Ankle Sprains

Injury to the ankle is one of the most common injuries encountered in the United States. An estimated one million people seek medical care for ankle injuries each year, and approximately 75% of these injuries are ankle sprains. Medical literature documents that up to 40% of ankle sprains may result in long-term injury.

Ankle Sprains and Associated Symptoms

A sprain of any joint involves injury to the soft tissues—the ligaments and other supportive tissues that stabilize the joint. Ankle sprains involve injury to the supportive ligaments, usually the ones on the outside of the joint. Typical signs and symptoms of acute ankle sprains include immediate pain associated with forceful twisting or rolling of the foot, swelling, bruising, and often the inability to bear weight on the injured foot.

While a sprain is technically just injury to the supportive ligaments around the ankle, many other associated injuries may occur simultaneously. These include broken bones, injured or ruptured tendons, or damage to the cartilage inside the ankle joint. It is often difficult or impossible to know if these injuries have happened, since even an isolated sprain can be quite painful. Even an experienced physician may have to rely on x-rays to differentiate a sprain from a broken ankle. Prompt medical attention by a physician is essential for proper initial treatment. This is the best way to avoid long-term ankle problems.

Immediate Treatment of Ankle Sprains

After proper initial medical evaluation has determined that an isolated sprain has occurred, then immediate treatment using the R.I.C.E. guidelines is essential.

Rest the injured ankle by using crutches to avoid bearing weight
Ice the ankle to minimize swelling
Compress the area with an elastic bandage, also to minimize swelling
Elevate the injured leg above the level of the heart

Weight bearing on the injured ankle may resume once it is not too painful to do so. Use crutches for the first few days as needed. If the pain is severe, a removable walking boot may be required. Keep in mind, however, that extended use of crutches and disuse of the ankle may hinder healing. Progression to full weight bearing and early rehabilitation are important to avoid stiffness and restore stability.

Rehabilitation

Rehabilitation is a key in treating ankle injuries. Rehabilitation may involve a home exercise regimen or exercises or under the supervision of a trained physical therapist. Overall, there are typically three phases of rehabilitation:

Phase 1: R.I.C.E. protocol and minimizing swelling
Phase 2: Regaining range of motion and flexibility
Phase 3: Transitioning to full recovery by gradually returning to sports

The use of a functional ankle brace has been shown to reduce the risk of ankle injury and may be prescribed by your doctor.

The proper regimen of exercises and therapy should be determined by your physician.

Ankle Injuries in Kids:

The ankle is the anatomic structure most often injured in sports; children are more likely to injure the relatively weaker growth plates around the ankle—the distal fibular physis in the case of an inversion injury—than to sprain a ligament.

A review of studies already done in this area show that athletes with a previous ankle injury are two to five times more likely to reinjure the ankle. An overweight player who had a previous ankle sprain was 19 times more likely to sustain a noncontact ankle sprain than was a normal-weight player with no previous ankle sprain

In one study, basketball players were stratified by a previous history of ankle sprains to wear a new pair of either high-top, high-top with inflatable air chambers, or low-top basketball shoes during all games for a complete season. There was no significant difference among these 3 groups, leading to the conclusion that there is no strong relationship between shoe type and ankle sprains.

Wouldn't it be better to wear an ankle brace and prevent that injury? That's the focus of this study by a group of physical therapists at the University of North Carolina at Chapel Hill. They found ankle bracing does reduce injuries, especially for anyone who's had a previous ankle sprain.There is good evidence that external ankle supports can reduce the risk of ankle ligament injury in high risk sports such as basketball and soccer, particularly among those with a prior injury to the ankle.

Exercises should focus on the conditioning of peroneal muscles, because insufficient strength in this muscle group has been associated with ankle instability and recurrent injury.