

## CAUSES

- Calcaneal apophysitis, commonly known as Sever's Disease is a common condition in young and physically active people that occurs due to the **Achilles tendon pulling** on its attachment to the calcaneus (**heel bone**) resulting in **inflammation** of the **growth plate**.
- Children's bones have a growth plate which is made up of cartilage near the end of bones. Over time as the skeleton matures this growth plate fuses.
- **Repetitive** stress, **increased exercise** intensity, **change in exercise** activity and **growth spurts** are common causes of this inflammation.

## SIGNS & SYMPTOMS

- **Pain** localised to the **heel** and **Achilles tendon**.
- Pain **aggravated** by weight bearing activities such as **running, jumping**.
- Recent increase in activity levels often precedes injury.
- Usually occurs in periods of growth spurt (between **8-15 years old**).
- Pain in the heel when squeezing around Achilles tendon.

## WHAT ELSE COULD IT BE?

- Achilles Tendinopathy
- Calcaneal Fracture
- Retrocalcaneal Bursitis
- Plantar Fasciitis

## ASSESSMENT & OUTCOME MEASURES

- Subjective examination addressing **mechanism of injury**, current & previous activity levels, aggravating factors, footwear and 24hr pain.
- Assessment of **ankle** and **foot range** of motion.
- **Palpation** of **heel** & surrounding structures of foot.
- Assessment of **lower limb strength** & **flexibility**.
- Assessment of sporting **footwear**.



## MANAGEMENT

- **Education** and advice regarding load management. This will be dependent on the child's current function and pain levels. Often a period of offloading is required in the early stages if highly irritable.
- Sever's disease is a self-limiting injury and will improve when full skeletal maturity is achieved, however it is important your child is able to stay active whilst managing the injury.
- **Manual therapy** to help improve pain, ankle and foot range of motion and decrease muscle tightness.
- Progressive **rehabilitation** targeting lower limb and trunk control, strength and flexibility.
- Review of **foot biomechanics** and **footwear**. Referral to Sports Podiatrist if warranted.

James A., Williams C., Haines T. (2013). Effectiveness of interventions in reducing pain and maintaining physical activity in children and adolescents with calcaneal apophysitis (Sever's disease): a systematic review. *Journal of foot and ankle research*; 6(1): 16.

Wiegerinck J.I., Zwiers R., Siervelt I.N., van Weert H.C.P.M., van Dijk C.N., Struijs P.A.A. (2016). Treatment of calcaneal apophysitis: wait and see versus orthotic device versus physical therapy: a pragmatic therapeutic randomized control trial. *Journal of pediatric orthopaedics*; 36(2):152-157.

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