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# Bone and Joint Injuries

# Dislocation

## What is it?

An injury in which the ends of your bones are forced from their normal positions.

Dislocation usually involves the body's larger joints. In adults, the most common site of the injury is the shoulder. In children, it's the elbow. Your thumb and fingers also are vulnerable if forcibly bent the wrong way.

## Signs/Symptoms:

- Joint is visibly deformed or out of place
- Numbness or tingling at the joint
- Swelling or discoloration
- Limited ability to move
- Intense pain

A dislocation requires prompt medical attention to return your bones to their proper positions.

## Plan of Action:

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

- **Get medical help immediately.**
- **Do not 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.
- **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.

# Fractures (broken bones)

## What is it?

A broken bone.

## Symptoms:

- Intense pain
- Limited mobility or inability to move a limb or put weight on it
- Swelling, bruising, or bleeding
- A visibly out-of-place or misshapen limb or joint
- Numbness or tingling
- Broken skin with bone protruding

## Plan of Action:

**Don't move the person except if necessary to avoid further injury.**

- **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.**

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.

**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 CPR if there's no breathing 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.



# Sprain

## What is it?

An injury to a ligament caused by tearing of the fibers of the ligament. The ligament can have a partial tear, or it can be completely torn apart.

Ankle sprains are the most common type of sprain. Wrist, knee and thumb sprains are also common. Sprained ligaments often swell rapidly and are painful. Generally, the greater the pain and swelling, the more severe the injury is. For most minor sprains, you probably can start initial injury treatment yourself.

## Plan of Action:

### **Rest, Ice, Compress, Elevate (R.I.C.E.)**

#### **Rest**

Your doctor may recommend not putting any weight on the injured area for 48 to 72 hours, so you may need to use crutches. A splint or brace also may be helpful initially. 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.

#### **Ice**

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 15 to 20 minutes, four to eight times a day, for the first 48 hours or until swelling improves. If you use ice, be careful not to use it too long, as this could cause tissue damage.

### **Compress**

Compress the area with an elastic wrap or bandage. Compressive wraps or sleeves made from elastic or neoprene are best.

### **Elevate**

Elevate the injured limb above your heart whenever possible to help prevent or limit swelling.

Sprains can take days to months to recover. As the pain and swelling improve, gently begin using the injured area. You should feel a gradual, progressive improvement. Over-the-counter pain relievers, such as ibuprofen (Advil, Motrin IB, others) and acetaminophen (Tylenol, others), may be helpful to manage pain during the healing process.

It is essential to restore strength and stability to the injured limb prior to a return to sports or fitness activities. A physical therapist or other sports medicine provider can provide you with the appropriate strength and stability exercises to optimize healing and minimize the risk of repeat injury.

The injuries that cause sprains can also cause serious injuries, including fractures. See your doctor if your sprain isn't improving after two or three days.

## **When to Seek Emergency Care:**

- You're unable to bear weight on the injured leg, the joint feels unstable or numb, 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 develop redness or red streaks that spread out from the injured area. This may mean you have an infection.
- You have pain directly over the bones of an injured joint.
- You have re-injured an area that has been injured a number of times in the past.
- You have a severe sprain. Inadequate or delayed treatment may contribute to long-term joint instability or chronic pain.

# Chemical Injuries

# Chemical Burns

## What is it?

Tissue damage caused by strong acids, drain cleaners, paint thinner, gasoline and many other substances.

Usually, you are aware of such a burn and its cause. But sometimes you may not immediately recognize a burn caused by a milder chemical. As with some sunburns, the damage may develop hours after the exposure. Major chemical burns need emergency medical help. Minor chemical burn can usually be treated with first aid.

## Plan of Action:

If you think you have a chemical burn, take these steps immediately:

- **Remove dry chemicals.** Put on gloves and brush off any remaining material.
- **Remove contaminated clothing or jewelry** and rinse chemicals off for at least 20 minutes, in a shower if it's available. Protect your eyes from chemical contamination.
- **Bandage the burn.** Cover the burn with a clean bandage. Wrap it loosely to avoid putting pressure on burned skin.
- **Rinse again if needed.** If you feel more burning, rinse the area again for several more minutes.

## When to Seek Emergency Care:

**Call 911 or seek immediate care** for major chemical burns, which:

- Are deep, involving all layers of the skin
- Are larger than 3 inches (about 8 centimeters) in diameter
- Cover the hands, feet, face, groin, buttocks, or a major joint or encircles an arm or leg
- Might cause shock, with symptoms such as cool, clammy skin, weak pulse and shallow breathing.

**If you're unsure you've been exposed to a toxic chemical, call a poison control center then call 911. There are two ways to get help from Poison Control in the United States: online at [www.poison.org](http://www.poison.org) or by calling [800-222-1222](tel:800-222-1222). Both options are free, confidential and available 24 hours a day. If you seek emergency medical help, take the container or the name of the chemical with you.**

# Chemical Splash in the Eye(s)

## What is it?

**When any chemical splashes in your eye(s).**

## Plan of Action:

### 1. Flush your eye(s) with water.

Use clean, lukewarm tap water for at least 20 minutes. Use whichever of these approaches is quickest:

- Get into the shower and aim a gentle stream of water on your forehead over your affected eye. Or direct the stream on the bridge of your nose if both eyes are affected. Hold the lids of your affected eye or eyes open.
- Put your head down and turn it to the side. Then hold the lids of your affected eye open under a gently running faucet. If you have access to a work site eye-rinse station, use it.
- Young children may do best if they lie down in the bathtub or lean back over a sink. Pour a gentle stream of water on the forehead over the affected eye or on the bridge of the nose to flush both eyes.

**2. Wash your hands with soap and water.** Thoroughly rinse your hands to be sure no chemical or soap is left on them.

**3. 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 by an eye specialist (ophthalmologist) or call 911 or your local emergency number. Take the chemical container or the name of the chemical with you to the emergency provider. If readily available, wear sunglasses to help reduce sensitivity to light.

# Electrical Injuries

# Burns

## What is it?

Tissue damage from hot liquids, the sun, flames, chemicals, electricity, steam and other causes.

## Plan of Action:

### Minor Burns

- **Cool the burn.** Hold the area under cool (not cold) running water for about 10 minutes. If the burn is on the face, apply a cool, wet cloth until the pain eases. For a mouth burn from hot food or drink, put a piece of ice in the mouth for a few minutes.
- **Remove rings or other tight items from the burned area.** Try to do this quickly and gently, before the area swells.
- **Don't break blisters.** Blisters help protect against infection. If a blister does break, gently clean the area with water and apply an antibiotic ointment.
- **Apply lotion.** After the burn is cooled, apply a lotion, such as one with aloe vera or cocoa butter. This helps prevent drying and provides relief.
- **Bandage the burn.** Cover the burn with a clean bandage. Wrap it loosely to avoid putting pressure on burned skin. Bandaging keeps air off the area, reduces pain and protects

blistered skin.

