isn't available, go to step 5 below.
5. Continue CPR until there are signs of movement or until emergency medical personnel take over.

## To perform CPR on a child

The procedure for giving CPR to a child age 1 through 8 is essentially the same as that for an adult. The differences are as follows:

- If you're alone, perform five cycles of compressions and breaths on the child — this should take about two minutes — before calling 911 or your local emergency number or using an AED.
- Use only one hand to perform heart compressions.
- Breathe more gently.
- Use the same compression-breath rate as is used for adults: 30 compressions followed by two breaths. This is one cycle. Following the two breaths, immediately begin the next cycle of compressions and breaths.
- After five cycles (about two minutes) of CPR, if there is no response and an AED is available, apply it and follow the prompts. Use pediatric pads if available. If pediatric pads aren't available, use adult pads.

Continue until the child moves or help arrives.

## To perform CPR on a baby

Most cardiac arrests in babies occur from lack of oxygen, such as from drowning or choking. If you know the baby has an airway obstruction, perform first aid for choking. If you don't know why the baby isn't breathing, perform CPR.

To begin, examine the situation. Stroke the baby and watch for a response, such as movement, but don't shake the baby.

If there's no response, follow the ABC procedures below and time the call for help as follows:

- If you're the only rescuer and CPR is needed, do CPR for two minutes — about five cycles — before calling 911 or your local emergency number.
- If another person is available, have that person call for help immediately while you attend to the baby.

### **Airway: Clear the airway**

1. Place the baby on his or her back on a firm, flat surface, such as a table. The floor or ground also will do.
2. Gently tip the head back by lifting the chin with one hand and pushing down on the forehead with the other hand.
3. In no more than 10 seconds, put your ear near the baby's mouth and check for breathing: Look for chest motion, listen for breath sounds, and feel for breath on your cheek and ear.

If the infant isn't breathing, begin mouth-to-mouth rescue breathing immediately. Compressions-only CPR doesn't work for infants.

## Breathing: Breathe for the infant

1. Cover the baby's mouth and nose with your mouth.
2. Prepare to give two rescue breaths. Use the strength of your cheeks to deliver gentle puffs of air (instead of deep breaths from your lungs) to slowly breathe into the baby's mouth one time, taking one second for the breath. Watch to see if the baby's chest rises. If it does, give a second rescue breath. If the chest does not rise, repeat the head-tilt, chin-lift maneuver and then give the second breath.
3. If the baby's chest still doesn't rise, examine the mouth to make sure no foreign material is inside. If the object is seen, sweep it out with your finger. If the airway seems blocked, perform first aid for a choking baby.
4. Begin chest compressions to restore blood circulation.

## Circulation: Restore blood circulation

1. Imagine a horizontal line drawn between the baby's nipples. Place two fingers of one hand just below this line, in the center of the chest.
2. Gently compress the chest to about one-third to one-half the depth of the chest.
3. Count aloud as you pump in a fairly rapid rhythm. You should pump at a rate of 100 compressions a minute.
4. Give two breaths after every 30 chest compressions.
5. Perform CPR for about two minutes before calling for help unless someone else can make the call while you attend to the baby.
6. Continue CPR until you see signs of life or until medical personnel arrive.

## CHOKING *To prepare yourself for these situations, learn the Heimlich maneuver and CPR in a certified first-aid training course.*

Choking occurs when a foreign object becomes lodged in the throat or windpipe, blocking the flow of air. In adults, a piece of food often is the culprit. Young children often swallow small objects. Because choking cuts off oxygen to the brain, administer first aid as quickly as possible.

The universal sign for choking is hands clutched to the throat. If the person doesn't give the signal, look for these indications:

- Inability to talk
- Difficulty breathing or noisy breathing
- Inability to cough forcefully
- Skin, lips and nails turning blue or dusky
- Loss of consciousness

If choking is occurring, the Red Cross recommends a **"five-and-five"** approach to delivering first aid:

- **First**, deliver five back blows between the person's shoulder blades with the heel of your hand.
- **Next**, perform five abdominal thrusts (also known as the **Heimlich maneuver**).
- **Alternate** between five back blows and five abdominal thrusts until the blockage is dislodged.

