

# Black eye: First aid

The so-called black eye is caused by bleeding beneath the skin around the eye. Sometimes a black eye indicates a more extensive injury, even a skull fracture, particularly if the area around both eyes is bruised (raccoon eyes) or if there has been a head injury.

Although most black eye injuries aren't serious, bleeding within the eye, called a hyphema, is serious and can reduce vision and damage the cornea — the clear, protective "window" at the front of the eye. In some cases, abnormally high pressure inside the eyeball (glaucoma) also can result.

To take care of a black eye:

- Using gentle pressure, apply a cold pack or a cloth filled with ice to the area around the eye. Take care not to press on the eye itself. Apply cold as soon as possible after the injury to reduce swelling, and continue using ice or cold packs for 24 to 48 hours.
- Be sure there's no blood within the white and colored parts of the eye.

Seek medical care immediately if you experience vision problems (double vision, blurring), severe pain, or bleeding in the eye or from the nose.

# Blisters: First aid

Common causes of blisters include friction and burns. If the blister isn't too painful, do everything possible to keep it intact. Unbroken skin over a blister provides a natural barrier to bacteria and decreases the risk of infection. Cover a small blister with an adhesive bandage, and cover a large one with a porous, plastic-coated gauze pad that absorbs moisture and allows the wound to breathe.

Don't puncture a blister unless it's painful or prevents you from walking or using one of your hands. If you have diabetes or poor circulation, call your doctor before considering the self-care measures below.

To relieve blister-related pain, drain the fluid while leaving the overlying skin intact. Here's how:

- **Wash your hands and the blister** with soap and warm water.
- **Swab the blister** with iodine or rubbing alcohol.
- **Sterilize a clean, sharp needle** by wiping it with rubbing alcohol.
- **Use the needle to puncture the blister.** Aim for several spots near the blister's edge. Let the fluid drain, but leave the overlying skin in place.
- **Apply an antibiotic ointment** to the blister and cover with a bandage or gauze pad.
- **Cut away all the dead skin** after several days, using tweezers and scissors sterilized with rubbing alcohol. Apply more ointment and a bandage.

Call your doctor if you see signs of infection around a blister — pus, redness, increasing pain or warm skin.

To prevent a blister, use gloves, socks, a bandage or similar protective covering over the area being rubbed. Special athletic socks are available that have extra padding in critical areas. You might also try attaching moleskin to the inside of your shoe where it might rub, such as at the heel.

## Shoe-shopping tips

Remember the following when you shop for shoes:

- **Shop during the middle of the day.** Your feet swell throughout the day, so a midday fitting will probably give you the best fit.

- **Wear the same socks you'll wear when walking**, or bring them with you to the store.
- **Measure your feet.** Shoe sizes change throughout adulthood.
- **Measure both feet and try on both shoes.** If your feet differ in size, buy the larger size.
- **Go for flexible, but supportive, shoes** with cushioned insoles.
- **Leave toe room.** Be sure that you can comfortably wiggle your toes.
- **Avoid shoes with seams in the toe box**, which may irritate bunions or hammertoes.

# Bruise: First aid

A bruise forms when a blow breaks small blood vessels near your skin's surface, allowing a small amount of blood to leak out into the tissues under your skin. The trapped blood appears as a black-and-blue mark. Sometimes, there also are tiny red dots or red splotches.

If your skin isn't broken, you don't need a bandage. You can, however, enhance bruise healing with these simple techniques:

- Elevate the injured area.
- Apply ice or a cold pack several times a day for a day or two after the injury.
- Rest the bruised area, if possible.
- Consider acetaminophen (Tylenol, others) for pain relief.

## See your doctor if:

- You have unusually large or painful bruises — particularly if your bruises seem to develop for no known reasons.
- You bruise easily and you're experiencing abnormal bleeding elsewhere, such as from your nose or gums, or you notice blood in your eyes, your stool or your urine.
- You have no history of bruising, but suddenly experience bruises.

These signs and symptoms may indicate a more serious problem, such as a blood-clotting problem or blood-related disease. Bruises accompanied by persistent pain or headache also may indicate a more serious underlying illness and require medical attention

# Burns: First aid

To distinguish a minor burn from a serious burn, the first step is to determine the degree and the extent of damage to body tissues. The three 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. The skin is usually red, with swelling and pain sometimes present. The outer layer of skin hasn't been burned through. 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.

## 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 (7.5 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 (7.5 centimeters) in diameter, take the following action:

- **Cool the burn.** Hold the burned area under cold running water for at least five minutes, or until the pain subsides. If this is impractical, immerse the burn in cold 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, which may irritate the skin. Wrap the gauze loosely to avoid putting pressure on burned skin. Bandaging keeps air off the burned skin, 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). Never give aspirin to children or teenagers.

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 frostbite, further damaging your skin.
- **Don't apply butter or ointments to the burn.** This could prevent proper healing.
- **Don't break blisters.** Broken blisters are vulnerable to infection.

