



Sprains, Strains, and Other Soft-Tissue Injuries

When you participate in sports and physical fitness activities, you can injure the soft tissues of your body. Even simple everyday activities can damage these ligaments, tendons, and muscles.

Some of the soft-tissue injuries you are most likely to experience include:

- sprains
- strains
- contusions
- tendonitis
- bursitis
- stress injuries

Any of these can be the result of a single episode, such as a fall, a sudden twist, or a blow to the body. You might also sustain one or more of these injuries because of repeated overuse, such as in ongoing athletic activities. In this case, small amounts of body stress accumulate slowly but steadily. The result can be damage and pain.

Here are some of the injuries you are most likely to experience, along with suggested ways of treating them.

Sprains

The joints of your body are supported by ligaments. Ligaments are strong bands of connective tissue that connect one bone to another. A sprain is a simple stretch or tear of the ligaments.

The areas of your body that are most vulnerable to sprains are your ankles, knees, and wrists.

A sprained ankle can occur when your foot turns inward. This can put extreme tension on the ligaments of your outer ankle and cause a sprain.

A sprained knee can be the result of a sudden twist.

A wrist sprain most often occurs when you fall on an outstretched hand.

Most mild sprains heal with "R.I.C.E." (rest, ice, compression, and elevation) and exercise. Moderate sprains may also require a period of bracing. The most severe sprains may require surgery to repair torn ligaments.



Sprains and strains are usually treated first with RICE (rest, ice, compression using a bandage, and elevation.)

Strains

Your bones are supported by a combination of muscles and tendons. Tendons connect muscles to bones.

A strain is the result of an injury to either a muscle or a tendon, usually in your foot or leg. The strain may be a simple stretch in your muscle or tendon, or it may be a partial or complete tear in the muscle-and-tendon combination.

The recommended treatment for a strain is the same as for a sprain: rest, ice, compression, and elevation. This should be followed by simple exercises to relieve pain and restore mobility.

For a serious tear, the soft tissues may need to be repaired surgically.

Contusions

A contusion is a bruise caused by a blow to your muscle, tendon, or ligament. The bruise is caused when blood pools around the injury and discolors the skin.

Most contusions are mild and respond well when you rest, apply ice and compression, and elevate the injured area.

If symptoms persist, medical care should be sought to prevent permanent damage to the soft tissues.

Tendonitis

Inflammation is a healing response to injury. It is usually accompanied by swelling, heat, redness, and pain. An inflammation in a tendon or in the covering of the tendon is called tendonitis.

Tendonitis is caused by a series of small stresses that repeatedly aggravate the tendon.

Professional baseball players, swimmers, tennis players, and golfers are susceptible to tendonitis in their shoulders and arms.

Soccer and basketball players, runners, and aerobic dancers are prone to tendon inflammation in their legs and feet.

Tendonitis may be treated by rest to eliminate stress, anti-inflammatory medication, steroid injections, splinting, and exercises to correct muscle imbalance and improve flexibility.

Persistent inflammation may cause damage to the tendon, which may necessitate surgical correction.

Bursitis

A bursa is a sac filled with fluid that is located between a bone and a tendon or muscle. A bursa allows the tendon to slide smoothly over the bone.

Repeated small stresses and overuse can cause the bursa in the shoulder, elbow, hip, knee, or ankle to swell. This swelling and irritation is called bursitis.

Many people experience bursitis in association with tendonitis.

Bursitis can usually be relieved by rest and possibly with anti-inflammatory medication. Some orthopaedic surgeons also inject the bursa with additional medication to reduce the inflammation.

Stress Fractures

When one of your bones is stressed by overuse, tiny breaks in the bone can occur. The injury is termed a stress fracture.

Early symptoms may be pain and swelling in the region of the stress fracture. The bones of the lower leg and foot are particularly prone to stress fractures.

The fracture may not be seen on initial routine X-rays, requiring a bone scan to obtain the diagnosis.

These injuries are treated by rest, activity modification, cast immobilization, and, rarely, by surgery.

Good Care

If you are an athlete or a fitness enthusiast, you should pay close attention to your body's warning signs.

Fatigue and pain are usually a signal that you are pressing too hard. Be sure to stretch thoroughly before your work-out, and stop before you are exhausted.

Stress injuries can also result from poor muscle balance, lack of flexibility, or weakness in soft tissues caused by previous injuries. These injuries to the muscle, bone ligaments, and tendons may require a prolonged amount of time to heal, in spite of appropriate care.

Consult your orthopaedic surgeon for treatment of these injuries to the soft tissue and bone. Besides treating the problem, he or she can develop a program of exercise or rehabilitation to restore function.

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Recreational athletes can help prevent injuries by a brief warm up, then stretching, before exercise.

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