

## **ANKLE SPRAINS**

### **What is an ankle sprain?**

The ankle joint is capable of four fundamental movements: plantar flexion (pointing your toes down), dorsiflexion (bringing your toes up towards your face), inversion (turning your foot in towards the midline of your body) and eversion (turning your foot away from the midline of your body). A sprain is an overstretch of the ligaments that hold the bones of the ankle together. The ligaments on the outside of the ankle are most commonly injured when the foot inverts. Inversion ankle sprains are the most common type of sprain (85%). Less frequently patients can sustain a "high ankle sprain" when the ankle everts. High ankle sprains are much more serious, take longer to recover, can have fractures associated with the ankle sprain, and take longer to recover and return to sport.

### **What are the symptoms of an ankle sprain?**

Most commonly you will experience pain on the outside of the ankle just below the end of the fibula (outer skinny lower leg bone). The ankle will be swollen on that side as well. It may turn black and blue over several days if the sprain is severe enough. A sprain may be mild, causing only modest pain, or severe enough to prevent weight bearing.

### **How do I treat an ankle sprain?**

Initial care is the same as for all other acute injuries: RICE (rest, ice, compression and elevation). Use ice for 20-25 minutes out of every hour to minimize pain and swelling. Make sure you use a dampened towel between your skin and the ice pack to prevent frostbite. Compression in the form of an elastic bandage and elevation will help reduce swelling and pain. See an orthopedic physician if you are unable to bear weight or if you fail to notice any improvement over several days. Most ankle sprains do not require surgical intervention, but virtually all of them require physical therapy to restore full motion, strength and function. If you have a significant limp crutches should be used until you can walk comfortably. Your doctor may recommend anti-inflammatories to reduce swelling and pain. We usually will obtain xrays of the ankle to exclude a fracture. Tiny chips, flake fractures, or avulsion fractures are generally treated similarly to an ankle sprain. Generally MRI's are infrequently obtained; they may be used in more chronic or recurrent conditions to assess joint surface injuries.

### **How do I rehabilitate my ankle?**

Rehabilitation, in the form of physical therapy, may begin a few days after the initial injury. The goals of physical therapy are to restore range of motion, strength and function. Range of motion exercises generally consist of moving the ankle through the motions of plantar flexion, dorsiflexion, inversion and eversion. Once motion is close to being full, strengthening may begin. This is commonly done with resistive rubber tubing

(therabands, stretch cords, etc.) in repetitions and sets. Balance, flexibility, and stability exercises can be initiated when you are comfortable with weightbearing and have nearly comparable strength to the uninvolved ankle. Your rehabilitation should be overseen by a physical therapist or a certified athletic trainer. Once you have recovered and returned to sport it is important to continue with maintenance strengthening exercises to reduce the chance of reinjury.

### **When can I return to sports?**

Generally speaking, you can return to sports when the pain has subsided and the swelling has dissipated. You should have full range of motion, comparable to the uninjured ankle. You should have normal or near normal strength in all the muscles supporting the ankle. Functional testing, such as side-stepping, running figure-of-8's, running forwards and backwards, side-to-side, etc., should be performed to assure yourself that your ankle can tolerate the physical demands of your sport.

### **Should I tape my ankle or wear a brace?**

Taping an ankle or wearing a brace can help prevent re-injury. Taping is probably the best form of bracing because it is "customized" to your ankle. Braces come in a variety of designs and materials. Choose a brace that fits well and provides the best support for what you want to do. Keep in mind that bracing only provides additional support to already strong muscles. Bracing should not be used as a substitute for ankle strengthening exercises, but rather as an adjunct. Continue to perform your strengthening exercises as you return to sports.