**To perform abdominal thrusts (Heimlich maneuver) on someone else:**

- **Stand behind the person.** Wrap your arms around the waist. Tip the person forward slightly.
- **Make a fist with one hand.** Position it slightly above the person's navel.



- **Grasp the fist with the other hand.** Press hard into the abdomen with a quick, upward thrust — as if trying to lift the person up.
- **Perform a total of five abdominal thrusts**, if needed. If the blockage still isn't dislodged, repeat the five-and-five cycle.

If you're the only rescuer, perform back blows and abdominal thrusts before calling 911 or your local emergency number for help. If another person is available, have that person call for help while you perform first aid.

If the person becomes unconscious, perform standard CPR with chest compressions.

If you're alone and choking, you'll be unable to effectively deliver back blows to yourself. However, you can still perform abdominal thrusts to dislodge the item.



#### To perform abdominal thrusts (Heimlich maneuver) on yourself:

- **Place a fist** slightly above your navel.
- **Grasp your fist** with the other hand and bend over a hard surface — a countertop or chair will do.
- **Shove your fist** inward and upward.

#### Clearing the airway of a pregnant woman or obese person:

- **Position your hands a little bit higher** than with a normal Heimlich maneuver, at the base of the breastbone, just above the joining of the lowest ribs.
- **Proceed as with the Heimlich maneuver**, pressing hard into the chest, with a quick thrust.
- **Repeat** until the food or other blockage is dislodged or the person becomes unconscious.

#### Clearing the airway of an unconscious person:

- **Lower the person** on his or her back onto the floor.
- **Clear the airway.** If there's a visible blockage at the back of the throat or high in the throat, reach a finger into the mouth and sweep out the cause of the blockage. Be careful not to push the food or object deeper into the airway, which can happen easily in young children.
- **Begin cardiopulmonary resuscitation (CPR)** if the object remains lodged and the person doesn't respond after you take the above measures. The chest compressions used in CPR may dislodge the object. Remember to recheck the mouth periodically.

#### Clearing the airway of a choking infant younger than age 1:

- **Assume a seated position and hold the infant facedown** on your forearm, which is resting on your thigh.
- **Thump the infant gently but firmly** five times on the middle of the back using the heel of your hand. The combination of gravity and the back blows should release the blocking object.
- **Hold the infant faceup on your forearm** with the head lower than the trunk if the above doesn't work. Using two fingers placed at the center of the infant's breastbone, give five quick chest compressions.
- **Repeat the back blows and chest thrusts** if breathing doesn't resume. Call for emergency medical help.
- **Begin infant CPR** if one of these techniques opens the airway but the infant doesn't resume breathing.

If the child is older than age 1, give abdominal thrusts only.

# ELECTRIC SHOCK



The danger from an electrical shock depends on the type of current, how high the voltage is, how the current traveled through the body, the person's overall health and how quickly the person is treated.

Call 911 or your local emergency number immediately if any of these signs or symptoms occur:

- Cardiac arrest
- Heart rhythm problems (arrhythmias)
- Respiratory failure
- Muscle pain and contractions
- Burns
- Seizures
- Numbness and tingling
- Unconsciousness

## **While waiting for medical help, follow these steps:**

- **Look first. Don't touch.** The person may still be in contact with the electrical source. Touching the person may pass the current through you.
- **Turn off the source of electricity, if possible.** If not, move the source away from you and the person, using a nonconducting object made of cardboard, plastic or wood.
- **Check for signs of circulation (breathing, coughing or movement).** If absent, begin cardiopulmonary resuscitation (CPR) immediately.
- **Prevent shock.** Lay the person down and, if possible, position the head slightly lower than the trunk, with the legs elevated.

After coming into contact with electricity, the person should see a doctor to check for internal injuries, even if he or she has no obvious signs or symptoms.

