Athletes and Ankle Sprains

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A sprained ankle is one of the most common orthopaedic injuries, one that affects approximately 25,000 people in the United States every day. Though it is prevalent in young athletes and those with active lifestyles, non-athletes, children and adults can also suffer from a sprained ankle. These injuries can occur as a result of sports and physical fitness activities or simply by stepping on an uneven surface

Medically speaking, a sprain is a tearing of the ligaments of the ankle joint, which are elastic, band-like structures that hold the bones of the ankle joint together and prevent excess movement. Normally, the ligaments can stretch slightly and then retract back to their original shape and size. Most sprains occur with a rapid twisting movement with the foot planted. The anterior talo-fibular ligament and the calcaneofibular ligament of the lateral ankle are most frequently injured. This occurs when the ankle rolls outward and the foot to turn inward, stressing the outer aspect of the ankle. Less often, the ankle rolls inward and the foot turns outward. This damages the deltoid ligament on the inside of the ankle. High ankle sprains can occur with injury to the tibio-fibular ligament and often require a longer healing time.

Young athletes are prone to ankle injuries, especially those involved in soccer, basketball, football, tennis, lacrosse, trail running or other sports that require quick-cutting movements. Ankle sprains are categorized into three grades, depending on their severity. A grade one sprain results in some stretching or minor tearing of the lateral ankle ligaments. Mild pain and swelling around the bone on the outside of the ankle and some difficulty walking may occur. Grade one injuries typically do not require a visit to the doctor. A grade two sprain is partial tearing of the ligaments, which results in moderate to severe pain and difficulty walking. Swelling, bruising and stiffness in the ankle will be more pronounced. A grade three sprain is classified by a total rupture of a ligament. These injuries result in severe pain, extensive swelling and bruising, often resulting in the inability to bear weight for several days.

The treatment for an ankle sprain starts immediately. Patients start with the RICE protocol: rest, ice, compression and elevation for 3-5 days. A visit to an orthopaedic physician is recommended if you cannot bear weight after 24 hours. Once an MD evaluation confirms a sprain, patients are place in a protective brace or boot and weight bearing is allowed. Crutches are used for several days if the pain is severe. Physical therapy starts as soon as the pain allows. Therapy focuses on exercises to strengthen the muscles around the ankle and improve balance. The majority of lateral ankle sprains heal within six weeks of physical therapy, and the patient can then return to his or her normal sports and activities. High ankle sprains and deltoid medial ankle injuries can take up to 12 weeks to return to sports. It is recommended that athletes either tape their ankles or wear a lace-up brace when returning to sports, both of which will stabilize the ankle and help prevent repeat

injury.

Patients are typically able to return to their previous level of activity after spraining an ankle. A small percentage of people, however, will continue to complain of pain or suffer from repeat ankle sprains. MRI is usually ordered at this point to evaluate the articular cartilage, ligaments, bone and tendons. For injuries to the ankle cartilage, arthroscopy may be recommended. Ankle arthroscopy is a minimally invasive procedure during which a surgeon looks inside the joint to see if there are any loose fragments of bone, cartilage, or ligament impingement in the joint. Patients who continue to suffer ankle sprains despite conservative treatment may be candidates for surgically tightening the ligament. Repeat ankle sprains over time can result in arthritis of the ankle so it is important to address ankle instability when present. The best way to prevent ankle sprains and instability and ultimately arthritis is to maintain good strength, muscle balance and flexibility.

This can be done by:

- Warming up before exercising and partaking in vigorous activities
- Paying attention to walking, running or working surfaces
- Wearing supportive sneakers, cleats or shoes
- Paying attention to the body's warning signs to slow down, such as pain or fatigue

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