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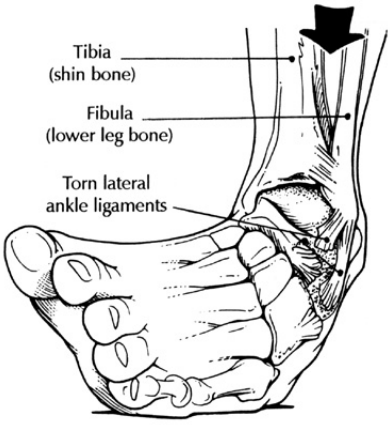
Sprains and Strains

Sprains and strains are among the most common injuries in sports. Athletes of all levels can sustain these injuries, but those at most risk are people that have had a previous sprain or strain, are overweight, and are in poor physical condition. All sports and exercises, even walking, carry a risk of injury. The areas at risk often depend on the activity you are involved with. Activities that involve running, cutting, pivoting, jumping tend to have a higher incidence of low back, knee, foot and ankle sprains and strains, whereas racquet sports lead to sprains and strains of the elbow, wrist and hand.

What is the difference between a sprain and a strain?

A *sprain* is a stretch and/or tear of a ligament. The ligament is the fibrous band of connective tissue that joins the ends of bones together, thus stabilizing and supporting the body's joints. A sprain is caused by trauma, such as a fall, that knocks a joint out of position, and overstretches, or even tears the supporting ligaments of the joint. A common example is an ankle sprain, occurring when the ankle and foot role inward, injuring the ligaments on the outside of the foot and ankle.



Sprains are classified as grade 1 (mild, stretch injury to the ligament), 2 (moderate, partial tear of the ligament) or 3 (severe, complete tear of the ligament). The symptoms vary depending on how severe the sprain is, and include pain, bruising, and inflammation.

A *strain* is a stretch, pull and/or tear of a muscle and/or tendon. Tendons are fibrous cords of tissue that attach muscles to bone. Acute strains are caused by a direct blow, overstretching, or excessive contraction of the muscles and/or tendons. Common examples include hamstring strain and low back strains. Chronic strains tend to occur with overuse, due to prolonged, repetitive movement of the muscles and tendons. Reasons for this include inadequate rest breaks during intensive training, poor technique and incorrect equipment.
Strains are classified as severe, where there is a tear or rupture of the muscle and/or tendon, moderate where the muscle/tendon is overstretched and slightly torn. With a mild strain the muscle/tendon is stretched or pulled slightly. The typical symptoms of a strain are pain, muscle spasm, muscle weakness, swelling, inflammation and cramping.

Treatment of Sprains and Strains

Rest, ice, compression and elevation is the initial treatment for all sprains and strains to help minimize the damage that occurs due to the inflammation. It is important in all but very mild cases for a qualified health care provider to evaluate the injury. This evaluation will allow for the establishment of an appropriate treatment and rehabilitation plan. For example, a severe sprain or strain may require

surgery or immobilization followed by physical therapy and a mild sprain or strain may require a short course of physical therapy with activity modification to ensure healing and a safe return to activity.

Guidelines for Icing an Injury

Types of ice you can use:

- Zip lock bag with ice cubes with a thin damp towel around it.
- Manufactured ice wraps or gel packs
- Frozen Peas, or vegetables in your freezerFollow the PRICE Principal:

'P' Protect the area of injury
'R' Rest the injured area
'I' Ice the area quickly
'C' Compression to the area (gentle)
'E' Elevation of the extremity

Follow these simple steps for the best results to use ice to treat an injury.

- Ice the injured area immediately following an injury. The effect of icing decreased significantly after 48 hour period.
- Apply the ice for 15-20 minutes…… no longer! You can actually damage tissue, including frostbite if icing for too long.
- Allow at least 45 minutes to an hour between icing to allow the area to warm.
- Repeat as necessary, make sure sensation is not altered before icing.

Prevention tips

Some tips to avoid sprains and strains include:

⇒ Participate in a conditioning program to ensure you have the appropriate muscle strength, endurance and flexibility. Always wear properly fitting shoes designed for the activity you are participating in.
⇒ At the beginning of a season do not over train or over play as you will be putting excessive stress on soft tissues not conditioned for the new level of activity
⇒ Be sure to have the correct equipment – for example, have a professional assist you when you chose a racquet or golf club.
⇒ Be sure you are using the optimal techniques – its worth having a lesson from a professional if you are a tennis player or golfer.
⇒ If you have had a past injury, be sure it is fully rehabilitated and healed before resuming your activity/sport.
⇒ Nourish your muscles by eating a well-balanced diet
⇒ Warm up before any sports activity
⇒ If you are injured, seek the assistance of a qualified health care provider