- **If needed, take a nonprescription pain reliever**, such as ibuprofen (Advil, Motrin IB, others), naproxen sodium (Aleve) or acetaminophen (Tylenol, others).

### **For major burns until emergency help arrives:**

- **Protect the burned person from further harm.** If you can do so safely, make sure the person you're helping is not in contact with the source of the burn. For electrical burns, make sure the power source is off before you approach the burned person. Don't try to remove clothing stuck in the burn.
- **Make certain that the person burned is breathing.** If needed, begin rescue breathing if you know how.
- **Remove jewelry, belts and other tight items**, especially from the burned area and the neck. Burned areas swell quickly.
- **Cover the burn.** Loosely cover the area with gauze or a clean cloth.
- **Raise the burned area.** Lift the wound above heart level if possible.
- **Watch for signs of shock.** Signs and symptoms include cool, clammy skin, weak pulse and shallow breathing.

### **When to seek emergency care:**

**Call 911 or seek immediate care** for major burns, which:

- Are deep, involving all layers of the skin
- Cause the skin to be dry and leathery
- May appear charred or have patches of white, brown or black
- Are larger than 3 inches (about 8 centimeters) in diameter
- Cover the hands, feet, face, groin, buttocks or a major joint, or encircles an arm or leg
- Are accompanied by smoke inhalation
- Begin swelling very quickly

Electrical burns, including those caused by lightning, and major chemical burns need emergency medical care. A minor burn might need emergency care if it affects the eyes, mouth, hands or genital areas. Babies and older adults might need emergency care for minor burns as well.

# Electrical Burns

## What is it?

A skin burn that occurs when the body comes in contact with electricity.

## Symptoms:

- Burn or other injury to the skin
- Confusion, dizziness, or headache
- Heart pounding or fluttering
- Muscle contractions
- Numbness or tingling
- Problems with balance
- Red or re-black urine
- Seizures
- Shortness of breath
- Trouble staying awake

## Plan of Action:

## **For minor electrical burns:**

- Put a cool wet cloth on the area
- Do not break any blisters
- After you gently clean the skin, put a bandage on the area

## **When to contact your doctor:**

A person who has been injured by contact with electricity should be seen by a health care provider. The damage may be worse than it looks from the burn on the skin. Sometimes an electrical injury can cause damage to skin, muscles, blood vessels and nerves, often in an arm or a leg. The heart, brain and other body organs can be damaged.

## **Caution**

- Don't touch the injured person if the person is still in contact with the electrical current.
- Call 911 or your local emergency number if the source of the burn is a high-voltage wire or lightning. Don't get near high-voltage wires until the power is turned off. Overhead power lines usually aren't insulated. Stay at least 50 feet (about 15 meters) away — farther if wires are jumping and sparking.
- Don't drive over downed power lines. If a live electrical line contacts the vehicle you're in, stay in the vehicle. Call 911 or your local emergency number to disable the power line before touching any metal to try to exit the vehicle.

- Don't move a person with an electrical injury unless the person is in immediate danger.

## **When to seek emergency care:**

**Call 911 or your local emergency number if the injured person experiences:**

- Severe burns
- Confusion
- Difficulty breathing
- Irregular heart rhythm (arrhythmias)
- Does not have a pulse and is not breathing (cardiac arrest)
- Muscle pain and contractions
- Seizures
- Loss of consciousness

## **Take these actions immediately while waiting for medical help:**

- Turn off the source of electricity if possible. If not, move the source away from both you and the injured person. Use a dry, nonconducting object made of cardboard, plastic or wood.
- Begin CPR if the person is not breathing, coughing or moving and doesn't have a pulse.

- Do not remove clothing or try to clean the burned area. Cover any burned areas with a sterile gauze bandage, if available, or a clean cloth or sheet. Don't use a blanket or towel, because fuzz or loose fibers can stick to the burns.
- Try to prevent the injured person from becoming chilled.

# Electrical Shock

## What is it?

Injury to the body from direct contact with a high-voltage source.

### **The danger from an electrical shock depends on:**

- Voltage
- Length of time in contact with the source
- Overall health
- Electricity's path through your body
- Type of current (an alternating current is often more harmful than a direct current)

## Symptoms:

- Loss of consciousness
- Muscle spasms
- Numbness or tingling
- Breathing problems

- Headache
- Problems with vision or hearing
- Burns
- Seizures
- Irregular heartbeat

## **Plan of Action:**

### **Caution:**

- Don't touch an injured person who is still in contact with an electrical current.
- Call 911 or your local emergency number if the source of the burn is a high-voltage wire or lightning. Don't get near high-voltage wires until the power is turned off. Overhead power lines usually aren't insulated. Stay at least 20 feet (about 6 meters) away — farther if wires are jumping and sparking.
- Don't move a person with an electrical injury unless there is immediate danger.

## **When to seek emergency care:**

### **Call 911 or your local emergency number if the injured person experiences:**

- Severe burns

- Confusion
- Difficulty breathing
- Heart rhythm problems
- Cardiac arrest
- Muscle pain and contractions
- Seizures
- Loss of consciousness

**Take these actions immediately while waiting for medical help:**

- Turn off the source of electricity, if possible. If not, use a dry, nonconducting object made of cardboard, plastic or wood to move the source away from you and the injured person.
- Begin CPR if the person shows no signs of circulation, such as breathing, coughing or movement.
- Try to prevent the injured person from becoming chilled.
- Apply a bandage. Cover any burned areas with a sterile gauze bandage, if available, or a clean cloth. Don't use a blanket or towel, because loose fibers can stick to the burns.

A person who has been injured by contact with electricity should be seen by a health care provider.

# Eye Injuries

# Black Eye

## What is it?

Bruising caused by bleeding in the tiny blood vessels in the skin surrounding the eye.

## Plan of Action:

- **Apply a cold compress soon after the injury.** Using gentle pressure, place a cold pack, a cloth filled with ice — or even a bag of frozen vegetables — to the area around your eye. Take care not to press on the eye itself. Apply cold as soon as possible after the injury to reduce swelling. Repeat several times a day for a day or two.
- **Look for blood.** If you see blood in the white or colored parts of the eye, seek urgent care by an eye specialist (ophthalmologist).
- **Seek medical care right away** if you have vision problems, such as double vision or blurring. Also seek care right away if you have severe pain, bruising around both eyes, or bleeding in an eye or from the nose.
- **Apply warm or hot compresses.** This may be helpful after a few days when the swelling has gone down. Repeat several times a day for a day or two.