### **Third-degree burn**

The most serious burns are painless, 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,** dial 911 or call for emergency medical assistance. Until an emergency unit arrives, follow these steps:

1. **Don't remove burnt 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 shock.
3. **Check for signs of circulation (breathing, coughing or movement).** If there is no breathing or other sign of circulation, begin cardiopulmonary resuscitation (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.

# Cardiopulmonary resuscitation (CPR): First aid

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. CPR involves a combination of chest compression and mouth-to-mouth rescue breathing that keeps 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. Death will occur within eight to 10 minutes. Time is critical when you're helping an unconscious person who isn't breathing.

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

Assess the situation before starting CPR:

- 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 advised 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 breath sounds, and feel for the person's breath on your cheek and ear. Gaspings 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 compression.

### **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 and push fast — give two compressions per second, or about 120 compressions per 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.

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. The American Heart Association recommends administering one shock, then resuming 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. Trained staff at many public places are also able to provide and use an AED. Use pediatric pads, if available, for children ages 1 to 8. Do not use an AED for infants younger than age 1. If an AED isn't available, go to No. 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 infants occur from lack of oxygen, such as from drowning or choking. If you know the infant has an airway obstruction, perform first aid for choking. If you don't know why the infant isn't breathing, perform CPR.

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

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 breathing immediately.

### **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 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 infant.
4. Begin chest compressions to restore 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 about 100 to 120 pumps 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 a professional relieves you.

# Chest pain: First aid

Causes of chest pain can vary from minor problems, such as indigestion or stress, to serious medical emergencies, such as a heart attack or pulmonary embolism. The specific cause of chest pain is often difficult to interpret.

As with other sudden, unexplained pains, chest pain may be a signal for you to get medical help. Use the following information to help you determine whether your chest pain is a medical emergency.

## Heart attack

A heart attack occurs when an artery that supplies oxygen to your heart muscle becomes blocked. A heart attack generally causes chest pain that lasts longer than 15 minutes. But a heart attack can also be silent and produce no signs or symptoms.

Many people who suffer a heart attack have warning symptoms hours, days or weeks in advance. The earliest predictor of an attack may be recurrent chest pain that's triggered by exertion and relieved by rest.

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 lasting more than a few minutes
- Pain spreading to the shoulders, neck or arms
- Lightheadedness, fainting, sweating, nausea or shortness of breath

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

- **Dial 911 or call for emergency medical assistance.** 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 someone such as a neighbor or friend drive you to the nearest hospital. Drive yourself only as a last resort, if there are absolutely no other options. Driving yourself puts you and others at risk if your condition suddenly worsens.
- **Chew a regular-strength aspirin.** Aspirin can inhibit blood clotting. However, you shouldn't take aspirin if you're allergic to aspirin, have bleeding problems or your doctor previously told you not to do so.
- **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.

- **Begin CPR.** If the person suspected of having a heart attack is unconscious, a 911 dispatcher or another emergency medical specialist may advise you to begin cardiopulmonary resuscitation (CPR). Even if you're not trained, a dispatcher can instruct you in CPR until help arrives.

## **Pulmonary embolism**

An embolus is an accumulation of foreign material — usually a blood clot — that blocks an artery. Tissue death occurs when the tissue supplied by the blocked artery is damaged by the sudden loss of blood. Pulmonary embolism describes the condition that occurs when a clot — usually from the veins of your leg or pelvis — lodges in an artery of your lung.

Signs and symptoms of pulmonary embolism include:

- Sudden, sharp chest pain that begins or worsens with a deep breath or a cough, often accompanied by shortness of breath
- Sudden, unexplained shortness of breath, even without pain
- Cough that may produce blood-streaked sputum
- Rapid heartbeat
- Anxiety and excessive perspiration

As with a suspected heart attack, dial 911 or call for emergency medical assistance immediately.

## **Pneumonia with pleurisy**

Frequent signs and symptoms of pneumonia are chest pain accompanied by chills, fever and a cough that may produce bloody or foul-smelling sputum. When pneumonia occurs with an inflammation of the membranes that surround the lung (pleura), you may have considerable chest discomfort when inhaling or coughing. This condition is called pleurisy.

One sign of pleurisy is that the pain is usually relieved temporarily by holding your breath or putting pressure on the painful area of your chest. This is not true of a heart attack. See your doctor if a cough and a fever or chills accompany your chest pain. Pleurisy alone, however, isn't a medical emergency.

## **Chest wall pain**

One of the most common varieties of harmless chest pain is chest wall pain. One kind of chest wall pain is costochondritis. It consists of pain and tenderness in and around the cartilage that connects your ribs to your breastbone (sternum).

Often, placing pressure over a few points along the margin of the sternum results in considerable tenderness limited to those small areas. If the pressure of a

finger duplicates your chest pain, you probably can conclude that a serious cause of chest pain, such as a heart attack, isn't responsible.

**Other causes of chest pain include:**

- Strained chest muscles from overuse or excessive coughing
- Chest muscle bruising from minor trauma
- Acute anxiety with rapid breathing
- Pain from the gastrointestinal tract, such as esophageal reflux, peptic ulcer pain, or gallbladder pain.

