



## CAPE COD SPORTS MEDICINE INC.

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### ORTHOPEDIC SURGEON

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### THE DOCTORS ADVICE: GETTING BACK FROM ANKLE SPRAINS

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#### **What is it?**

Ankle sprains are a common injury in runners. It is usually caused by the stretching of the outside ligaments of the ankle as the foot & ankle is turned in (inversion injury). Ligaments usually join bone to bone and are made of tough, thick fibrous material which is pretty unyielding, and will tear under stress. Tendons on the other hand, join muscle to bone, are elastic and subject to stretching when stressed. When an ankle sprain occurs, some or all the fibers of a ligament are torn. On the outside of the ankle you have three main ligaments holding things together. On the inside of the ankle there are only two, but these are broader than the lateral side, so less frequently injured.

#### **Signs & Symptoms**

Usually swelling is almost immediate on the outside of the ankle. The prominent bump on the outside of the ankle (the lateral malleolus) quickly disappears within the diffuse swelling. There is tenderness in the soft tissues, not directly on the bone. Remember the ligament has torn away from the bone and is resting its inflamed end in the soft tissue somewhere, giving off inflammatory substances causing swelling and pain. Bringing the foot up (dorsiflexion) is much more painful than pressing down on the foot (plantarflexion).

#### **Treatment**

Treatment is divided up into two phases: initial & rehabilitation. During the initial phase that can last 2 or three days, the treatment uses the acronym RICE for rest, ice, compression and elevation. Try to stay off the ankle as much as possible. Avoid stairclimbing and uneven surfaces which places additional stress across the damaged ligaments. Place ice in a wet towel and apply to the area. DO NOT apply ice directly to skin as it can cause frostbite to the surface skin. Use ice for 20 minutes every hour. Apply a lightly wrapped ace-wrap from the toes to just above the ankle, to avoid a tourniquet effect. Pumping your toes while elevating your feet is the most effective way to reduce swelling. The rehabilitation phase begins when the swelling has begun to decrease. There are three components to a successful rehab program: 1.) Restore motion & flexibility, 2.) Restore strength and 3.) Restore balance. You may want to warm up the ankle prior to your rehab program by soaking it in warm water for 20 minutes. Warmed tissue is more flexible and less prone to injury. Start by restoring the up & down motion (dorsiflexion-plantarflexion) to the foot. After 3 or 4 days add turning the foot in & out (inversion-eversion). Do stretching of the Achilles Tendon (Gastroc-Soleus complex) with forward leans. Phase two or the strengthening phase can begin when you have approximately 60-70% of your motion restored. A rubber tubing or old bicycle tubing comes in handy. Attach one end of the tubing to an immovable object like a table leg and loop the other end around the tips of your toes. Sit with your knees bent and heels on the floor and pull the tubing toward you (dorsiflexion) and hold for 10 seconds. Do this 10 times and reverse position so your back is against the table leg. Press down and away from the tubing (plantarflexion) in the same manner. You can then sit sideways and do the same for in & out motions (inversion & eversion). Do this with both ankles to keep strength symmetrical. As your strength is restored, Phase 3 balance is practiced by standing on one foot with your hands out to the side. Do this for both sides so that your proprioception is balanced. At the completion of any and all exercise rehab programs use ice to minimize any irritation to the tissue caused by the workout.