

SPRAINS AND STRAINS

A sprain refers to a sudden twist or pulling of a *ligament* (connective tissue that attaches bone to bone). It results in the stretching or tearing of the ligament. A strain refers to an injury that involves stretching, twisting, or tearing muscles or tendons (connective tissue that join muscles to bones). Most people suffer sprains due to some trauma like an automobile accident, body contact in sports like football, or falls. Strains are due to excessive tension or over use. These injuries commonly affect the body joints like the neck, back, knees, wrists, fingers and ankles. The ankle joint is highly susceptible to injury due to its location and role of supporting the body. Risk factors include living a sedentary lifestyle (no exercise) with obesity, wearing high-heeled shoes, participating in contact sports, and skating (skateboarding, ice skating and roller blading). For the most part, sprains and strains are treated the same because it is hard to tell them apart.

Symptoms *may include:*

Pain and swelling of the injured joint

Tenderness to touch

Limited movement or inability to move the joint

Redness, discoloration or bruising to skin

Deformity of the joint and possible *dislocation* (bones of the joint move out of place)

What your doctor can do:

Diagnose the injury by asking about your symptoms, doing a physical exam, and ordering joint x-rays.

Order special imaging studies that include a CT-scan or MRI (special radiology pictures that are able to show more details of muscle, ligament and tendon damage).

Immobilize joint with a splint, elastic wrap, or cast. This limits movement and allows the tissues time to heal. You will receive crutches to avoid bearing weight on the injured ankle or knee joint.

Prescribe medication to reduce pain, muscle spasms and inflammation.

Recommend surgery to repair torn tissues and physical therapy to strengthen muscles, ligaments, tendons and joints.

What you can do:

Immediately after the injury:

Immobilize the injury with an elastic bandage wrapped snugly. Do not wrap too tightly; you do not want to restrict blood flow. Do not use heat at this time because it will increase inflammation (swelling, tenderness, and warmth). Do not try to manipulate the joint.

Apply ice packs to the injured joint for 15 to 20 minutes every hour during the first 24 to 48 hours after an injury. Always cover ice packs with a hand cloth or towel to limit frostbite injuries to skin.

Keep the injured site elevated above the level of your heart

See your doctor or go to an emergency room if you suffer a severe injury or suspect a bone *fracture* (break).

During recovery remember the RICE mnemonic:

R- Rest the injured site

I - Ice the injured area for 15 to 20 minutes every hour. Ice therapy is recommended for the first 24 to 48 hours after the injury.

C - Compression; Immobilize the injury with a snug elastic bandage. Do not wrap too tightly; you do not want to restrict blood flow.

E - Elevate; Keep the injured site above the level of your heart to reduce swelling.

Generally after 24 hours, it is recommend to apply heat. Place hot compresses or a moist heating pad on the joint several times daily for 15-20 minutes at a time. Talk to your doctor about cold and hot therapies for your condition.

Preventive measures:

Weight reduction is important if you are overweight. Start an exercise program with your doctor's permission and advice.

Warm-up and stretch prior to exercising.

Apply elastic bandages, wraps or braces to increase joint stability and limit twisting motions. Wear comfortable, low-heeled, rubber soled shoes.

What you can expect:

Most injuries recover within 1 week to a couple of months, depending on the severity of the injury.

Some complications may include chronic sprain/strain injuries of the affected joint; arthritis; damage to nearby nerves and blood vessels; and bone fractures (breaks).

Contact your doctor if you suffer a sprain or strain or if your symptoms worsen despite receiving treatment.

Seek immediate medical assistance if your pain increases; if you suspect a bone fracture (deformity, pain, discoloration, bone through skin, and decreased function of joint); if you are unable to bear weight or walk; if you develop pale, bluish skin that does not improve with elevation or ice therapy; or if you develop signs of an *infection* after surgery (fever, pus drainage from surgical site, increased pain, or inflammation).