# Choking: First aid

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.

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.

## 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 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.

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

# Cuts and scrapes: First aid

Minor cuts and scrapes usually don't require a trip to the emergency room. Yet proper care is essential to avoid infection or other complications. These guidelines can help you care for simple wounds:

1. **Stop the bleeding.** Minor cuts and scrapes usually stop bleeding on their own. If they don't, apply gentle pressure with a clean cloth or bandage. Hold the pressure continuously for 20 to 30 minutes. Don't keep checking to see if the bleeding has stopped because this may damage or dislodge the fresh clot that's forming and cause bleeding to resume. If the blood spurts or continues to flow after continuous pressure, seek medical assistance.
2. **Clean the wound.** Rinse out the wound with clear water. Soap can irritate the wound, so try to keep it out of the actual wound. If dirt or debris remains in the wound after washing, use tweezers cleaned with alcohol to remove the particles. If debris remains embedded in the wound after cleaning, see your doctor. Thorough wound cleaning reduces the risk of infection and tetanus. To clean the area around the wound, use soap and a washcloth. There's no need to use hydrogen peroxide, iodine or an iodine-containing cleanser.
3. **Apply an antibiotic.** After you clean the wound, apply a thin layer of an antibiotic cream or ointment such as Neosporin or Polysporin to help keep the surface moist. The products don't make the wound heal faster, but they can discourage infection and allow your body's healing process to close the wound more efficiently. Certain ingredients in some ointments can cause a mild rash in some people. If a rash appears, stop using the ointment.
4. **Cover the wound.** Bandages can help keep the wound clean and keep harmful bacteria out. After the wound has healed enough to make infection unlikely, exposure to the air will speed wound healing.
5. **Change the dressing.** Change the dressing at least daily or whenever it becomes wet or dirty. If you're allergic to the adhesive used in most bandages, switch to adhesive-free dressings or sterile gauze held in place with paper tape, gauze roll or a loosely applied elastic bandage. These supplies generally are available at pharmacies.
6. **Get stitches for deep wounds.** A wound that is more than 1/4 inch (6 millimeters) deep or is gaping or jagged edged and has fat or muscle protruding usually requires stitches. A strip or two of surgical tape may hold a minor cut together, but if you can't easily close the mouth of the

wound, see your doctor as soon as possible. Proper closure within a few hours reduces the risk of infection.

7. **Watch for signs of infection.** See your doctor if the wound isn't healing or you notice any redness, increasing pain, drainage, warmth or swelling.
8. **Get a tetanus shot.** Doctors recommend you get a tetanus shot every 10 years. If your wound is deep or dirty and your last shot was more than five years ago, your doctor may recommend a tetanus shot booster. Get the booster within 48 hours of the injury.

# Dislocation: First aid

A dislocation is an injury in which the ends of your bones are forced from their normal positions. The cause is usually trauma, such as a blow or fall, but dislocation can be caused by an underlying disease, such as rheumatoid arthritis.

Dislocations are common injuries in contact sports, such as football and hockey, and in sports that may involve falls, such as downhill skiing and volleyball. Dislocations may occur in major joints, such as your shoulder, hip, knee, elbow or ankle or in smaller joints, such as your finger, thumb or toe.

The injury will temporarily deform and immobilize your joint and may result in sudden and severe pain and swelling. A dislocation requires prompt medical attention to return your bones to their proper positions.

## **If you believe you have dislocated a joint:**

1. **Don't delay medical care.** Get medical help immediately.
2. **Don't move the joint.** Until you receive help, splint the affected joint into its fixed position. Don't try to move a dislocated joint or force it back into place. This can damage the joint and its surrounding muscles, ligaments, nerves or blood vessels.
3. **Put ice on the injured joint.** This can help reduce swelling by controlling internal bleeding and the buildup of fluids in and around the injured joint.

# Fainting: First aid

Fainting occurs when the blood supply to your brain is momentarily inadequate, causing you to lose consciousness. This loss of consciousness is usually brief.

Fainting can have no medical significance, or the cause can be a serious disorder. Therefore, treat loss of consciousness as a medical emergency until the signs and symptoms are relieved and the cause is known.

## If you feel faint:

- Lie down or sit down.
- If you sit down, place your head between your knees.

Discuss recurrent fainting spells with your doctor.

## If someone else faints:

1. **Position the person on his or her back.** Elevate the legs above heart level — about 12 inches (30 centimeters), if possible.
2. **Check the person's airway to be sure it's clear.** Watch for vomiting.
3. **Check for signs of circulation (breathing, coughing or movement).** If absent, begin CPR. Call 911 or your local emergency number. Continue CPR until help arrives or the person responds and begins to breathe.
4. **Help restore blood flow.** If the person is breathing, restore blood flow to the brain by raising the person's legs above the level of the head. Loosen belts, collars or other constrictive clothing. The person should revive quickly. If the person doesn't regain consciousness within one minute, dial 911 or call for emergency medical assistance.