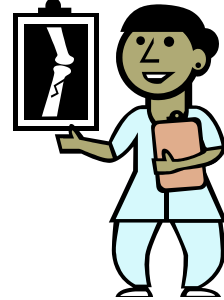
## **Caution**

- **Don't touch the person with your bare hands** if he or she is still in contact with the electrical current.
- **Don't get near high-voltage wires** until the power is turned off. Stay at least 20 feet away — farther if wires are jumping and sparking.
- **Don't move a person** with an electrical injury unless the person is in immediate danger.

# FRACTURES

A fracture is a broken bone. It requires medical attention. If the broken bone is the result of major trauma or injury, call 911 or your local emergency number. Also call for emergency help if:

- The person is unresponsive, isn't breathing or isn't moving. Begin cardiopulmonary resuscitation (CPR) if there's no respiration or heartbeat.
- There is heavy bleeding.
- Even gentle pressure or movement causes pain.
- The limb or joint appears deformed.
- The bone has pierced the skin.
- The extremity of the injured arm or leg, such as a toe or finger, is numb or bluish at the tip.
- You suspect a bone is broken in the neck, head or back.
- You suspect a bone is broken in the hip, pelvis or upper leg (for example, the leg and foot turn outward abnormally).



Don't move the person except if necessary to avoid further injury. Take these actions immediately while waiting for medical help:

- **Stop any bleeding.** Apply pressure to the wound with a sterile bandage, a clean cloth or a clean piece of clothing.
- **Immobilize the injured area.** Don't try to realign the bone or push a bone that's sticking out back in. If you've been trained in how to splint and professional help isn't readily available, apply a splint to the area above and below the fracture sites. Padding the splints can help reduce discomfort.
- **Apply ice packs to limit swelling and help relieve pain until emergency personnel arrive.** Don't apply ice directly to the skin — wrap the ice in a towel, piece of cloth or some other material.
- **Treat for shock.** If the person feels faint or is breathing in short, rapid breaths, lay the person down with the head slightly lower than the trunk and, if possible, elevate the legs.

# HEAD TRAUMA

Most head trauma involves injuries that are minor and don't require hospitalization. However, call 911 or your local emergency number if any of the following signs or symptoms are apparent:

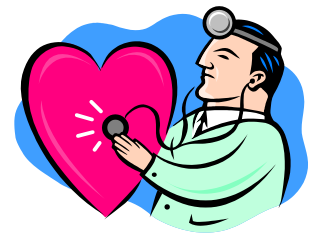
- Severe head or facial bleeding
- Bleeding from the nose or ears
- Severe headache
- Change in level of consciousness for more than a few seconds
- Black-and-blue discoloration below the eyes or behind the ears
- Cessation of breathing
- Confusion
- Loss of balance
- Weakness or an inability to use an arm or leg
- Unequal pupil size
- Repeated vomiting
- Slurred speech
- Seizures



## **If severe head trauma occurs:**

- **Keep the person still.** Until medical help arrives, keep the injured person lying down and quiet, with the head and shoulders slightly elevated. Don't move the person unless necessary, and avoid moving the person's neck.
- **Stop any bleeding.** Apply firm pressure to the wound with sterile gauze or a clean cloth. But don't apply direct pressure to the wound if you suspect a skull fracture.
- **Watch for changes in breathing and alertness.** If the person shows no signs of circulation (breathing, coughing or movement), begin CPR.

# HEART ATTACK



Someone having a heart attack may experience any or all of the following:

- Uncomfortable pressure, fullness or squeezing pain in the center of the chest
- Prolonged pain in the upper abdomen
- Discomfort or pain spreading beyond the chest to the shoulders, neck, jaw, teeth, or one or both arms
- Shortness of breath
- Lightheadedness, dizziness, fainting
- Sweating
- Nausea

A heart attack occurs when an artery supplying your heart with blood and oxygen becomes partially or completely blocked. This loss of blood flow injures or destroys part of your heart muscle. A heart attack generally causes chest pain for more than 15 minutes, but it can also have no symptoms at all.

