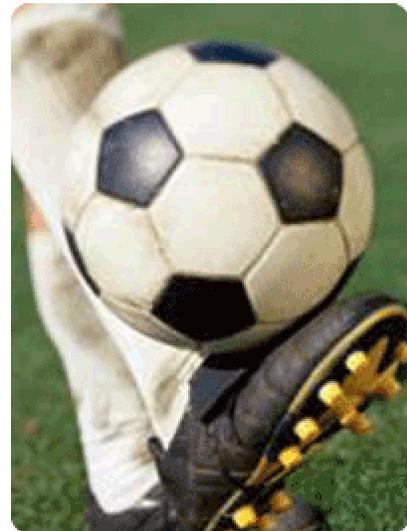


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Severs Disease

Heel Pain In Active Children

Heel pain is less common in children than adults. Of those children who do get heel pain, by far the most common cause is an irritation to the growing area at the back of the heel bone (the Calcaneus) where the strong Achilles tendon attaches to it. This is known as Sever's disease or calcaneal apophysitis (inflammation of the growth plate). It is most common between the ages of 10 to 14 years of age.

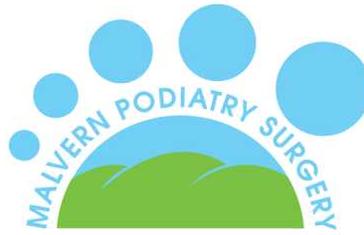


Anatomy of heel pain in the child

When a baby is born, most of the bones are still cartilage with only some starting to develop into bone. When the heel (calcaneus) starts to develop bone, there is generally one large area of development that starts in the centre of the cartilage heel. This area of bone spreads to 'fill up' the cartilage. Another area of bone development (ossification) occurs at the back of the heel bone- see the x-ray. These two areas of developing bone will have an area of cartilage between them- this is how the bone grows in size. At around age 16, when growth is nearly complete, these two bony areas fuse together. Sever's disease is usually considered to be due to damage or a irritation in this area during growth.

What are the symptoms?

Pain is usually felt at the back and side of the heel bone. Sometimes there may be pain at the bottom of the heel. The pain is usually relieved when the child is not active and becomes painful with sport. Squeezing the sides of the heel bone is often painful. Running and jumping make the symptoms worse. One or both heels may be affected. In more severe cases the child may be limping.



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What causes heel pain in children?

The cause of Sever's disease is not entirely clear. It is most likely due to overuse or repeated minor trauma that happens in a lot of sporting activities. The cartilage joint between the two boney areas at the base of the heel cannot take all the shear stress of the activities. Some children seem to be just more prone to it for an unknown reason- combine this with sport, especially if it is on a hard surface and the risk of getting injury increases. It can be almost epidemic at the start of some sports seasons, especially winter. At the start of winter, the grounds are often harder, but soften later. Children who are heavier are also at greater risk for developing Sever's disease.

A tight calf muscle is also common in those children who develop this problem. A pronated foot (a foot rolled in at the ankle) is also more common. A pronated foot creates an unusual twisting of the Achilles tendon Achilles Pain that adds a shearing force on the soft bone of the heel in addition to the pulling.

How is Sever's disease managed?

If your child has Sever's disease, the following is suggested:

- Cut back on sporting activities - don't stop, just reduce the amount until symptoms improve. If the condition has been present for a while, a total break from sport may be needed.
- Avoid going barefoot.
- Your Podiatrist will fit you with some heel raises and possibly an orthotic insole (this reduces the pull from the calf muscles on the growth plate and increases the shock absorption, so the growth plate is not stressed as much).
- Stretch the calf muscles provided the stretch does not cause pain in the area.
- Massage the calf muscle to help them stretch and relax.
- Strapping or tape is sometimes used during activity to limit the ankle joint range of motion.

After the pain from Sever's disease resolves, prevention with the use of stretching, good supportive shock absorbing shoes and orthotics to address Pronation are important to help prevent the return of symptoms.



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What are the long-term consequences?

This condition is self limiting - it will go away when the two parts of bony growth join together. Unfortunately, Sever's disease can be very painful and limit sporting activity of the child while waiting for it to go away, so treatment is often advised to help relieve the pain.