If the person was injured in a fall associated with a faint, treat any bumps, bruises or cuts appropriately. Control bleeding with direct pressure.

# Fever: First aid

Fever is one of your body's reactions to infection. What's normal for you may be a little higher or lower than the average temperature of 98.6 F (37 C). But a rectal temperature higher than 100.4 F (38 C) is always considered a fever. A rectal temperature reading is generally 1 degree F (about 0.5 degree C) higher than an oral reading.

For very young children and infants, even slightly elevated temperatures may indicate a serious infection. In newborns, a subnormal temperature — rather than a fever — also may be a sign of serious illness.

Don't treat fevers below 102 F (38.9 C) with any medications unless advised to do so by your doctor. If you have a fever of 102 F (38.9 C) or higher, your doctor may suggest taking an over-the-counter medication, such as acetaminophen (Tylenol, others) or ibuprofen (Advil, Motrin, others). Adults may also use aspirin. But don't give aspirin to children. It may trigger a rare, but potentially fatal, disorder known as Reye's syndrome. Also, don't give ibuprofen to infants younger than 6 months of age.

Fahrenheit-Celsius conversion table	
°F	°C
105	40.6
104	40.0
103	39.4
102	38.9
101	38.3
100	37.8
99	37.2
98	36.7
97	36.1
96	35.6

## How to take a temperature

You can choose from several types of thermometers. Today most have digital readouts. Some take the temperature quickly from the ear canal and can be especially useful for young children and older adults. Other thermometers can be used rectally, orally or under the arm. If you use a digital thermometer, be sure to read the instructions so you know what the beeps mean and when to read the thermometer. Under normal circumstances, temperatures tend to be highest around 4 p.m. and lowest around 4 a.m.

Because of the potential for mercury exposure or ingestion, glass mercury thermometers have been phased out and are no longer recommended.

### **Rectally (for infants)**

To take your child's temperature rectally:

- Place a dab of petroleum jelly or other lubricant on the bulb.
- Lay your child on his or her stomach.
- Carefully insert the bulb one-half inch to one inch into the rectum.
- Hold the bulb and child still for three minutes. To avoid injury, don't let go of the thermometer while it's inside your child.
- Remove and read the temperature as recommended by the manufacturer.
- A rectal temperature reading is generally 1 degree F (about 0.5 degree C) higher than a simultaneously taken oral reading.

Taking a rectal temperature is also an option for older adults when taking an oral temperature is not possible.

### **Orally**

To take your temperature orally:

- Place the bulb under your tongue.
- Close your mouth for the recommended amount of time, usually three minutes.

### **Under the arm (axillary)**

Although it's not the most accurate way to take a temperature, you can also use an oral thermometer for an armpit reading:

- Place the thermometer under your arm with your arm down.
- Hold your arms across your chest.
- Wait five minutes or as recommended by your thermometer's manufacturer. Then remove the thermometer and read the temperature.
- An axillary reading is generally 1 degree F (about 0.5 degree C) less than an oral reading.

To take your child's axillary temperature, sit your child in your lap with your child facing to the side. Place the thermometer under your child's near arm, which should be against your chest.

### **Get medical help for a fever in these cases:**

- If a baby is younger than 3 months of age and has a rectal temperature of 100.4 F (38 C) or higher. Even if your baby doesn't have other signs or symptoms, call your doctor just to be safe.
- If a baby is older than 3 months of age and has a temperature of 102 F (38.9 C) or higher.

- If a newborn has a lower than normal temperature — less than 97 F (36.1 C) rectally.
- If a child younger than age 2 has a fever for more than one day, or a child age 2 or older has a fever for more than three days. If your child has a fever after being left in a very hot car, seek medical care immediately.
- If an adult has a temperature of more than 103 F (39.4 C) or has had a fever for more than three days.

**Call your doctor immediately if any of these signs or symptoms accompanies a fever:**

- A severe headache
- Severe swelling of the throat
- Unusual skin rash
- Unusual eye sensitivity to bright light
- A stiff neck and pain when the head is bent forward
- Mental confusion
- Persistent vomiting
- Difficulty breathing or chest pain
- Extreme listlessness or irritability
- Abdominal pain or pain when urinating
- Any other unexplained symptoms

When reporting a fever to your doctor, don't attempt to convert from a rectal reading to an oral reading. It's simpler to just report what the reading was and how you took it.

# First-aid kits: Stock supplies that can save lives

A well-stocked first-aid kit can help you respond effectively to common injuries and emergencies. Keep at least one first-aid kit in your home and one in your car. Store your kits in easy-to-retrieve locations that are out of the reach of young children. Children old enough to understand the purpose of the kits should know where they are stored.