Many people who experience a heart attack have warning symptoms hours, days or weeks in advance. The earliest warning sign of an attack may be ongoing episodes of chest pain that start when you're physically active, but are relieved by rest.

## **If you or someone else may be having a heart attack:**

- **Call 911 or your local emergency medical assistance number.** Don't tough out the symptoms of a heart attack for more than five minutes. If you don't have access to emergency medical services, have a neighbor or a friend drive you to the nearest hospital. Drive yourself only as a last resort, if there are absolutely no other options, and realize that it places you and others at risk when you drive under these circumstances.
- **Chew and swallow an aspirin,** unless you're allergic to aspirin or have been told by your doctor never to take aspirin. But seek emergency help first, such as calling 911.
- **Take nitroglycerin,** if prescribed. If you think you're having a heart attack and your doctor has previously prescribed nitroglycerin for you, take it as directed. Do not take anyone else's nitroglycerin, because that could put you in more danger.
- **Begin CPR.** If you're with a person who might be having a heart attack and he or she is unconscious, tell the 911 dispatcher or another emergency medical specialist. You may be advised to begin cardiopulmonary resuscitation (CPR). If you haven't received CPR training, doctors recommend skipping mouth-to-mouth rescue breathing and performing only chest compressions. The dispatcher can instruct you in the proper procedures until help arrives.

# NOSEBLEED



Nosebleeds are common. Most often they are a nuisance and not a true medical problem. But they can be both.

Among children and young adults, nosebleeds usually originate from the septum, just inside the nose. The septum separates your nasal chambers.

In middle-aged and older adults, nosebleeds can begin from the septum, but they may also begin deeper in the nose's interior. This latter origin of nosebleed is much less common. It may be caused by hardened arteries or high blood pressure. These nosebleeds begin spontaneously and are often difficult to stop. They require a specialist's help.

## **To take care of a nosebleed:**

- **Sit upright and lean forward.** By remaining upright, you reduce blood pressure in the veins of your nose. This discourages further bleeding. Sitting forward will help you avoid swallowing blood, which can irritate your stomach.
- **Pinch your nose.** Use your thumb and index finger to pinch your nostrils shut. Breathe through your mouth. Continue to pinch for five to 10 minutes. This maneuver sends pressure to the bleeding point on the nasal septum and often stops the flow of blood.
- **To prevent re-bleeding after bleeding has stopped,** don't pick or blow your nose and don't bend down until several hours after the bleeding episode. Keep your head higher than the level of your heart.
- **If re-bleeding occurs,** blow out forcefully to clear your nose of blood clots and spray both sides of your nose with a decongestant nasal spray containing oxymetazoline (Afrin, others). Pinch your nose in the technique described above and call your doctor.

## **Seek medical care immediately if:**

- The bleeding lasts for more than 20 minutes
- The nosebleed follows an accident, a fall or an injury to your head, including a punch in the face that may have broken your nose

## **For frequent nosebleeds**

If you experience frequent nosebleeds, make an appointment with your doctor. You may need a blood vessel cauterized. Cautery is a technique in which the blood vessel is burned with electric current, silver nitrate or a laser. Sometimes your doctor may pack your nose with special gauze or an inflatable latex balloon to put pressure on the blood vessel and stop the bleeding.

Also call your doctor if you are experiencing nasal bleeding and are taking blood thinners, such as aspirin or warfarin (Coumadin). Your doctor may advise adjusting your medication intake.

Using supplemental oxygen administered with a nasal tube (cannula) may increase your risk of nosebleeds. Apply a water-based lubricant to your nostrils and increase the humidity in your home to help relieve nasal bleeding.

# POISONING



Many conditions mimic the signs and symptoms of poisoning, including seizures, alcohol intoxication, stroke and insulin reaction. So look for the signs and symptoms listed below and if you suspect poisoning, call your regional poison control center or, in the United States, the National Poison Control Center at 800-222-1222 before giving anything to the affected person.

