

Common Causes of Heel Pain in Children and Adults

Dr Prasad Athreya

Heel pain is a common complaint in both young, active children and adults of all ages.

Below are three common causes:

1. Sever's Disease (Children)

Sever's Disease is an overuse condition that typically affects skeletally immature growing children. It involves inflammation at the point where the Achilles tendon attaches to the growth plate of the calcaneus, a condition known as traction apophysitis. This condition is similar to Osgood-Schlatter disease, which affects the knees. Treatment is typically conservative, with rest and activity modification. As the child grows, the condition generally improves on its own.

Symptoms:

- Pain at the back of the heel, near the Achilles tendon, often exacerbated by activity or impact.
- Tenderness can be elicited by squeezing the calcaneal tuberosity.
- Some children may also have tight Achilles or calf muscles.

Diagnosis:

- Diagnosis is largely clinical, based on the symptoms and physical exam.
- X-rays may show a sclerotic or fragmented calcaneal apophysis, although the X-ray may appear normal in some cases (Figure 1).

2. Plantar Fasciitis (Adults)

Plantar fasciitis is an inflammation of the plantar fascia, the thick band of connective tissue that runs along the bottom of the foot. It is a common cause of heel pain in adults, typically presenting as pain on the medial or plantar side of the heel.

Symptoms:

- Pain that is usually worst with the first few steps in the morning or after periods of rest.
- Pain may decrease with activity but can return after prolonged standing or walking.

Diagnosis:

- Diagnosis is based on the patient's history and physical examination.
- Imaging tests such as X-rays, ultrasound, or MRI can help assess the severity, but a plantar spur seen on an X-ray is not diagnostic of plantar fasciitis.

3. Achilles Tendinitis (Adults)

Achilles tendinitis is a degenerative condition affecting the Achilles tendon, which can occur in various locations: mid-substance, insertional, retrocalcaneal bursitis, or associated with bony spurs and Haglund's deformities. This condition is often seen in middle-aged adults or athletes who have experienced repetitive stress to the tendon.

Symptoms:

- Pain at the back of the heel, especially with activities like walking, running, or climbing stairs.
- Swelling, stiffness, and sometimes the development of a bony prominence, which can cause shoewear irritation (Figure 2).
- Difficulty with mobility due to pain and tendon dysfunction.

Diagnosis:

- Diagnosis is made based on clinical examination, along with imaging studies like X-rays or ultrasound to assess tendon degeneration and bony changes.
- MRI may be used to further characterize the extent of tendon damage, tears, or inflammation.

	Severs	Plantar Fasciitis	Achilles Tendinitis
Education	Self limiting condition that will improve with time	Pain may last for months despite treatment	
Weight loss	To reduce force through feet and therefore pain		
Analgesia	Simple analgesia and anti inflammatory agents as required		
Load Management	Reducing hours of weight bearing sports or jobs temporarily		
Insoles / orthotics	Heel gel cups	Medial arch supports Heel gel cups	Heel gel cups
Supportive Shoewear	Comfortable well supported shoes at all times if possible		
Physiotherapy	Achilles Stretches before and after activities/sports	Plantar Fascia Stretches Calf/Achilles Stretches Taping	A physiotherapy supervised achilles program as the exercises are painful with an aim to heal/prevent further tendon degeneration
Night Splints	Not indicated	<u>Toe Cock Up Night Splints:</u> If tolerated, as some patients find them uncomfortable and cannot sleep	Not indicated, unless significant achilles tightness
Injections	Not indicated	Steroid: To reduce inflammation in region, can repeat injection as required PRP: Evidence shows a possible more durable benefit than steroids, I would recommend if steroid has no effect	Steroid: Into retrocalcaneal bursa or paratenon, not into tendon as this will cause rupture. Has limited effect if calcaneal spur present PRP: Evidence shows a possible benefit only, I would recommend if steroid has no effect
ECSW (Shockwave Therapy)	Not indicated	Good evidence that it is effective for chronic cases that have not responded to any of the above therapies	Good evidence that it is effective for midsubstance tendinitis chronic cases
Surgery (For patients not responding to above measures)	Not indicated	Last line, unpredictable long term results, but can be performed	Involves Achilles tendon debridement, spur excision, and tendon transfers

Figure 1.



Figure 2.



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