You can purchase first-aid kits at many drugstores or assemble your own. Contents of a first-aid kit should include:

## Basic supplies

- Adhesive tape
- Aluminum finger splints
- Antibiotic ointment
- Antiseptic solution or towelettes
- Bandages, including a roll of elastic wrap (Ace, Coban, others) and bandage strips (Band-Aid, Curad, others) in assorted sizes
- Instant cold packs
- Cotton balls and cotton-tipped swabs
- Disposable latex or synthetic gloves, at least two pair
- Gauze pads and roller gauze in assorted sizes
- Eye goggles
- First-aid manual
- Petroleum jelly or other lubricant
- Plastic bags for the disposal of contaminated materials
- Safety pins in assorted sizes
- Save-A-Tooth storage device containing salt solution and a travel case
- Scissors, tweezers and a needle
- Soap or instant hand sanitizer
- Sterile eyewash, such as a saline solution
- Thermometer
- Triangular bandage
- Turkey baster or other bulb suction device for flushing out wounds

## Medications

- Activated charcoal (use only if instructed by your poison control center)
- Anti-diarrhea medication
- Over-the-counter oral antihistamine (Benadryl, others)
- Aspirin and nonaspirin pain relievers (never give aspirin to children)
- Calamine lotion

- Over-the-counter hydrocortisone cream
- Personal medications
- If prescribed by your doctor, drugs to treat an allergic attack, such as an auto-injector of epinephrine (EpiPen)
- Syringe, medicine cup or spoon

### **Emergency items**

- Cell phone and recharger that utilizes the accessory plug in your car dash
- Emergency phone numbers, including contact information for your family doctor and pediatrician, local emergency services, emergency road service providers and the regional poison control center
- Small, waterproof flashlight and extra batteries
- Candles and matches for cold climates
- Sunscreen
- Mylar emergency blanket
- First-aid instruction manual

### **Give your kit a checkup**

Check your first-aid kits regularly, at least every three months, to be sure the flashlight batteries work and to replace supplies that have expired.

In addition, take a first-aid course to prepare for a possible medical emergency. Be sure the course covers cardiopulmonary resuscitation (CPR) and how to use an automatic external defibrillator (AED). Renew your CPR certification at least every two years.

Prepare children for medical emergencies in age-appropriate ways. The American Red Cross offers a number of helpful resources, including classes designed to help children understand and use first-aid techniques

# Fractures (broken bones): First aid

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).

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, but if you've been trained in how to splint and professional help isn't readily available, apply a splint to the area.
- **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 pain: First aid

Most headaches are minor, and you can treat them with a pain reliever. Some head pain, however, signals a dangerous or serious medical problem. Don't ignore unexplained head pain or head pain that steadily worsens. Get medical attention right away if your head pain:

- Develops suddenly and severely
- Accompanies a fever, stiff neck, rash, mental confusion, seizures, changes in vision, dizziness, weakness, loss of balance, numbness or difficulty speaking
- Is severe and follows a recent sore throat or respiratory infection
- Begins or worsens after a head injury, fall or bump
- Is a new pain, and you're older than 50
- Is excruciating and affects just one, reddened eye
- Progressively worsens over the course of a single day, or persists for several days

# Head trauma: First aid

Most head trauma involves injuries that are minor and don't require hospitalization. However, dial 911 or call for emergency medical assistance if any of the following signs 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 in a darkened room, 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: First aid

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

Many people who suffer a heart attack have warning symptoms hours, days or weeks in advance. The earliest predictor of an attack may be recurrent chest pain that's triggered by exertion and relieved by rest (angina).

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

- Uncomfortable pressure, fullness or squeezing pain in the center of the chest. The pain might last several minutes or come and go. It may be triggered by exertion and relieved by rest.
- 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.

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

- **Dial 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. Police or fire-rescue units also may be a source of transportation. 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 proceeding directly to chest compression. The dispatcher can instruct you in the proper procedures until help arrives.

# Heat exhaustion: First aid

Heat exhaustion is one of the heat-related syndromes, which range in severity from mild heat cramps to heat exhaustion to potentially life-threatening heatstroke.

Signs and symptoms of heat exhaustion often begin suddenly, sometimes after excessive exercise, heavy perspiration and inadequate fluid intake. Signs and symptoms resemble those of shock and may include:

- Feeling faint or dizzy
- Nausea
- Heavy sweating
- Rapid, weak heartbeat
- Low blood pressure
- Cool, moist, pale skin
- Low-grade fever
- Heat cramps
- Headache
- Fatigue
- Dark-colored urine

## **If you suspect heat exhaustion:**

- Get the person out of the sun and into a shady or air-conditioned location.
- Lay the person down and elevate the legs and feet slightly.
- Loosen or remove the person's clothing.
- Have the person drink cool water.
- Cool the person by spraying or sponging him or her with cool water and fanning.
- Monitor the person carefully. Heat exhaustion can quickly become heatstroke.

If fever greater than 102 F (38.9 C), fainting, confusion or seizures occur, dial 911 or call for emergency medical assistance.

# Heatstroke: First aid

Heatstroke is the most severe of the heat-related problems, often resulting from exercise or heavy work in hot environments combined with inadequate fluid intake.

Young children, older adults, people who are obese and people born with an impaired ability to sweat are at high risk of heatstroke. Other risk factors include dehydration, alcohol use, cardiovascular disease and certain medications.