Most injuries that cause a black eye aren't serious. But a black eye could be a sign of a more serious injury, such as an internal injury to the eye or a fracture of the thin bones around the eye. You may have a skull fracture if you have double vision, bruising around both eyes (raccoon eyes) or bleeding from the nose.

# Corneal Abrasion (scratch on the eye)

## What is it?

A superficial scratch on the clear, protective "window" at the front of the eye (cornea).

The cornea can be scratched by contact with dust, dirt, sand, wood shavings, plant matter, metal particles, contact lenses or even the edge of a piece of paper.

## Symptoms:

- Pain
- Blurry vision
- A gritty feeling in the eye
- Tearing
- Redness
- Sensitivity to the light (photophobia)
- Headache

## Plan of Action:

In case of a corneal abrasion, seek prompt medical attention. Left untreated, the abrasion could become infected and result in a sore known as a corneal ulcer.

**In the meantime, take these immediate steps:**

- **Rinse your eye with clean water or a saline solution.** You can use an eyecup or a small, clean drinking glass positioned with its rim resting on the bone at the base of your eye socket. If you have quick access to a work site eye-rinse station, use it. Rinsing the eye may wash out a foreign object.
- **Blink several times.** This may remove small particles.
- **Pull the upper eyelid over the lower eyelid.** This may cause your eye to tear, which may help wash out the particle. Or it may cause the lashes of your lower eyelid to brush away an object from under your upper eyelid.

**Use the following pointers to avoid making the injury worse:**

- Don't try to remove an object that is embedded in your eye or makes your eye difficult to close.
- Don't rub your eye after an injury.
- Don't touch your eye with cotton swabs, tweezers or other instruments.
- If you use contact lenses, don't wear them while your eye is healing.

**Most corneal abrasions heal in a few days but should be treated with antibiotic drops or ointment to reduce the risk of infection.**

# Foreign Object in the Eye

## What is it?

Anything that is in the eye that wouldn't normally be there.

## Plan of Action:

### To help yourself:

- Wash your hands with soap and water.
- Try to flush the object out of your eye with a gentle stream of clean, warm water. Use an eyecup or a small, clean drinking glass positioned with its rim resting on the bone at the base of your eye socket.
- Another way to flush a foreign object from your eye is to get into a shower and aim a gentle stream of lukewarm water on your forehead over the affected eye while holding your eyelid open.
- If you're wearing contact lenses, it's best to remove the lens before or while you're irrigating the surface of the eye with water. Sometimes a foreign body can be stuck to the undersurface of the lens.

### To help someone else:

- Wash your hands with soap and water.

- Seat the person in a well-lighted area.
- Gently examine the eye to find the object. Pull the lower lid down and ask the person to look up. Then hold the upper lid while the person looks down.
- If the object is floating in the tear film on the surface of the eye, try using a medicine dropper filled with clean, warm water to flush it out. Or tilt the head back and irrigate the surface of the eye with clean water from a drinking glass or a gentle stream of tap water.

### **Caution:**

- Don't try to remove an object that's embedded in the eye.
- Don't rub the eye.
- Don't try to remove a large object that appears to be embedded in the eye or is sticking out between the lids.

### **When to seek emergency care:**

- You can't remove the object with simple irrigation
- The object is embedded in the eye
- The person with the object in the eye is experiencing abnormal vision

- Pain, redness or the sensation of an object in the eye persists more than 24 hours after the object is removed

Keep in mind that sometimes an object can scratch your eye. This often feels as though the object is still in the eye even after the object has been removed. This sensation can sometimes take 24 hours to go away.

# Fever

## What is it?

A rise in body temperature. consisting of 100.4 (38 C) or higher.

## Plan of Action:

### To treat a fever:

- Drink plenty of fluids to stay hydrated.
- Dress in lightweight clothing.
- Use a light blanket if you feel chilled, until the chills end.
- Take acetaminophen (Tylenol, others) or ibuprofen (Advil, Motrin IB, others). Follow the directions on the label.

## When to seek medical advice:

### Seek medical care if someone with a fever has any of the following signs and symptoms:

- Difficulty breathing
- Chest pain
- Severe headache
- Confusion or agitation

- Abdominal pain
- Repeated vomiting
- Dry mouth, decreased or dark urine, or refusal to drink fluids, which may indicate dehydration
- Skin rashes
- Difficulty swallowing fluids
- Pain with urination or pain in the back

### **When to seek emergency care:**

- Fever with no sweating
- Severe headache
- Seizures
- Stiff neck
- Confusion
- Repeated vomiting or diarrhea
- Irritability or significant discomfort
- Any worrisome, different or unusual symptoms

# Foreign Object in the Ear

## What is it?

Anything in the ear canal that normally would not be there.

**If left untreated, a foreign object in the ear can cause pain, infection and hearing loss.**

## Plan of Action:

- **Know when to seek help.** If there is bleeding, severe pain, drainage or signs of infection, see a health care provider right away. Also, if you know the object is a battery, seek help right away. And if you can't easily see the object and you've tried removing it more than once, stop and get care. Delays and many failed tries to remove it can lead to infection and damage.
- **Never poke or prod the object.** If you use tools such as cotton swabs or matchsticks to pry an object out, they can push it deeper into the ear. This may cause more damage.
- **Use tweezers.** If the object is easy to see and grasp, gently remove it with tweezers.
- **Use water.** Only wash out the ear canal if you don't think there is a hole in the eardrum. Use a rubber-bulb syringe and warm water to wash the object out of the canal. Don't use water to remove batteries, food, or plant material.

- **Use oil or alcohol for an insect.** If the object is an insect, tilt the head so that the ear with the insect is upward. Pour alcohol or warm, but not hot, oil into the ear. The oil can be mineral oil, olive oil, or baby oil. The insect should float out. Don't use oil if you think there is a hole in the eardrum.
- **Never use liquid if there is a hole in the eardrum.** If you see signs of a hole in the eardrum such as pain, bleeding or discharge, see a health care provider right away.

Remember, if you can't remove the object easily the first time, get help. Also, if the person continues to have pain, discharge from the ear canal, problems hearing, or feeling there is something lodged in the ear, see a health care provider.

# Head, Neck, and Spine Injuries

# Head Trauma

## What is it?

Any damage to the scalp, skull, or brain caused by injury.

