

Once the strain has been physically removed from the back of the heel, symptoms will gradually begin to settle. However, additional treatment modalities can also be employed if necessary.

These include:

1. Elevating the foot after activity by sitting down with the feet up above heart level. This helps to reduce blood flow to the feet and helps to reduce symptoms.
2. Anti-inflammatory medications cause a generalized decrease in inflammation. This may help to reduce pain in some cases. Some examples of anti-inflammatory drugs are Aspirin or Ibuprofen. Consult your podiatrist for best advice.

### *What to expect*

Sever's Disease is not an injury, so a child can continue to maintain activity at a level they find comfortable. As it is a growth-spurt discomfort the symptoms typically 'come and go' between 8 - 14 years of age and settle after a growth-spurt has finished. However some children can have intermittent symptoms for between 6 months to 3 years. The episodes tend to be periodic usually during and after sporting activities.

Treatment using simple heel lifts, stretching and cold-packs tend to improve symptoms enough to allow a child to play sport with minimal discomfort in about 50% of cases. Arch supports improve the condition in unstable feet in another 20-30% of cases. If all else fails, then rest!

However if the pain is initiated by a traumatic incident to the heel or if other symptoms occur such as swelling, inflammation or sudden, severe pain during activity, then this is unusual and may indicate a different condition or an injury. If this is the case then stop activity and consult your Podiatrist for further examination. This may require other tests, X-rays or further referral.

If you have this or any other foot related issue, see us at Shepparton Foot Clinic for a caring professional podiatry opinion.

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where we help your 'Feet for Life'**

# Sever's Disease



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Sever's Disease is also known as Calcaneal Apophysitis or Osteochondrosis Desiccans of the Calcaneus. It is a common condition causing pain in the heels in growing children usually between the ages of 8 to 14. It was named by Dr Sever, a physician in the USA in 1907.

### Symptoms

Typically the symptoms come on in children after some form of physical activity such as running. The pain can be quite uncomfortable which makes it very hard for a sufferer to walk for some time after activity.

Though there is often intense pain over the heel region when walking, there are no obvious signs of inflammation such as swelling or redness and often the area

is often only slightly tender to pressure or compression. Most often the symptoms settle with rest only to be aggravated again with activity.

### Causes

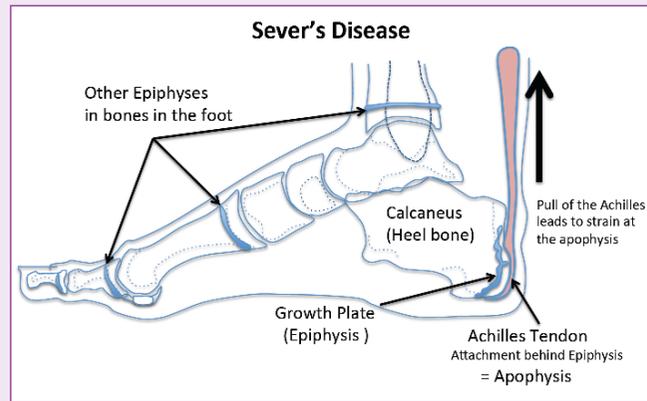
The cause of the symptoms is due to strain on the 'growth-plate' of the heel bone.

When a child goes through a 'growth-spurt', new bone develops to enlarge the skeleton. The area of growth in a bone is called the epiphysis.

The heel bone is known as the Calcaneus. The epiphysis in the Calcaneus is at the back of the heel where the Achilles tendon attaches. When an epiphysis occurs at the insertion of a tendon it is known as an 'apophysis'.

New bone starts initially as layers of cartilage with each successive layer gradually calcifying into bone. New bone growth requires an increase in blood supply to assist with nutrition of the developing bone cells.

Blood flow of an apophysis moves in and out of the area at about equal amounts during normal walking. However the Achilles can cause significant strain at the apophysis during intense activity such as running. This leads to an increase in blood flow and swelling inside the apophysis. This therefore is 'Calcaneal Apophysitis' or Sever's Disease. (See diagram right)



Sever's Disease is particularly evident after a short rest after activity when the increase in blood flow to the area results in swelling inside the apophysis. Consequently contraction of the calf muscles leading to a pull of the Achilles at the apophysis causes pain in the heel as the child tries to walk after sport.

The area shows no inflammation or swelling because the increased blood flow is inside the bone not the surrounding skin.

Often symptoms reduce as a child warms up into an activity. This is due to much of the extra swelling in the bone being squeezed out during movement. However symptoms will usually return quickly after a short rest.

After activity the pain gradually subsides as the blood flow equalizes in the heel again. This can take between a few hours to a day to settle depending on the child.

Symptoms are often worse in children who put more strain on their calf muscles. This includes more active or heavy children or children with unstable or flat feet.

### Treatment

It should be noted that these symptoms are due to normal growth of the heels so symptoms will come and go over the normal growing period of some children. However there are some simple techniques that may help a child to keep active with less pain.

Because the symptoms are due to swelling in the growth plate caused by strain on the Achilles tendon, the treatment should be aimed at reducing this strain and inflammation. This can be achieved in a number of ways.

- 1. Modification of activity:** Reducing activity to a comfortable level or keeping warmed up and stretching during activity helps to reduce the risk of the circulation 'pooling' in the growth-plate. Cooling down slowly and stretching after activity will also help.
- 2. Cold-packs applied to the heels:** A cold-pack helps to reduce the blood flow to the area thus reducing the swelling inside the apophysis. After activity apply a cold-pack for 15 minutes. This can be repeated every hour as necessary.
- 3. Heel lifts:** Wearing a heel lift made from a material which doesn't compress easily can help reduce the stretch on the Achilles tendon. This therefore helps to reduce the strain at the growth-plate.
- 4. Assessment of biomechanical issues:** Checking foot posture and gait can reveal biomechanical issues which may be contributing to the increased strain on the calf muscles. An excessively flat foot can lead to more strain on the Achilles tendon, so the Podiatrist may recommend arch supports or custom-made orthotics to assist in stabilizing the foot.
- 5. Stretching the calf muscles:** Stretching of the calf-muscle is usually beneficial to help reduce long-term strain on the Achilles. These should be performed gently to begin as it may aggravate symptoms initially. (See instructions below)