What makes heatstroke severe and potentially life-threatening is that the body's normal mechanisms for dealing with heat stress, such as sweating and temperature control, are lost. The main sign of heatstroke is a markedly elevated body temperature — generally greater than 104 F (40 C) — with changes in mental status ranging from personality changes to confusion and coma. Skin may be hot and dry — although if heatstroke is caused by exertion, the skin may be moist.

Other signs and symptoms may include:

- Rapid heartbeat
- Rapid and shallow breathing
- Elevated or lowered blood pressure
- Cessation of sweating
- Irritability, confusion or unconsciousness
- Feeling dizzy or lightheaded
- Headache
- Nausea
- Fainting, which may be the first sign in older adults

**If you suspect heatstroke:**

- Move the person out of the sun and into a shady or air-conditioned space.
- Dial 911 or call for emergency medical assistance.
- Cool the person by covering him or her with damp sheets or by spraying with cool water. Direct air onto the person with a fan or newspaper.
- Have the person drink cool water, if he or she is able.

# Insect bites and stings: First aid

Signs and symptoms of an insect bite result from the injection of venom or other substances into your skin. The venom triggers an allergic reaction. The severity of your reaction depends on your sensitivity to the insect venom or substance.

Most reactions to insect bites are mild, causing little more than an annoying itching or stinging sensation and mild swelling that disappear within a day or so. A delayed reaction may cause fever, hives, painful joints and swollen glands. You might experience both the immediate and the delayed reactions from the same insect bite or sting. Only a small percentage of people develop severe reactions (anaphylaxis) to insect venom. Signs and symptoms of a severe reaction include:

- Facial swelling
- Difficulty breathing
- Abdominal pain
- Shock

Bites from bees, wasps, hornets, yellow jackets and fire ants are typically the most troublesome. Bites from mosquitoes, ticks, biting flies and some spiders also can cause reactions, but these are generally milder.

## For mild reactions

- **Move to a safe area** to avoid more stings.
- **Scrape or brush off the stinger** with a straight-edged object, such as a credit card or the back of a knife. Wash the affected area with soap and water. Don't try to pull out the stinger. Doing so may release more venom.
- **Apply a cold pack** or cloth filled with ice to reduce pain and swelling.
- **Apply hydrocortisone cream** (0.5 percent or 1 percent), calamine lotion or a baking soda paste — with a ratio of 3 teaspoons baking soda to 1 teaspoon water — to the bite or sting several times a day until your symptoms subside.
- **Take an antihistamine** containing diphenhydramine (Benadryl, Tylenol Severe Allergy) or chlorpheniramine maleate (Chlor-Trimeton, Actifed).

Allergic reactions may include mild nausea and intestinal cramps, diarrhea or swelling larger than 2 inches in diameter at the site. See your doctor promptly if you experience any of these signs and symptoms.

## For severe reactions

Severe reactions may progress rapidly. Dial 911 or call for emergency medical assistance if the following signs or symptoms occur:

- Difficulty breathing
- Swelling of the lips or throat
- Faintness
- Dizziness
- Confusion
- Rapid heartbeat
- Hives
- Nausea, cramps and vomiting

Take these actions immediately while waiting with an affected person for medical help:

1. **Check for special medications** that the person might be carrying to treat an allergic attack, such as an auto-injector of epinephrine (for example, EpiPen). Administer the drug as directed — usually by pressing the auto-injector against the person's thigh and holding it in place for several seconds. Massage the injection site for 10 seconds to enhance absorption.
2. **Have the person take an antihistamine pill** if he or she is able to do so without choking, after administering epinephrine.
3. **Have the person lie still** on his or her back with feet higher than the head.
4. **Loosen tight clothing** and cover the person with a blanket. Don't give anything to drink.
5. **Turn the person on his or her side** to prevent choking, if there's vomiting or bleeding from the mouth.
6. **Begin CPR**, if there are no signs of circulation (breathing, coughing or movement).

If your doctor has prescribed an auto-injector of epinephrine, read the instructions before a problem develops and also have your household members read them.

# Nosebleeds: First aid

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 and 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, Neo-Synephrine, 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 to have the blood vessel that's causing your problem 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.

# Puncture wounds: First aid

A puncture wound doesn't usually cause excessive bleeding. Often the wound seems to close almost instantly. But these features don't mean treatment isn't necessary.

A puncture wound — such as results from stepping on a nail or being stuck with a tack — can be dangerous because of the risk of infection. The object that caused the wound may carry spores of tetanus or other bacteria, especially if the object has been exposed to the soil. Puncture wounds resulting from human or animal bites, including those of domestic dogs and cats, may be especially prone to infection. Puncture wounds on the foot are also more vulnerable to infection.