## Signs and symptoms of poisoning:

- Burns or redness around the mouth and lips, from drinking certain poisons
- Breath that smells like chemicals, such as gasoline or paint thinner
- Burns, stains and odors on the person, on his or her clothing, or on the furniture, floor, rugs or other objects in the surrounding area
- Empty medication bottles or scattered pills
- Vomiting, difficulty breathing, sleepiness, confusion or other unexpected signs

## When to call for help:

Call 911 or your local emergency number immediately if the person is:

- Drowsy or unconscious
- Having difficulty breathing or has stopped breathing
- Uncontrollably restless or agitated
- Having seizures



If the person seems stable and has no symptoms, but you suspect poisoning, call your regional poison control center or, in the United States, the National Poison Control Center at 800-222-1222. Provide information about the person's symptoms, the person's age and weight, and any information you have about the poison, such as amount and how long since the person was exposed to it. It helps to have the pill bottle or poison container on hand when you call.

## What to do while waiting for help:

- If the person has been exposed to poisonous fumes, such as carbon monoxide, get him or her into fresh air immediately.
- If the person swallowed the poison, remove anything remaining in the mouth.
- If the suspected poison is a household cleaner or other chemical, read the label and follow instructions for accidental poisoning. If the product is toxic, the label will likely advise you to call the poison control center at 800-222-1222. Also call this 800 number if you can't identify the poison, if it's medication or if there are no instructions.
- Follow treatment directions that are given by the poison control center.
- If the poison spilled on the person's clothing, skin or eyes, remove the clothing. Flush the skin or eyes with cool or lukewarm water, such as by using a shower for 20 minutes or until help arrives.
- Make sure the person is breathing. If not, start rescue breathing and CPR.
- Take the poison container (or any pill bottles) with you to the hospital.

## What NOT to do

**Don't give ipecac syrup or do anything to induce vomiting.** The American Academy of Pediatrics advises discarding ipecac in the home, saying there's no good evidence of effectiveness and that it can do more harm than good.

# SEIZURES

A seizure results from a sudden rush of abnormal electrical signals in the brain. Symptoms may range from a minor daze to uncontrollable muscle spasms (convulsion). In some cases, the victim may even lose consciousness. A seizure can be caused by a high fever, head injury, drug reaction, or conditions such as epilepsy.

- **Protect the head**
  - Help the victim to the floor if he or she begins losing muscle control. Turn the person on his or her side to prevent choking
  - Protect the victim's head from injury by placing something soft, such as folded clothes, beneath it and by moving objects away from the victim
  - Don't cause injury by restraining the person or by placing anything in his or her mouth
- **Preserve dignity**
  - Clear away bystanders
  - Reassure the victim, who may be confused, drowsy, or hostile when coming out of the seizure
  - Cover the person or provide dry clothes if muscle spasms have caused a loss of bladder control
- **Check for Injury**
  - Make sure the victim's mental state has returned to normal. One way to do this is to ask the person his or her name, the year, and your location
  - Look for any injury to the mouth and head
- **Call 911**
  - If the seizure lasts longer than 3 minutes
  - If a second seizure occurs
  - If the victim doesn't regain consciousness
  - If the victim is pregnant
  - If the victim has no history of seizures



# SHOCK

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, which if untreated, can lead to permanent organ damage or death.

Various signs and symptoms appear in a person experiencing shock:

- **The skin is cool and clammy.** It may appear pale or gray.
- **The pulse is weak and rapid.** Breathing may be slow and shallow, or hyperventilation (rapid or deep breathing) may occur. Blood pressure is below normal.
- **The person may be nauseated.** He or she may vomit.
- **The eyes lack luster and may seem to stare.** Sometimes the pupils are dilated.
- **The person may be conscious or unconscious.** If conscious, the person may feel faint or be very weak or confused. Shock sometimes causes a person to become overly excited and anxious.

**If you suspect shock, even if the person seems normal after an injury:**

- **Call 911** or your local emergency number.