## Plan of Action:

To give first aid to a person who has head trauma, **call 911 or your local emergency number.**

### While waiting for emergency medical help to arrive:

- **Keep the person still.** The injured person should lie down with the head and shoulders slightly elevated. Don't move the person unless necessary. Avoid moving the person's neck. If the person is wearing a helmet, don't remove it.
- **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 — no breathing, coughing or movement — begin CPR.

Head trauma that results in concussion symptoms need to be evaluated by a medical professional. Concussion symptoms include nausea, unsteadiness, headaches or difficulty concentrating.

**Any of the following symptoms may indicate a serious head injury:**

- Severe head or facial bleeding
- Bleeding or fluid leakage from the nose or ears
- Vomiting
- Severe headache
- Change in consciousness for more than a few seconds
- Black-and-blue discoloration below the eyes or behind the ears
- Not breathing
- Confusion
- Agitation
- Loss of balance
- Weakness or an inability to use an arm or leg
- Unequal pupil size
- Slurred speech
- Seizures

# Headache

## What is it?

A painful sensation in any part of the head, ranging from sharp to dull, that may occur with other symptoms.

Most headaches are minor, and you can treat them with a pain reliever. Some headaches, however, signal a dangerous or serious medical problem. Don't ignore headaches that aren't explained or headaches that steadily worsen.

## Symptoms:

### Get immediate medical attention if your headache:

- Develops suddenly and severely.
- Persists for several days.
- Causes mental confusion or loss of consciousness.
- Happens with seizures.

### Immediate medical attention also is needed if your headache occurs with new:

- Dizziness or loss of balance.
- Weakness or paralysis, such as in the arms or legs.

- Numbness.
- Difficulty speaking or understanding speech.
- Reddened eye.

**Also seek medical attention if your headache:**

- Occurs with a fever, stiff neck or rash.
- Is accompanied by changes in vision, such as blurring or seeing halos around lights.
- Is serious and follows a recent sore throat or respiratory infection.
- Begins or worsens after a head injury, fall, or bump.
- Is triggered by changing the position of your head, coughing, sneezing, bending or physical activity.
- Is a different type of headache from your usual type and you're older than 50.

# Spinal Injury

## What is it?

An injury to the spine.

## Signs/Symptoms:

### 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
- 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 bowels
- The neck or body is twisted or positioned oddly

## Plan of Action:

- **Get help.** Call 911 or emergency medical help.
- **Keep the person still.** Place heavy towels or rolled sheets on both sides of the neck or hold the head and neck to prevent movement.

- **Avoid moving the head or neck.** 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 the person has no pulse, begin chest compressions.
- **Keep helmet on.** If the person is wearing a helmet, don't remove it. A football helmet facemask should be removed if you need to access the airway.
- **Don't roll alone.** If you must roll the person because he or she is vomiting, choking on blood, or because you have to make sure the person is still breathing, you need at least one other person. With one of you at the head and another along the side of the injured person, work together to keep the person's head, neck and back aligned while rolling the person onto one side.

# Concussions

## What is it?

A type of head injury that occurs when the head or body is hit so hard that the brain moves inside the skull.

## Signs/Symptoms:

- Feeling stunned or dazed
- Confusion
- Headache
- Nausea or vomiting
- Dizziness, unsteadiness, or difficulty balancing
- Double vision or flashing lights
- Loss of memory of events that happened before or after the injury
- Sleepiness

## Plan of Action:

- Seek medical attention for evaluation and monitoring to determine severity
- If there is a change in consciousness, worsening signs or symptoms, or other cause for concerns seek medical attention ASAP.
- If the person becomes unresponsive, call 911

# Illnesses

# Foodborne Illness

## What is it?

Illness caused by food contaminated with bacteria, viruses, parasites, or toxins.

## Symptoms:

- Diarrhea, which may be bloody
- Nausea
- Abdominal pain
- Vomiting
- Dehydration
- Low-grade fever (sometimes)

## If you are very dehydrated, you might notice:

- Feeling lightheaded or faint, especially when you stand up
- Fatigue
- Dark-colored urine

- Less frequent urination
- Excessive thirst

## **Plan of Action:**

- **Sip liquids**, such as a sports drink or water, to prevent dehydration. Drinking fluids too quickly can worsen nausea and vomiting, so try to take small frequent sips over a couple of hours instead of drinking a large amount at once.
- **Take note of urination.** You should be urinating at regular intervals, and your urine should be light and clear. Infrequent passage of dark urine is a sign of dehydration. Dizziness and lightheadedness also are symptoms of dehydration. If any of these symptoms occur and you can't drink enough fluids, seek medical attention.
- **Avoid anti-diarrheal medications.** They may slow your body's removal of organisms or toxins from your system. If in doubt, check with your doctor about your particular situation.

Foodborne illness often improves on its own within a few days.

## **Call your doctor if:**

- Vomiting persists for more than two days
- Diarrhea persists for more than several days
- Diarrhea turns bloody, black or tarry

- Fever is 101 F (38.3 C) or higher
- Lightheadedness or fainting occurs with standing
- Confusion develops
- Worrisome abdominal pain develops

**Seek emergency medical assistance if:**

- You have severe symptoms, such as severe abdominal pain or watery diarrhea that turns very bloody within 24 hours.
- You belong to a high-risk group.
- You suspect botulism poisoning. Botulism is a potentially fatal food poisoning that results from the ingestion of a toxin formed by certain spores in food. Botulism toxin is most often found in home-canned foods, especially green beans or tomatoes.

Symptoms of botulism usually begin 12 to 36 hours after eating the contaminated food and may include headache, blurred vision, muscle weakness and eventual paralysis. Some people also have nausea and vomiting, constipation, urinary retention, difficulty breathing, and a dry mouth. These symptoms require immediate medical attention.

# Gastroenteritis

## What is it?

An inflammation of your stomach and intestines.

## Symptoms:

- Nausea or vomiting
- Diarrhea
- Abdominal cramps
- Low-grade fever (sometimes)

Depending on the cause of the inflammation, symptoms may last from one day to more than a week.

## Plan of Action:

- **Sip liquids**, such as a sports drink or water, to prevent dehydration. Drinking fluids too quickly can worsen the nausea and vomiting, so try to take small frequent sips over a couple of hours, instead of drinking a large amount at once.
- **Take note of urination.** You should be urinating at regular intervals, and your urine should be light and clear. Infrequent passage of dark urine is a sign of dehydration. Dizziness and lightheadedness also are signs of dehydration. If any of these

signs and symptoms occur and you can't drink enough fluids, seek medical attention.