If the bite was deep enough to draw blood and the bleeding persists, seek medical attention. Otherwise, follow these steps:

1. **Stop the bleeding.** Minor cuts and scrapes usually stop bleeding on their own. If they don't, apply gentle pressure with a clean cloth or bandage. If bleeding persists — if the blood spurts or continues to flow after several minutes of pressure — seek emergency assistance.
2. **Clean the wound.** Rinse the wound well with clear water. A tweezers cleaned with alcohol may be used to remove small, superficial particles. If larger debris still remains more deeply embedded in the wound, see your doctor. Thorough wound cleaning reduces the risk of tetanus. To clean the area around the wound, use soap and a clean washcloth.
3. **Apply an antibiotic.** After you clean the wound, apply a thin layer of an antibiotic cream or ointment (Neosporin, Polysporin) to help keep the surface moist. These products don't make the wound heal faster, but they can discourage infection and allow your body to close the wound more efficiently. Certain ingredients in some ointments can cause a mild rash in some people. If a rash appears, stop using the ointment.
4. **Cover the wound.** Exposure to air speeds healing, but bandages can help keep the wound clean and keep harmful bacteria out.
5. **Change the dressing regularly.** Do so at least daily or whenever it becomes wet or dirty. If you're allergic to the adhesive used in most bandages, switch to adhesive-free dressings or sterile gauze and hypoallergenic paper tape, which doesn't cause allergic reactions. These supplies are generally available at pharmacies.
6. **Watch for signs of infection.** See your doctor if the wound doesn't heal or if you notice any redness, drainage, warmth or swelling.

If the puncture is deep, is in your foot, is contaminated or is the result of an animal or human bite, see your doctor. He or she will evaluate the wound, clean it and, if necessary, close it. If you haven't had a tetanus shot within five years, your doctor may recommend a booster within 48 hours of the injury.

If an animal — especially a stray dog or a wild animal — inflicted the wound, you may have been exposed to rabies. Your doctor may give you antibiotics and suggest initiation of a rabies vaccination series. Report such incidents to county public health officials. If possible, the animal should be confined for 10 days of observation by a veterinarian.

# Severe bleeding: First aid

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.** 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.** Use a sterile bandage, clean cloth or even a piece of clothing. If nothing else is available, use your hand.
4. **Maintain pressure until the bleeding stops.** Hold continuous pressure for at least 20 minutes without looking to see if the bleeding has stopped. You can maintain pressure by binding the wound tightly with a bandage (or even a piece of clean clothing) and adhesive tape.
5. **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.
6. **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.
7. **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

# Shock: First aid

Shock may result from trauma, heatstroke, allergic reactions, severe infection, poisoning or other causes. 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 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:**

- **Dial 911** or call your local emergency number.
- **Have the person lie down** on his or her back with feet 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(s) 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

# Spider bites: First aid

CLICK TO ENLARGE



[Black widow spider](#)



[Brown recluse spider](#)

Only a few spiders are dangerous to humans. Two that are present in the contiguous United States and more common in the Southern states are the black widow spider and the brown recluse spider. Both prefer warm climates and dark, dry places where flies are plentiful. They often live in dry, littered, undisturbed areas, such as closets, woodpiles and under sinks.

## **Black widow spider**

The female black widow gives the more serious bite, but its bite is rarely lethal. You can identify this spider by the red hourglass marking on its belly. The bite feels like a pinprick. You may not even know you've been bitten. At first you may notice only slight swelling and faint red marks. Within a few hours, though, intense pain and stiffness begin. Other signs and symptoms of a black widow spider bite include:

- Chills
- Fever
- Nausea
- Severe abdominal pain

## **Brown recluse spider**

You can identify this spider by the violin-shaped marking on its top. The bite produces a mild stinging, followed by local redness and intense pain within eight hours. A fluid-filled blister forms at the site and then sloughs off to leave a deep, enlarging ulcer. Reactions from a brown recluse spider bite vary from a mild fever and rash to nausea and listlessness. On rare occasions death results, more often in children.

## **If bitten by a spider**

Clean the site of the spider bite well with soap and water. Apply a cool compress over the spider bite location. Aspirin or acetaminophen (Tylenol, others) may be used to relieve minor signs and symptoms in adults. Don't give aspirin to

children. Give children acetaminophen instead. Treatment in a medical facility may be necessary for children under 6 years old and for adults with severe signs and symptoms.

**If bitten by a brown recluse or black widow spider**

1. **If possible, make a positive identification.** If the spider bite is on an arm or a leg, tie a snug bandage above the bite to help slow or halt the venom's spread. Ensure that the bandage is not so tight as to cut off circulation in the arm or the leg.
2. **Use a cold cloth at the spider bite location.** Apply a cloth dampened with cold water or filled with ice.
3. **Seek immediate medical attention.** Treatment for the bite of a black widow may require an antivenom medication. Doctors may treat a brown recluse spider bite with corticosteroids.

# Spinal injury: First aid

If you suspect a back or neck (spinal) injury, **do not move the affected person**. Permanent paralysis and other serious complications can result. Assume a person has a spinal injury if:

- There's evidence of a head injury with an ongoing change in the person's level of consciousness.
- The person complains of severe pain in his or her neck or back.
- The person won't move his or her neck.
- An injury has exerted substantial force on the back or head.
- The person complains of weakness, numbness or paralysis or lacks control of his or her limbs, bladder or bowel.
- The neck or back is twisted or positioned oddly.

