

Ankle Sprains

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Illustrated by Sierra Simmons

According to the Ultimate Injuries Study reported by Dr. Yen in the last issue of *Ultimate News*, ankle sprains are one of the most common injuries in Ultimate. Thus we decided to reprint an updated version of this article originally printed in 2006. This article reviews the management and rehabilitation of ankle sprains. This column is not meant to replace medical evaluation for your health problems. Always seek medical help for worrisome or persistent symptoms.

Ankle sprains are very common in Ultimate. When an ankle injury first happens, you should rest immediately and call for a trainer, if available. The goal of early treatment is to prevent swelling. Once swelling occurs, it's hard to get rid of and can lead to a prolonged injury. Elevation and compression are the most important initial therapies. Elevate the injured limb at least above your waist. Compress the ankle using the following method: take your sock off, twist it, then turn it into a horseshoe shape. Place the horseshoe around the ankle bone on the outside with the open side facing up towards your knee. Then wrap an ace bandage or long sleeve shirt around the horseshoe and ankle. The horseshoe helps prevent joint swelling. If you have ice, place it over the ace wrap for 20 minutes on then 20 minutes off. Repeat until the pain gets better. You can take ibuprofen (Advil, Motrin), but it's easier to monitor your pain level without it. You can take up to 600-800mg, three times a day. Tylenol helps with pain, but not swelling.

RICE is the mnemonic we use to remember this treatment: Rest, Ice, Compress, Elevate. Repeat these steps after walking around all day and after playing if you continue to experience swelling. You can compress as above and elevate throughout the day.

Warning signs of a more serious injury include: inability to bear weight, including limping; hearing a crack or pop; instability with or without a snapping sensation; or pain when the bone is pressed in the areas in Figure 1.

10-20% of ankle sprains become chronic, most often because the ankle was not fully rehabilitated. It will take at least 4-6 weeks of rehab to fully recover. Players frequently choose to play during the rehab process. Risk of re-injury is high soon after the initial injury. Any benefits of returning to competition early must be weighed against the risks of re-injury. Some players choose to wear protective braces or tape, but these methods will not prevent re-injury. One predictor of the ability to return to play is being able to stand on your toes and hop up and down without pain.

Swelling usually stabilizes in 24 hours and rehab can be started with range of motion (ROM) exercises. One ROM exercise is writing the alphabet repeatedly with your foot. To reduce swelling and warm up the ankle use contrast baths. Fill one container with warm water and one with cold water and ice. Immerse your ankle in the warm bath for 4 minutes then the cold for 1 minute. Repeat five times. Write the alphabet throughout the warm bath phases. Repeat contrast baths up to five times a day.

Strength exercises can be started when the swelling stabilizes. First use isometric exercises. Sit with your leg crossed so that you can reach your ankle with your hand. You will be applying pressure to the foot with your hand as you contract the muscles of your ankle against the hand pressure. Do this in four directions: pulling your foot up, pushing it down, rolling it outward, and rolling it inward. Hold the pressure for 20 seconds. Stop if you experience pain. Repeat five times, five times per day.

Once isometrics get easy use a Theraband or exercise band for isokinetic exercises (see Figure 2). You will be using the same force directions as the hand pressure, but this time you will be actively moving your ankle. Tie the loose ends of the band in a knot and close a door over the knot. Sit on the floor, place the band slung around your foot, and do each of the four ankle motions. You will have to shift position to get the angles right. Moving your foot further from the door will make the exercise harder.

Proprioception is often forgotten in rehabilitation, but is very important for preventing injury recurrence. Proprioception is the unconscious perception of movement and spatial orientation. Start after the swelling has stabilized. First, simply stand on the injured foot, balance on that leg, and close your eyes for 30 seconds. Try to maintain your balance. When this is easy, stand in a runner's pose: on your toes, other leg back, arms poised and knees bent as if mid-stride. You can also start doing calf raises on a step with a straight knee and with a bent knee. Afterward, stretch your calf with a straight and bent knee. Your goal is to work up to the strength and balance of your good ankle.

Maintain aerobic fitness during this time with swimming and stationary biking.

