



# ORTHOPÆDICS

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## Proper treatment, rehabilitation returns athlete to sports after a sprained ankle

As summer draws to an end, it's time for children of all ages to head back to school. A great percentage of these children will be returning not only to school but also to athletics. With the return of the fall athletic season comes back-to-sports injuries. As a parent or as an athlete yourself, what do you do when an injury occurs? What exactly is the injury? How do you know if it's serious? Do you need to see a doctor? What's the best treatment plan?



*Jennifer Wegler is a certified physician assistant at Orthopaedic Associates of DuPage*

**Jennifer Wegler, PA-C, ATC**

Let's review the most common foot and ankle injury that you or a student athlete may encounter.

Jennifer Wegler, a physician assistant at Orthopaedic Associates of DuPage, has treated many of these injuries over the years as both a physician assistant and an athletic trainer. When she asks the patient what happened, the patient usually starts their story with, "Ouch, I rolled my ankle..."

Ankle sprains are the most common athletic injury. Ankle sprains occur when the ankle rolls inward or outward beyond its normal range of motion, stretching or tearing the ligaments and/or tendons that support the ankle joint. Most sprains occur on the outside of the ankle, and most sprains are minor

sprains that do not require extensive medical treatment.

Sprains often occur when an athlete steps into a hole or lands on someone else's foot and "rolls" their ankle. Sometimes, the athlete may even feel or hear a "pop" as the ligaments are stretched or torn. This is usually followed by pain, swelling, and the inability to bear weight on the injured ankle. Even with a minor ankle sprain, a great deal of swelling and bruising may occur.

If you have access to an athletic trainer, seek him or her out for an initial evaluation and guidance with treatment and rehabilitation protocols.

### Early treatment

Early treatment is the key to a quick recovery from minor sprains. Getting rid of swelling as quickly as possible will help decrease pain and speed up healing. To control pain and swelling in the first 24 to 48 hours, Jeffrey A. Senall, M.D., Director of the Foot and Ankle Program at Orthopaedic Associates of DuPage, encourages using the RICE concept of first aid for acute injuries:

- R:** Rest the injured ankle. Use crutches until you can walk without pain.
- I:** Ice the ankle. Put an ice bag or a bag of frozen vegetables on the ankle for 20-30 minutes 4-5 times a day for the first 48 hours.
- C:** Compress the ankle. Wrap the ankle with an ace bandage as much as possible (except when you go to bed!).
- E:** Elevate the ankle above the level of your heart as much as possible.

The ice combined with elevation will really help with pain control.

You may want to add the use of an over-the-counter anti-inflammatory to help control some of the pain and swelling. If you are comfortable taking over-the-counter medications, they can really make a difference; but remember, always follow the dosing guidelines on the package insert, especially if the patient is not an adult.



*Jeffrey Senall, M.D., Director of the Foot and Ankle Program at Orthopaedic Associates of DuPage*

**Jeffrey Senall, M.D.**

### Initial rehab

After 48 hours, it's time to get your ankle moving. You should still be using the RICE regime to control pain and swelling but can now add range of motion exercises to help get you back to sports quickly.

A great and fun activity that incorporates all ranges of motion is the alphabet exercise. While your foot is elevated, draw each letter of the alphabet as big as you possibly can in the air using your big toe as the pencil. Repeat the alphabet five times. Try to do this at least five times a day.

Ankle pumps (pushing your foot up and down) are another great way to increase post-injury range of motion. Flex and extend your ankle up and



## ORTHOPÆDICS

down as far as it will go 10 to 20 times. Do this three times a day. Both exercises should be done as pain allows for the next three to five days.

### Stretching, strengthening

After an ankle sprain, the calf muscles may be tight, sore and tired. Three to four days after the initial injury you will need to slowly begin to stretch and strengthen these muscles, as your return-to-play date looms closer.

Stretch your calf muscles by leaning against a wall from 2 to 3 feet away, making sure to keep your heels flat on the ground. Another gentle stretch can be achieved by looping a towel under your foot while you sit with your legs straight out in front of you and pulling your foot back toward your face.

Your calf muscles will grow stronger as you begin to walk normally. To hasten the strengthening you may want to incorporate heel (rock back on your heels, lifting your toes off the ground) and toe raises (go up on your toes and hold it) 10 to 20 times three times a day. You can also try filling a tub with warm water and doing the alphabet exercise with your foot submerged.

### Back to sports

After an ankle sprain, you may find it difficult to balance on your injured ankle. This happens as a result of the swelling and immobility that occurred initially. To get your balance back, try

standing on the injured foot only, with your eyes closed for a count of 15. Once you have mastered this, do the same standing on a folded bath towel or pillow. Do these same exercises on the other leg, too, repeating each leg three times a day. Once you feel really confident, do this exercise with your eyes open, and have someone toss you a ball, as you balance.

Once you can walk without pain, it's time to try running. This may be difficult, and you'll need to start with light jogging on an even surface in a straight line. Start by running for ten minutes then gradually increase time and intensity as your pain and swelling will allow.

During this time, it will help if you continue to wear a compression wrap and ice 2-3 times per day, especially after activity.

Most sports require sprinting and quick changes in direction. Once you can run, it's time to retrain your ankle to handle sport-specific movements. Start by incorporating sprints into your workout. Start out at half speed and work up to full speed. Next, run figure eights – big at first then progressively smaller. Now add zig-zags. Run zig-zags changing direction every five yards.

### When to worry

Sometimes it's not just a first-or second-degree ankle sprain – it's more serious, and you need to seek medical attention. Orthopaedic Associates of DuPage

recommends you see a doctor if you experience numbness in your foot or ankle, swelling gets worse instead of better with time, your ankle feels like it could give out when you walk, or you roll your ankle again before you've healed from the first time. Without an X-ray, it is impossible to know if the ankle is broken. If you have any of the above symptoms, seek the advice of a board certified orthopaedic surgeon or a sports medicine specialist.

*This article was submitted by Jeffrey A. Senall, M.D., foot and ankle/general orthopaedic surgeon, and Jennifer L. Wegler, PA-C, ATC, certified physician assistant and athletic trainer, at Orthopaedic Associates of DuPage, Ltd. With fifteen board certified physicians and convenient locations in Naperville, Warrenville, Wheaton and Carol Stream, Orthopaedic Associates of DuPage provides comprehensive orthopaedic care and services with specialization in the surgical and non-surgical areas of sports medicine, hand/wrist/elbow and upper extremity care, joint replacement/reconstruction, spine and neck disorders, physiatry, and workers' compensation/occupational health services. State-of-the-art facilities offer on-site diagnostic testing, physical and hand therapy services. For appointments and information call (630) 225-BONE (2663) or visit [www.orthodupage.com](http://www.orthodupage.com).*

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