- **Ease back into eating.** Try to eat small amounts of food frequently if you experience nausea. Otherwise, gradually begin to eat bland, easy-to-digest foods, such as soda crackers, toast, gelatin, bananas, applesauce, rice and chicken. Stop eating if your nausea returns. Avoid milk and dairy products, caffeine, alcohol, nicotine, and fatty or highly seasoned foods for a few days.
- **Get plenty of rest.** The illness and dehydration can make you weak and tired.

## Seek medical attention if:

- Vomiting persists more than two days
- Diarrhea persists more than several days
- Diarrhea turns bloody
- Fever is more than 102 F (39 C) or higher
- Lightheadedness or fainting occurs with standing
- Confusion develops
- Worrisome abdominal pain develops

# Motion Sickness

## What is it?

Nausea caused by motion.

## Symptoms:

- Fatigue
- Cold sweats
- Headache
- Irritability
- Pale skin
- Rapid breathing
- Dizziness
- Vomiting
- Nausea

## Plan of Action:

Usually quiets down as soon as the motion stops. The more you travel, the more easily you'll adjust to being in motion.

## **If you're susceptible to motion sickness:**

- **Focus on the horizon** or on a distant, stationary object. Don't read or use electronic devices while traveling.
- **Keep your head still**, while resting against a seat back.
- **Don't smoke** and don't sit near smokers.
- **Avoid strong odors**, spicy and greasy foods, and alcohol.
- **Take an antihistamine**, which you can buy without a prescription. Medicines include dimenhydrinate (Dramamine, Draminate, others) and meclizine (Dramamine Less Drowsy, Travel-Ease, others). Take these medicines at least 30 to 60 minutes before you travel. Expect drowsiness as a side effect.
- **Consider scopolamine**, available in a prescription adhesive patch called Transderm Scop. Several hours before you plan to travel, apply the patch behind your ear for 72-hour protection. Talk to your health care provider before using the medicine if you have health problems such as glaucoma or urine retention.
- **Try ginger**. A ginger supplement combined with ginger snaps, ginger ale, or candied ginger might help curb nausea.
- **Eat lightly**. Some people find that nibbling on plain crackers and sipping cold water or a carbonated drink without caffeine help.

# Nose Injuries

# Foreign Object in the Nose

## What is it?

Anything in the nose that wouldn't normally be there.

## Plan of Action:

- **Remove right away if the object is a magnet, battery or expands when wet.** These objects can cause severe tissue damage in just hours. If it's stuck and you can't remove it easily, seek emergency care.
- **Don't poke or prod the object.** Fingers, cotton swabs and other tools might cause swelling and more damage. If the object is pushed deeper into the nose, it may be harder to remove. And it could cause choking.
- **Don't inhale the object.** You might choke. Instead, breathe through your mouth until the object is removed.
- **Don't wash out the object.** You might choke if the object is washed into the airway. Also, some objects may cause more damage when wet.
- **Blow out of your nose.** The puff of air might free the object. This also is called positive pressure. Don't blow hard or constantly. If the object is stuck in only one nostril, gently close the other nostril with your finger. Then, blow out gently but

firmly through the affected nostril.

- **Use tweezers only if the object is easy to see and grasp.**

Don't try this method if you can't easily see or grasp the object. Try blowing air out of the nose first. This might free the object without tweezers.

- **Seek help right away** if you see symptoms of infection or if you can't remove the object on the first try.

**Seek Emergency Care** if these methods fail. Delays and many failed tries to remove a stuck object can lead to infection and damage. Also see a member of your care team if you see symptoms of infection.

# Nosebleeds

## What is it?

Occur when the tender blood vessels in the nose break.

Common nosebleed causes can include changes of season, dryness, scratching, some medicines, and injuries.

People on blood thinners may have worse nosebleeds than do others. Most often nosebleeds are only annoying and not a true medical problem. But they can be both.

## Plan of Action:

- **Sit up and lean forward.** Keep the head up. Lean forward so the blood doesn't go down the throat. This could cause you to choke or have an upset stomach.
- **Gently blow your nose.** This will clear any blood clots.
- **Pinch the nose.** Use the thumb and a finger to pinch both nostrils shut. Breathe through the mouth. Keep pinching for 10 to 15 minutes. Pinching puts pressure on the blood vessels and helps stop the blood flow.

If the bleeding doesn't stop, pinch the nose again for up to 15 minutes. Don't let go for at least five minutes even to check if the bleeding has stopped. Seek emergency care if the bleeding doesn't stop after the second try.

- **Prevent another nosebleed.** Don't pick or blow the nose. And don't drop the head below the heart or lift anything heavy for many hours. Gently put a saline gel (Ayr), antibiotic ointment (Neosporin) or petroleum jelly (Vaseline) on the inside of the nose. Put most of the salve on the middle part of the nose, also called the septum. Steam, humidifiers or an ice pack across the bridge of the nose also may help.
- **If you have another nosebleed, try first-aid steps again.**  
This time, spray both sides of the nose with a nasal spray that has oxymetazoline in it (Afrin). Do this after blowing the nose. Then pinch the nose again. Seek medical help if the bleeding does not stop.

## When to contact your doctor

- **You have nosebleeds often.** You may need to have a blood vessel cauterized. Cautery is a method that burns and seals blood vessels using electric current, silver nitrate or a laser. Also, a care provider might pack the nose with special gauze or an inflatable latex balloon. Both packing methods put pressure on the blood vessel and stop the bleeding.
- **You have nosebleeds and you're taking blood thinners.** If you're taking medicines such as aspirin or warfarin (Jantoven), your care team may change the medicine dose.

Think about using a humidifier. Adding more moisture in your home may help relieve nasal bleeding.

## When to seek emergency care

- Nosebleeds involve a greater than expected amount of blood.
- Nosebleeds last longer than 30 minutes.
- You feel faint or lightheaded.
- The nosebleed follows a fall or an accident. Bleeding after a fall or an injury to the head or face could mean that you have broken the nose.

# Poisoning

## What is it?

Injury or death due to swallowing, inhaling, touching or injecting various drugs, chemicals, venoms or gases.

Many substances — such as drugs and carbon monoxide — are poisonous only in higher concentrations or dosages.

Certain types of cleaners are only harmful if ingested, while others also emit toxic gases/fumes.

## Symptoms:

Poisoning signs and symptoms can mimic other conditions, such as seizure, alcohol intoxication, stroke and insulin reaction.

### May include:

- Burns or redness around the mouth and lips
- Breath that smells like chemicals, such as gasoline or paint thinner
- Vomiting
- Difficulty breathing
- Drowsiness
- Confusion or other altered mental status

If you suspect poisoning, be alert for clues such as empty pill bottles or packages, scattered pills, and burns, stains, and odors on the person or nearby objects.

