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## Foot problems - heel pain

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### Summary

- The heel is a padded cushion of fatty tissue that holds its shape despite the pressure of body weight and movement.
  - Common causes of heel pain include obesity, ill-fitting shoes, running and jumping on hard surfaces, abnormal walking style, injuries and certain diseases.
  - Plantar fasciitis is inflammation of the ligament that runs the length of the foot, commonly caused by overstretching. It results in pain under the heel, particularly after rest.
  - A heel spur is a bony growth that is not usually painful to the touch.
  - Sever's disease is caused by stress on the growth plate in the heel bone.
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The heel is a padded cushion of fatty tissue around the heel bone (the calcaneus) that holds its shape despite the pressure of body weight and movement. It serves to protect the structures of the foot, including the calcaneus, muscles and ligaments. Heel pain is a very common foot complaint.

### Some groups are at increased risk of heel pain

Anyone can suffer from heel pain, but certain groups seem to be at increased risk, including:

- Middle-aged men and women
- Physically active people
- People who are overweight or obese
- People who are on their feet for long periods of time
- Children aged between eight and 13 years (particularly boys)
- Women during pregnancy.

### Causes of heel pain

Some of the many causes of heel pain can include:

- Abnormal walking style (gait), such as rolling the feet inwards
- Obesity
- Ill-fitting shoes
- Standing, running or jumping on hard surfaces
- Injury to the heel, such as stress fractures
- Bursitis (inflammation of a bursa – bursae are small sacs that contain fluid to lubricate moving parts, such as joints and muscles)
- Neuroma (nerve enlargement)
- Certain disorders, including diabetes and arthritis.

### Complications of heel pain

Complications of heel pain can include:

- Plantar fasciitis
- Heel spur.

### Plantar fasciitis

The plantar fascia is a band of connective tissue that runs along the sole from the heel to the ball of the foot. One of its main roles is to keep the bones and joints in position. Bruising or overstretching this ligament can cause

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inflammation and heel pain. A common cause is flat feet, because the ligament is forced to overstretch as the foot spreads out and the arch flattens. The pain may be worse first thing in the morning or after rest.

In many cases, plantar fasciitis is associated with heel spur. The plantar fascia tears and bleeds at the heel and, over time, these injuries calcify and form a bony growth.

### **Heel spur**

An abnormal walking style, such as rolling the feet inwards, can place extra strain on the plantar fascia. Chronic inflammation may develop and, over time, lead to a bony growth or spur. The spur can only be seen on x-ray, but its presence is often flagged by a tender patch at the heel on the sole of the foot.

You may have heel spurs without realising it - it is estimated that about one in 10 Australians have heel spurs without any symptoms. The spur itself does not cause the pain, but pain may be associated with inflammation in the area.

### **Sever's disease**

Sever's disease is the most common cause of heel pain in children aged eight to 16. Sever's disease results from stress placed on the growth plate of the heel bone. An excessive amount of running or jumping causes inflammation to the growth plate, which results in pain. Rest, ice, stretching of the calf muscle and heel lifts are usually prescribed.

### **Diagnosis of heel pain**

Depending on the condition, the cause of heel pain is diagnosed using a number of tests, including:

- Medical history
- Physical examination, including examination of joints and muscles of the foot and leg
- X-rays.

### **Treatment for heel pain**

Depending on the underlying cause, treatment can include:

- Rest from activities that stress the heel (such as running and jumping)
- Ice packs
- Regular foot massage, concentrating on the arch of the foot
- Professional strapping
- A splint worn at night
- Flexibility exercises
- Ultrasound therapy
- Anti-inflammatory medicine (topical or oral)
- Checking your posture and walking style, to correct imbalances and gait abnormalities that may contribute to the pain
- Shoe inserts (orthoses) to help support the foot
- In some cases, surgery may be recommended to treat conditions including neuroma, bursitis and heel spurs.

### **Prevention of heel pain**

You can reduce the risk of heel pain in many ways, including:

- Wear shoes that fit you properly with a firm fastening, such as laces.
- Choose shoes with shock-absorbent soles and supportive heels.
- Repair or throw out any shoes that have worn heels.
- Always warm up and cool down when exercising or playing sport – include plenty of slow, sustained stretches.
- If necessary, your podiatrist will show you how to tape or strap your feet to help support the muscles and ligaments.

- Shoe inserts (orthoses) professionally fitted by your podiatrist can help support your feet in the long term.

### Where to get help

- Podiatrist
- Australian Podiatry Association (Vic) Tel. (03) 9895 4444.
- Your doctor.

### Things to remember

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**This page has been produced in consultation with and approved by:**

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