If you suspect someone has a spinal injury:

- Dial 911 or call for emergency medical assistance.
- Keep the person still. Place heavy towels on both sides of the neck or hold the head and neck to prevent movement. The goal of first aid for a spinal injury is to keep the person in much the same position as he or she was found.
- Provide as much first aid as possible without moving the person's head or neck. If the person shows no signs of circulation (breathing, coughing or movement), begin CPR, but do not tilt the head back to open the airway. Use your fingers to gently grasp the jaw and lift it forward.
- If you absolutely must roll the person because he or she is vomiting, choking on blood or in danger of further injury, use at least two people. Work together to keep the person's head, neck and back aligned while rolling the person onto one side.

# Sprain: First aid

Your ligaments are tough, elastic-like bands that attach to your bones and hold your joints in place. A sprain is an injury to a ligament caused by excessive stretching. The ligament can have tears in it, 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. For most minor sprains, you can probably 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 prevent deconditioning. For example, you can use an exercise bicycle, 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 apply ice as soon as possible after the injury. If you use ice, be careful not to use it for 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 whenever possible to help prevent or limit swelling.

After the first 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.

## Get emergency medical assistance if:

- You heard a popping sound when your joint was injured, you can't use the joint, or you feel unstable when you try to bear weight on 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.
- You aren't improving after the first two or three days.

# Stroke: First aid

A stroke occurs when there's bleeding into your brain, or 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.

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

If you notice a sudden onset of one or more of the following signs or symptoms, call 911 or your local emergency number immediately:

- 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 or 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 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.

# Sunburn: First aid

Signs and symptoms of sunburn usually appear within a few hours of exposure, bringing pain, redness, swelling and occasional blistering. Because exposure often affects a large area of your skin, sunburn can cause headache, fever and fatigue.

## **If you have a sunburn:**

- Take a cool bath or shower. Adding 1/2 cup (about 120 milliliters) of cornstarch, oatmeal or baking soda to your bath water may provide some relief.
- Apply an aloe vera lotion several times a day.
- Leave blisters intact to speed healing and avoid infection. If they burst on their own, apply an antibacterial ointment on the open areas.
- If needed, take an over-the-counter pain reliever such as aspirin, ibuprofen (Advil, Motrin, others), naproxen (Aleve) or acetaminophen (Tylenol, others). Don't give children or teenagers aspirin. It may cause Reye's syndrome, a rare but potentially fatal disease.

Do not use petroleum jelly, butter or other home remedies on your sunburn. They can prevent or delay healing.

If your sunburn begins to blister or if you experience immediate complications, such as rash, itching or fever, see your doctor.

# Tooth loss: First aid

If your tooth is knocked out, get emergency dental care. It's sometimes possible to successfully reimplant permanent teeth that have been knocked out. But this is an option only if you follow the steps below immediately — before you see a dentist.

## **If your tooth is knocked out:**

- Handle your tooth by the top only, not the roots.
- Don't rub it or scrape it to remove debris. This damages the root surface, making the tooth less likely to survive.
- Gently rinse your tooth in a bowl of tap water. Don't hold it under running water.
- Try to replace your tooth in the socket. If it doesn't go all the way into place, bite down gently on gauze or a moistened tea bag to help keep it in place. Hold the tooth in place until you see your dentist.
- If you can't replace your tooth in the socket, immediately place it in whole milk, your own saliva or a warm, mild saltwater solution — 1/4 teaspoon salt to 1 quart water (1.2 milliliters salt to about 1 liter water).
- Get medical attention from a dentist or emergency room immediately.

If you participate in contact sports, you can often prevent tooth loss by wearing a mouth guard, fitted by your dentist.

# Toothache: First aid

Tooth decay is the primary cause of toothaches for most children and adults. Bacteria that live in your mouth thrive on the sugars and starches in the food you eat. These bacteria form a sticky plaque that clings to the surface of your teeth.

Acids produced by the bacteria in plaque can eat through the hard, white coating on the outside of your teeth (enamel), creating a cavity. The first sign of decay may be a sensation of pain when you eat something sweet, very cold or very hot. A toothache often indicates that your dentist will need to work on your teeth.

## **Self-care tips**

Until you can see your dentist, try these self-care tips for a toothache:

- Rinse your mouth with warm water.
- Use dental floss to remove any food particles wedged between your teeth.
- Take an over-the-counter (OTC) pain reliever to dull the ache.
- Apply an OTC antiseptic containing benzocaine directly to the irritated tooth and gum to temporarily relieve pain. Direct application of oil of cloves (eugenol) also may help. Don't place aspirin or another painkiller directly against your gums, as it may burn your gum tissue.

Swelling, pain when you bite, a foul-tasting discharge and gum redness indicate infection. See your dentist as soon as possible.

## **Call your dentist if:**

- The pain persists for more than a day or two
- You have fever with the toothache
- You have trouble breathing or swallowing