

# Sever's Disease

- **Overview**

- Physicians in the **Orthopedic Center** at Boston Children's Hospital have experience caring for adolescents with Sever's disease, a common heel injury that can be easily treated without your child needing surgery.

## What is Sever's disease?

Sever's disease (also known as calcaneal apophysitis) is a type of bone injury in which the growth plate in the lower back of the heel, where the Achilles tendon (the heel cord that attaches to the growth plate) attaches, becomes inflamed and causes pain. Sever's disease is the most common cause of heel pain in children, especially those who exercise or play sports on a regular basis.

## What causes Sever's disease?

The heel bone grows faster than the ligaments in the leg. As a result, muscles and tendons can become very tight and overstretched in children who are going through growth spurts. The heel is especially susceptible to injury since the foot is one of the first parts of the body to grow to full size and the heel area is not very flexible. Sever's disease occurs as a result of repetitive stress on the Achilles tendon. Over time, this constant pressure on the already tight heel cord can damage the growth plate, causing pain and inflammation.

Such stress and pressure can result from:

- Sports that involve running and jumping on hard surfaces (track, basketball and gymnastics).
- Standing too long, which puts constant pressure on the heel.
- Poor-fitting shoes that don't provide enough support or padding for the feet.
- Overuse or exercising too much can also cause Sever's disease.

## Who gets Sever's disease?

Sever's disease is most likely to occur during the growth spurt that occurs in adolescence. For girls, growth spurts usually occur between 8 and 13 years of age. For boys, it's typically between 10 and 15 years of age.

The back of the heel hardens and becomes stronger when it finishes growing, which is why Sever's rarely occurs in older adolescents and teenagers.

## What are the symptoms of Sever's disease?

The most common symptoms of Sever's involve pain or tenderness in one or both heels. This pain usually occurs at the back of the heel, but can also extend to the sides and bottom of the heel.

A child with Sever's may also have these common problems:

- Heel pain with limping, especially after running.
- Difficulty walking
- Discomfort or stiffness in the feet upon awaking
- Swelling and redness in the heel

Symptoms are usually worse during or after activity and get better with rest.

## How is Sever's disease diagnosed?

Sever's disease can be diagnosed based on the symptoms your child has. Your child's doctor will conduct a physical examination by squeezing different parts of your child's foot to see if they cause any pain.

An **X-ray** may be used to rule out other problems, such as a broken bone or fracture.

### **Treatment**

The primary method of treating Sever's disease is taking time off from sports and other physical activities to alleviate the pressure on the heel bone.

During the healing period, your child's doctor may also recommend:

- Physical therapy or any type of exercise that involves stretching and strengthen leg muscles and tendons.
- Wrapping ice in a towel and placing it under the child's heel will also help to alleviate and reduce pain and swelling.

### **How Boston Children's Hospital approaches Sever's disease:**

Experts in the **Orthopedic Center** at Boston Children's provide comprehensive assessment, treatment and follow-up care to children, adolescents and young adults with Sever's disease and other problems of the musculoskeletal system. Our skilled orthopedists and sports medicine experts work with physical therapy staff to deliver comprehensive evaluation and long-term treatment plans. Our team has also developed innovative evaluation programs and effective injury prevention programs and strategies. Together, we provide your child with expert diagnosis, treatment and care—as well as the benefits of some of the most advanced clinical and scientific research in the world.

***Sever's disease: Reviewed by Benton E. Heyworth, MD***

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- See more at: <http://www.childrenshospital.org/health-topics/conditions/severs-disease#sthash.RZRGHbyJ.dpuf>