References

Garrick and Webb. Sports Injuries. 1999

Rouzier, Pierre. Patient Advisor. 2004

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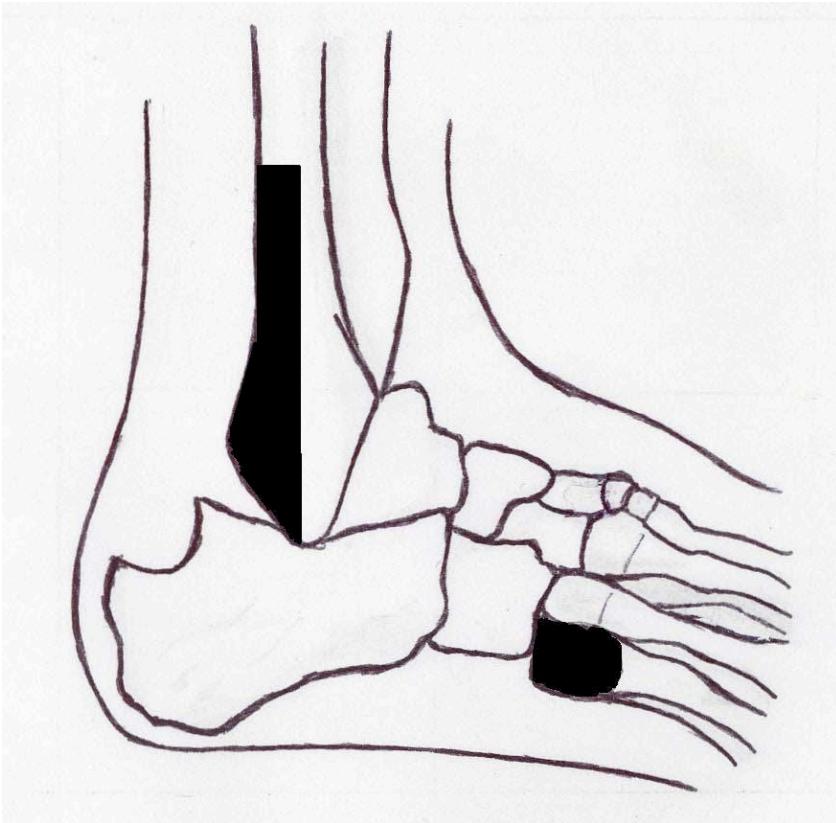


Figure 1: Left: lateral (outside) of foot, Right: medial (inside) of foot. Pain when pushing on any of these four areas suggests a fracture; consult your doctor urgently.

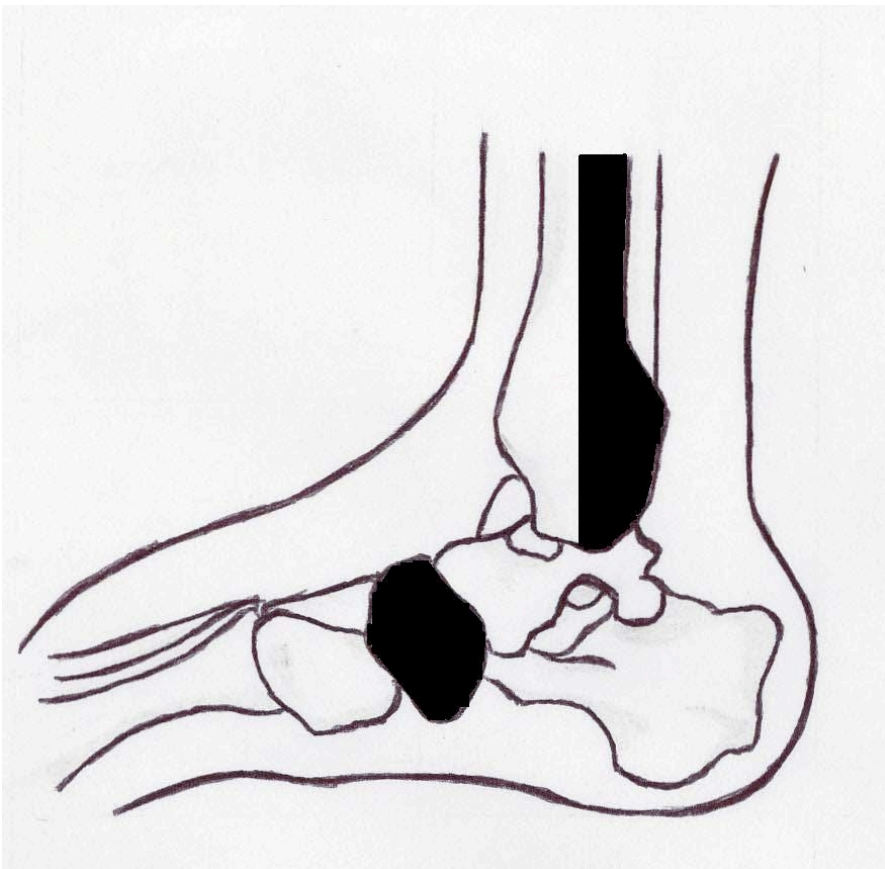


Figure 2: Theraband (exercise band) exercises for ankle sprain rehabilitation.