

# SPRAIN OR STRAIN

## Definition, Treatment and Prevention

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A **SPRAIN** involves injury to ligaments. Ligaments are the static support at a joint. In a “twisted” or sprained ankle the ligaments are pulled beyond their normal length and injury with possible tears in the fibers occurs. The body produces swelling or edema at the injury site further stretching the ligament. Both the stretched ligament and the swelling itself stimulate the pain nerves and pain is felt.



A **STRAIN** is a tightening or spasm of the muscle following overuse or being pulled or lengthened beyond its “breaking point” during a contraction. The brain senses an injury and sends a message to protect the area by tightening the muscle to prevent further movement. The reaction is fairly significant and can be quite painful. This pain stimulates the brain to protect the area further and causes more tightening or spasms. Swelling most likely occurs at this injury site and contributes to more pain. And the cycle of pain-spasm-pain continues.

**R.I.C.E.** Rest, Ice, Compression, and Elevation should be performed immediately following an injury ANYWHERE on your body and should continue for at least a week. Specifically, a sprained ankle should be wrapped in an elastic bandage, elevated above the heart level, i.e. lying down with the lower leg propped on pillows, and ice placed on the injured site for 15 minutes 4-8 times per day. If a severe sprain occurs, your doctor may prescribe anti-inflammatory medication. Crutches will provide rest of the sprained ankle and still allow you to get around.



A strained back responds well to the application of ice, while in a crooked lying position, i.e. lying on your back with your legs propped up such that the hips are close to 90°. Heat applied initially may increase the swelling and, therefore, increase the pain. A back brace can be worn to allow for rest of the back muscles however should be discontinued as soon as possible.

**GETTING MOVING** Within the first week, depending on the severity of the injury and your level of pain, moving the area of injury slowly and through a range of motion that does not increase the pain is essential. Ten repetitions are sufficient and the goal is to increase the amount of motion each set. A set of 10 repetitions should be performed at least twice per day. A progressive exercise program that incorporates flexibility, stability, and strength improves the function of the injured area.

**PREVENTION** Proper diet, a good night’s sleep, and a consistent exercise program are integral in preventing an injury. Other ways to avoid injury include wearing proper fitting shoes, warming up before working out or playing a sport, wearing appropriate equipment, and don’t participate if you are tired or already injured. Remember, an ounce of prevention equals a pound of cure.

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