- **Have the person lie down** on his or her back with feet about a foot higher than the head. If raising the legs will cause pain or further injury, keep him or her flat. Keep the person still.
- **Check for signs of circulation** (breathing, coughing or movement). If absent, begin CPR.
- **Keep the person warm and comfortable.** Loosen belt and tight clothing and cover the person with a blanket. Even if the person complains of thirst, give nothing by mouth.
- **Turn the person on his or her side** to prevent choking if the person vomits or bleeds from the mouth.
- **Seek treatment for injuries,** such as bleeding or broken bones.



## **SPRAIN**

*Your ligaments are tough, elastic-like bands that connect bone to bone and hold your joints in place. A sprain is an injury to a ligament caused by excessive stretching. The ligament can have a partial tear, or it can be completely torn apart.*

*Of all sprains, ankle and knee sprains occur most often. Sprained ligaments swell rapidly and are painful. Generally, the greater the pain, the more severe the injury is. For most minor sprains, you probably can treat the injury yourself.*

### **Follow the instructions for P.R.I.C.E.**

1. **Protect** the injured limb from further injury by not using the joint. You can do this using anything from splints to crutches.
2. **Rest** the injured limb. But don't avoid all activity. Even with an ankle sprain, you can usually still exercise other muscles to minimize deconditioning. For example, you can use an exercise bicycle with arm exercise handles, working both your arms and the uninjured leg while resting the injured ankle on another part of the bike. That way you still get three-limb exercise to keep up your cardiovascular conditioning.
3. **Ice** the area. Use a cold pack, a slush bath or a compression sleeve filled with cold water to help limit swelling after an injury. Try to ice the area as soon as possible after the injury and continue to ice it for 10 to 15 minutes four times a day for 48 hours. If you use ice, be careful not to use it too long, as this could cause tissue damage.
4. **Compress** the area with an elastic wrap or bandage. Compressive wraps or sleeves made from elastic or neoprene are best.
5. **Elevate** the injured limb above your heart whenever possible to help prevent or limit swelling.

After two days, gently begin using the injured area. You should feel a gradual, progressive improvement. Over-the-counter pain relievers, such as ibuprofen (Advil, Motrin, others) and acetaminophen (Tylenol, others), may be helpful to manage pain during the healing process.

See your doctor if your sprain isn't improving after two or three days.

### **Get emergency medical assistance if:**

- You're unable to bear weight on the injured leg, the joint feels unstable or you can't use the joint. This may mean the ligament was completely torn. On the way to the doctor, apply a cold pack.
- You have a fever higher than 100 F (37.8 C), and the area is red and hot. You may have an infection.
- You have a severe sprain. Inadequate or delayed treatment may cause long-term joint instability or chronic pain.

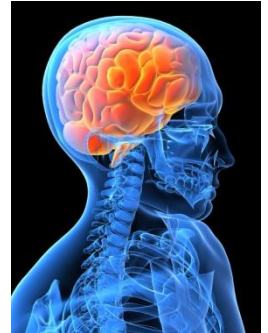
# STROKE

A stroke occurs when there's bleeding into your brain or when normal blood flow to your brain is blocked. Within minutes of being deprived of essential nutrients, brain cells start dying — a process that may continue over the next several hours.

**Seek immediate medical assistance.** A stroke is a true emergency. The sooner treatment is given, the more likely it is that damage can be minimized. Every moment counts.

Signs and symptoms of a stroke include:

- Sudden weakness or numbness in your face, arm or leg on one side of your body
- Sudden dimness, blurring or loss of vision, particularly in one eye
- Loss of speech, trouble talking or understanding speech
- Sudden, severe headache — a bolt out of the blue — with no apparent cause
- Unexplained dizziness, unsteadiness or a sudden fall, especially if accompanied by any of the other signs or symptoms



Risk factors for stroke include having high blood pressure, having had a previous stroke, smoking, having diabetes and having heart disease. Your risk of stroke increases as you age.

