REHABILITATION AFTER ANKLE SPRAIN

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The Injury

Ankle sprains are very common ankle injuries, usually the result of the ankle turning inward. An ankle sprain occurs when a ligament connecting the bones that comprise the ankle joint is ruptured or torn.

Ankle sprains are immediately and severely painful and incapacitating; they can often develop into a chronic problem. However, if treated quickly and properly, ankle sprains can heal completely, allowing a safe and early return to activity.

Contributing Factors

- Previous injury
- Muscle weakness or imbalance
- Inappropriate footwear
- Overweight
- Family tendency
- high-arch foot

THREE DEGREES OF SEVERITY.

Ankle sprains are graded into three degrees of severity. The more severe the sprain, the longer the time to recover.

First Degree. This injury is the most common and, if not neglected, the most minor. Ligaments connecting the bones of the ankle are "stretched", causing a small amount of superficial tearing of the ankle ligaments. There is a small amount of swelling but no instability. With a first-degree injury, you can expect to be back to sports within 1 to 3 weeks.

Second Degree. When this injury occurs, the ankle ligaments are more deeply torn, resulting in immediate pain and swelling. There is bruising and pain with walking. There can be looseness and minor instability. A second-degree sprain may require the use of a protective brace and 3 to 6 weeks of rest and recovery before you can return to full activity.

Third Degree. This injury results in a full tearing or rupture of an ankle ligament(s). The ankle can be very swollen and weight-bearing is painful. Crutches are often necessary and sometimes the ankle will be placed in a cast or cast-boot to allow the injury time to rest and heal. Surgery is rarely necessary, but the third-degree ankle sprain can take many months to fully heal.

Treatment

Treatment is divided into four stages. The rate of progress depends upon the amount of pain and swelling present, and whether your doctor has used tape, a brace or a cast to stabilize your ankle.

Stage 1 (up to 72 hours)

To reduce pain and swelling, apply ice to the ankle for 20 minutes every hour while awake. Ice application with a plastic bag of crushed ice with a towel between the ice and your skin is a safe method to use. Compression of the ankle with an elastic bandage will help to limit swelling. The ankle should be elevated, as much as possible, to a position higher than your heart to reduce swelling. Tape, a splint, a brace or a cast may be applied to

support or immobilize the ankle. Your doctor may also prescribe anti-inflammatory/ analgesic medication to relieve pain and reduce swelling and inflammation.

Stage 2 (first week)
You can walk and bear weight on the ankle as soon as it is comfortable. Crutches can be used as partial support when you begin to walk. Further support may be needed with continued use of taping, bracing or a cast. Let pain be your guide as to how much activity is enough.
After an injury your ankle will get stiff. It is important to maintain the full range of motion your ankle. For exercise rest your heel on the floor and write the alphabet in the air with your big toe, making the letters as large as you can.

Stage 3 (second week and after)
The crucial part of the treatment for ankle sprains is a rehabilitation program to regain ankle range of motion and strengthen the supporting muscles. Your doctor will advise you about exercises and physical therapy.

Stage 4 (variable)
Your ankle must be strong before you return to full daily activity or sports. Returning too early to full activity may lead to re-injury and a chronic problem.

Criteria for return to sports activity: When you can stand on the toes of the injured ankle for 20 seconds and hop on your toes 10 times you can begin to run. Initially you should jog in a straight line until you jog pain-free. As you become stronger, you can progress to running a large figure-of-eight. You can return to sports practice when you can run a zigzag pattern without pain or instability.
Your ankle should be protected with a lace-up support for a minimum of 6 months after injury. Always follow your doctor's advice.
Shoes. Athletic shoes that fit well and stabilize your foot will help prevent re-injury. You should not wear running shoes or sandals to play sports such as basketball, volleyball or tennis.

Exercises

The following exercises will strengthen the muscles and re-develop the reflexes of the ankle area. Following the prescribed exercise program will restore normal ankle function and prevent re-injury and chronic problems.

Ankle Eversion
With tubing anchored around uninvolved foot, slowly turn injured foot outward. Repeat 30 times.

Ankle Plantar Flexion
With tubing around foot, press foot down. Repeat 30 times

Ankle Dorsiflexion
With tubing anchored on solid object, pull foot toward you knee. Repeat 30 times.

Ankle Inversion
Cross legs with injured ankle underneath. With tubing anchored around uninvolved foot, slowly turn injured foot inward. Repeat 30 times.

Calf Stretch
Keeping back leg (injured) straight, with the heel and foot flat on the floor, lean into wall until a stretch is felt in the calf. Hold 15 to 20 seconds. Repeat 3 to 5 times.

Dorsiflexion Stretch
Standing with both knees bent and the injured foot forward, gently lean forward, bending the injured knee over the ankle while keeping the heel and foot flat on the floor. This stretch will be felt in the ankle close to the heel or in the front of the ankle. Hold 15 to 20 seconds, Repeat 3 to 5 times.

Toe Raises
Stand facing a wall , hands on the wall for support and balance, keep the knees extended fully. Tighten the quadricep to hold the knee fully straight. Raise up on 'tip-toes' while maintaining the knees in full extension. Hold for one second, then lower slowly
to the starting position. Repeat 20 to 30 times. As you become stronger, you can raise up on both legs, and lower down on just the injured side. Gradually build so that you can raise up and down on just the injured leg.

Single -Leg Balancing
Attempt to balance on the injured leg while holding the uninjured foot in the air. When you can balance easily, you can attempt to balance with eyes closed, or while someone throws you a ball. Practice this exercise for 5 minutes.