## **Plan of Action:**

**How you treat someone who may have been poisoned depends on:**

- The person's symptoms
- The person's age
- Whether you know the type and amount of the substance that caused poisoning

## **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
- Known to have taken medications, or any other substance, intentionally or accidentally overdosed (in these situations the poisoning typically involves larger amounts, often along with alcohol)

**Call Poison Help at 800-222-1222 in the United States or your regional poison control center in the following situations:**

- The person is stable and has no symptoms
- The person is going to be transported to the local emergency department

Be ready to describe the person's symptoms, age, weight, other medications he or she is taking, and any information you have about the poison. Try to determine the amount ingested and how long since the person was exposed to it. If possible, have on hand the pill bottle, medication package or other suspect container so that you can refer to its label when speaking with the poison control center.

**What to do while waiting for help:**

- **Swallowed poison.** Remove anything remaining in the person's mouth. If the suspected poison is a household cleaner or other chemical, read the container's label and follow instructions for accidental poisoning.
- **Poison on the skin.** Remove any contaminated clothing using gloves. Rinse the skin for 15 to 20 minutes in a shower or with a hose.
- **Poison in the eye.** Gently flush the eye with cool or lukewarm water for 20 minutes or until help arrives.
- **Inhaled poison.** Get the person into fresh air as soon as possible.

- **If the person vomits**, turn his or her head to the side to prevent choking.
- **Begin CPR if the person shows no signs of life**, such as moving, breathing or coughing.
- **Call Poison Help at 800-222-1222** in the United States or your regional poison control for additional instructions.
- **Have somebody gather pill bottles, packages or containers with labels**, and any other information about the poison to send along with the ambulance team.

## **In the case of an opioid overdose:**

If the person is at risk of overdose of opioid pain medication and naloxone (Narcan) is available, please administer.

Increasingly, health care providers are giving people Narcan injectable prescriptions if they are at risk of overdose. Loved ones should be familiar with how to use them.

## **Caution**

- **Syrup of ipecac.** Don't give syrup of ipecac or do anything to induce vomiting. Expert groups, including the American Association of Poison Control Centers and the American Academy of Pediatrics, no longer endorse using ipecac in children or adults who have taken pills or other potentially poisonous substances. No good evidence proves its effectiveness, and it often can do more harm than good.

If you still have old bottles of syrup of ipecac, throw them away.

# Shock

## What is it?

A critical condition brought on by the sudden drop in blood flow through the body.

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

## Symptoms:

- Cool, clammy skin
- Pale or ashen skin
- Bluish tinge to lips or fingernails (or gray in the case of dark complexions)
- Rapid pulse
- Rapid breathing
- Nausea or vomiting
- Enlarged pupils
- Weakness or fatigue

- Dizziness or fainting
- Changes in mental status or behavior, such as anxiousness or agitation

## When to Seek Emergency Care:

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

- Lay the person down and elevate the legs and feet slightly, unless you think this may cause pain or further injury.
- Keep the person still and don't move him or her unless necessary.
- Begin CPR if the person shows no signs of life, such as not breathing, coughing or moving.
- Loosen tight clothing and, if needed, cover the person with a blanket to prevent chilling.
- Don't let the person eat or drink anything.
- If you suspect that the person is having an allergic reaction, and you have access to an epinephrine autoinjector, use it according to its instructions.
- If the person is bleeding, hold pressure over the bleeding area, using a towel or sheet.

- If the person vomits or begins bleeding from the mouth, and no spinal injury is suspected, turn him or her onto a side to prevent choking.

# Skin Injuries

# Blisters

## What is it?

A bubble on the skin filled with serum caused by friction, burning, or other damage.

## Plan of Action:

If a blister isn't too painful, try to keep it intact. Unbroken skin over a blister may provide a natural barrier to bacteria and decreases the risk of infection. Cover it with a bandage or moleskin. Cut a piece of moleskin into a doughnut shape and place the pad so that it encircles and protects the blister. Then cover the blister and moleskin with gauze.

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.
- **Clean a sharp needle** with rubbing alcohol.
- **Use the needle to prick the blister in several spots near the edge.** Let the fluid drain, but leave the overlying skin in place.

- **Apply an ointment** such as petroleum jelly to the blister and cover it with a nonstick gauze bandage. If a rash appears, stop using the ointment.
- **Follow-up care.** Check the area every day for infection. After several days, use a tweezers and scissors sterilized with rubbing alcohol to cut away the dead skin. Apply more ointment and a bandage.

## Prevention:

To prevent friction blisters on your feet, wear shoes that fit well. It also helps to use moisture-wicking socks. Try the various socks, shoes and insoles that are designed specifically to help reduce blistering. You might also try attaching moleskin to the inside of your shoes where it might rub. Or you can dust the inside of your socks with foot powder. Gloves help prevent blisters on your hands.

# Bruise

## What is it?

A bruise forms when blood vessels under the skin break. The trapped blood creates a bruise that's black, purple or blue then changes color as it heals.

## Plan of Action:

- Elevate the bruised area above heart level, if possible.
- Apply an ice pack wrapped in a thin towel. Leave it in place for 20 minutes. Repeat several times for a day or two after the injury. This helps to reduce the swelling and pain.
- If the bruised area is swelling, put an elastic bandage around it, but not too tight

If the skin isn't broken, you don't need to bandage a bruise. Consider taking a nonprescription pain reliever if needed.

## Consult your health care provider if you:

- Have very painful swelling in the bruised area
- Suspect a bruise has been caused by child abuse, domestic violence or elder abuse

- Are still experiencing pain three days after a seemingly minor injury
- Have frequent, large or painful bruises
- Have bruises that begin suddenly or seem to develop for no reason
- Have a personal or family history of easy bruising or bleeding
- Notice a lump form over the bruise, which may be a sign of pooling blood, also called a hematoma
- Have unusual bleeding, such as from the nose or gums

# Burns

## What is it?

Tissue damage from hot liquids, the sun, flames, chemicals, electricity, steam and other causes.

## Plan of Action:

### Minor Burns

- **Cool the burn.** Hold the area under cool (not cold) running water for about 10 minutes. If the burn is on the face, apply a cool, wet cloth until the pain eases. For a mouth burn from hot food or drink, put a piece of ice in the mouth for a few minutes.
- **Remove rings or other tight items from the burned area.** Try to do this quickly and gently, before the area swells.
- **Don't break blisters.** Blisters help protect against infection. If a blister does break, gently clean the area with water and apply an antibiotic ointment.
- **Apply lotion.** After the burn is cooled, apply a lotion, such as one with aloe vera or cocoa butter. This helps prevent drying and provides relief.
- **Bandage the burn.** Cover the burn with a clean bandage. Wrap it loosely to avoid putting pressure on burned skin. Bandaging keeps air off the area, reduces pain and protects

blistered skin.

