

# Bone and Joint Injuries

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# 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.