- **If needed, take a nonprescription pain reliever**, such as ibuprofen (Advil, Motrin IB, others), naproxen sodium (Aleve) or acetaminophen (Tylenol, others).

### **For major burns until emergency help arrives:**

- **Protect the burned person from further harm.** If you can do so safely, make sure the person you're helping is not in contact with the source of the burn. For electrical burns, make sure the power source is off before you approach the burned person. Don't try to remove clothing stuck in the burn.
- **Make certain that the person burned is breathing.** If needed, begin rescue breathing if you know how.
- **Remove jewelry, belts and other tight items**, especially from the burned area and the neck. Burned areas swell quickly.
- **Cover the burn.** Loosely cover the area with gauze or a clean cloth.
- **Raise the burned area.** Lift the wound above heart level if possible.
- **Watch for signs of shock.** Signs and symptoms include cool, clammy skin, weak pulse and shallow breathing.

### **When to seek emergency care:**

**Call 911 or seek immediate care** for major burns, which:

- Are deep, involving all layers of the skin
- Cause the skin to be dry and leathery
- May appear charred or have patches of white, brown or black
- Are larger than 3 inches (about 8 centimeters) in diameter
- Cover the hands, feet, face, groin, buttocks or a major joint, or encircles an arm or leg
- Are accompanied by smoke inhalation
- Begin swelling very quickly

Electrical burns, including those caused by lightning, and major chemical burns need emergency medical care. A minor burn might need emergency care if it affects the eyes, mouth, hands or genital areas. Babies and older adults might need emergency care for minor burns as well.

# Cuts and Scrapes

## What is it?

A minor skin wound that may or may not draw blood.

## Plan of Action:

- 1. Wash your hands.** This helps avoid infection.
- 2. Stop the bleeding.** Minor cuts and scrapes usually stop bleeding on their own. If needed, apply gentle pressure with a clean bandage or cloth and elevate the wound until bleeding stops.
- 3. Clean the wound.** Rinse the wound with water. Keeping the wound under running tap water will reduce the risk of infection. Wash around the wound with soap. But don't get soap in the wound. And don't use hydrogen peroxide or iodine, which can be irritating.  
Remove any dirt or debris with a tweezers cleaned with alcohol. See a doctor if you can't remove all debris.
- 4. Apply an antibiotic or petroleum jelly.** Apply a thin layer of an antibiotic ointment or petroleum jelly to keep the surface moist and help prevent scarring. Certain ingredients in some ointments can cause a mild rash in some people. If a rash appears, stop using the ointment.
- 5. Cover the wound.** Apply a bandage, rolled gauze or gauze held in place with paper tape. Covering the wound keeps it clean. If the injury is just a minor scrape or scratch, leave it uncovered.

**6. Change the dressing.** Do this at least once a day or whenever the bandage becomes wet or dirty.

**7. Get a tetanus shot.** Get a tetanus shot if you haven't had one in the past five years and the wound is deep or dirty.

**8. Watch for signs of infection.** See a doctor if you see signs of infection on the skin or near the wound, such as redness, increasing pain, drainage, warmth or swelling.

# Foreign Object in the Skin

## What is it?

An object stuck under the skin such as wood splinters, thorns, slivers of metal or glass, and gravel.

## Plan of Action:

- Wash your hands and clean the area well with soap and water.
- Use tweezers cleaned with rubbing alcohol to remove the object. Use a magnifying glass to help you see better.
- If the object is under the surface of the skin, sterilize a clean, sharp needle by wiping it with rubbing alcohol. Use the needle to gently break the skin over the object and lift up the tip of the object.
- Use a tweezers to grab the end of the object and remove it.
- Wash the area again and pat dry. Apply petroleum jelly or an antibiotic ointment.

## When to Seek Medical Help:

**For a foreign object that seems to be more deeply embedded in the skin or muscle.**

- Don't try to remove the object. Doing so could cause further harm.
- Bandage the wound. First put a piece of gauze over the object. Then, if it helps, put clean padding around the object before binding the wound securely with a bandage or a piece of clean cloth. Take care not to press too hard on the object.

**In addition, seek medical help if:**

- The object is hard to see (as with clear glass) or doesn't come out easily (as with a fishhook).
- The injury involves an eye or is close to an eye.
- The wound is deep or dirty and the injured person's last tetanus vaccination was more than five years ago. The doctor may recommend a booster.

# Puncture Wounds

## What is it?

A wound made by a pointed object such as a nail, knife, or sharp tooth.

## Plan of Action:

- 1. Wash your hands.** This helps prevent infection.
- 2. Stop the bleeding.** Apply gentle pressure with a clean bandage or cloth.
- 3. Clean the wound.** Rinse the wound with clear water for 5 to 10 minutes. If dirt or debris remains in the wound, use a washcloth to gently scrub it off. See a doctor if you can't remove all of the dirt or debris.
- 4. Apply an antibiotic.** Apply a thin layer of an antibiotic cream or ointment (Neosporin, Polysporin). For the first two days, rewash the area and reapply the antibiotic when you change the dressing.
- 5. Cover the wound.** Bandages help keep the wound clean.
- 6. Change the dressing.** Do this daily or whenever the bandage becomes wet or dirty.
- 7. Watch for signs of infection.** See a doctor if the wound isn't healing or you notice any increasing pain, pus, swelling or fever. On light skin, spreading redness is a sign of infection. On dark skin, redness may not be apparent, or the infection's streaks may look purplish-gray or darker than your normal skin.

## Seek prompt medical care:

- Keeps bleeding after a few minutes of direct pressure
- Is the result of an animal or human bite
- Is deep and dirty
- Is caused by a metal object
- Is deep and to the head, neck, scrotum, chest, or abdomen
- Is over a joint and could be deep

If the injured person hasn't had a tetanus shot in the past five years and the wound is deep or dirty, your doctor may recommend a booster. The injured person should have the booster shot within 48 hours of the injury.

If the wound was caused by a cat or a dog, try to confirm that its rabies vaccination is up to date. If it was caused by a wild animal, seek advice from your doctor about which animals are most likely to carry rabies.

# Bleeding

# Severe Bleeding

## What is it?

Blood pumping from a wound, bleeding that does not slow down with pressure, and/or bleeding that is quickly soaking through bandage after bandage.

## Plan of Action:

**Call 911 or your local emergency number if the wound is deep or you're not sure how serious it is.** Don't move the injured person except if needed to avoid further injury.

- Before checking for the source of the wound, put on disposable gloves and other personal protective equipment if you have them.
- **Remove any clothing or debris from the wound.** Look for the source of the bleeding. There could be more than one injury. Remove any obvious debris but don't try to clean the wound. Don't remove large or deeply embedded objects, and don't probe the wound.
- **Stop the bleeding.** Cover the wound with sterile gauze or a clean cloth. Press on it firmly with the palm of your hand until bleeding stops. But don't press on an eye injury or embedded object. Don't press on a head wound if you suspect a skull

fracture.

Wrap the wound with a thick bandage or clean cloth and tape. Lift the wound above heart level if possible.

- **Help the injured person lie down.** If possible, place the person on a rug or blanket to prevent loss of body heat. Elevate the feet if you notice signs of shock, such as weakness, clammy skin or a rapid pulse. Calmly reassure the injured person.
- **Add more bandages as needed.** If the blood seeps through the bandage, add more gauze or cloth on top of the existing bandage. Then keep pressing firmly on the area.
- **Tourniquets:** A tourniquet is effective in controlling life-threatening bleeding from a limb. If needed, apply a commercially made tourniquet if it's available and you're trained in how to use it. Don't use an improvised tourniquet, such as a scarf or a belt.

When emergency help arrives, tell them how long the tourniquet has been in place.

- **Keep the person still.** If you're waiting for emergency help to arrive, try to keep the injured person from moving.

If you haven't called for emergency help, get the injured person to an emergency room as soon as possible.

- **Wash your hands.** After helping the injured person, wash your hands, even if it doesn't look like any blood got on your hands.

# External Bleeding

## What is it?

Bleeding due to breaking of the skin from cuts, scrapes, etc.

### **With all bleeding injuries, first identify:**

- The amount of bleeding
- The location of bleeding

If the flow of blood is continuous, steady, and heavy, consider the wound to be life-threatening.

## Plan of Action:

### **For non-life-threatening bleeding:**

- Apply dressings over the bleeding area, and put direct pressure on the dressings using the heel of your hand
- Direct pressure should be firm, steady, and constant
- Do not remove pressure from the wound to add more dressings
- Do not remove a dressing once it's placed because it could cause the wound to bleed more
- Do not remove pressure until help arrives or the bleeding stops

- If the bleeding is not stopping, press harder
- Once the bleeding stops or you cannot keep pressure on the wound, wrap a bandage firmly over the dressings to hold them in place
- A person who is bleeding should be seen by a healthcare provider ASAP because they may need stitches or a tetanus shot

### **When to Seek Emergency Care:**

- There is a lot of bleeding
- You cannot stop the bleeding
- You see signs of shock
- You suspect a head, neck, or spine injury
- You are not sure what to do

# Internal Bleeding

## What is it?

Bleeding inside the body.

When bleeding occurs inside the body, you may be able to see a bruise under the skin or you may not be able to see anything.

### **You should suspect internal bleeding if someone:**

- Was injured in a car crash or was hit by a car
- Fell from a height
- Was injured in the abdomen or chest (including bruises such as seat belt marks)
- Was injured in a sporting event, such as slamming into other people or being hit with a ball
- Has pain in the abdomen or chest after an injury
- Has shortness of breath after an injury
- Is coughing up or vomiting blood after an injury
- Shows signs of shock without external bleeding
- Was stabbed or shot

## **Plan of Action:**

- Call 911, and get a first aid kit and AED
- If the person is responsive, have them lie down and keep still while you treat any external injuries
- Check for signs of shock and provide first aid as needed
- Be prepared to provide CPR if they become unresponsive and stops breathing normally

# Mouth Injuries

# Tooth Loss

## Plan of Action:

**It's sometimes possible to successfully implant permanent teeth that have been knocked out, but only if you follow the steps below immediately — before you see a dentist.**

- Handle your tooth by the top or crown only — don't touch the roots.
- Inspect the crown and root to determine if any portion of either appears to be missing or fractured.
- Don't rub the tooth or scrape it to remove debris. This damages the root surface, making the tooth less likely to survive.
- If your tooth has dirt or foreign material on it, gently rinse your tooth briefly — no more than 10 seconds — in a bowl of lukewarm tap water to remove the debris. Don't hold it under running water, because too much tap water could kill the cells on the root surface that help reattach the tooth.
- Try to put your tooth back in the socket. If it doesn't go all the way into place, bite down slowly and gently on gauze or a moistened paper towel to help keep it in place. Hold the tooth in place until you see your dentist.
- If you can't put your tooth back in the socket, immediately place it between your cheek and gum, or in cold milk or your own

saliva. Or use an over-the-counter product that preserves a knocked-out tooth, such as those approved by the American Dental Association, if you have quick access to it.

- Get emergency dental care. If your dentist's office isn't open, go to the emergency room.

For permanent teeth, if a sharp surface or shiny surface is apparent, there's a chance that part of the root is still in the socket, and reimplantation becomes less successful. If reimplantation doesn't occur within two hours after the tooth is knocked out — sooner is better — the likelihood of success becomes poor. So it's vital to get emergency dental care.

# Bleeding From the Mouth

## What is it?

Bleeding occurring inside or on the mouth from the teeth, tongue, lip, gums, or cheek.

## Plan of Action:

- If the bleeding is coming from the tongue, lip, or cheek and you can reach it easily, apply pressure with a gauze or clean cloth.
- If you can't stop the bleeding in 5 to 10 minutes or if the person has trouble breathing, call 911.
- If a mouth injury is severe, blood or broken teeth can block the airway and/or be a choking hazard.

# Amputation

## What is it?

When any part of a limb is cut or torn off.

## Plan of Action:

### Act quickly

- Stop the bleeding by using a tourniquet or direct pressure
- Make sure the scene is safe
- Call 911 and get a first aid kit and AED
- Use a tourniquet to stop the bleeding
- If a tourniquet is unavailable or doesn't stop the bleeding, apply dressings from the first aid kit and apply direct pressure on the dressings over the bleeding area

### To protect the amputated part:

- Rinse the amputated part with clean water
- Cover it with a clean dressing
- Place it in a watertight plastic bag

- Place that bag inside a separate container that contains ice or ice water
- Label the bag with the injured person's name, the date, and the time of amputation
- Make sure the body part gets to the hospital with the injured person

**Do not place the amputated body part directly on ice**