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ICB Medical Newsletter

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## Severs Condition Treating Children's Heel Pain

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This area is one that I really enjoy! For me treating children is a real delight, and very rewarding to see improvements that can be made using orthotic therapy when combined with other modalities.

Often parents bring a child to me saying that the child plays sports and afterwards limps off the field like an 'old man'. The parents explain that the child complains of painful heels - but when they run, the pain ceases.

This is of course indicative of the child suffering from Severs Condition. There is no need to plaster the foot or for the child to stop playing sport during a course treatment -that is unless X-rays show evidence of a fracture in the heel growth plate.

Often the child may experience pain in one or both heels whilst engaging in general activities such as running, jumping, or common sports like netball, basketball, football and soccer. Symptoms of Severs condition include extreme pain when the child placing their heel on the ground. This pain is alleviated when the child runs or walks on their toes (activities that do not exert weight and pressure on the heels) - strain is reduced when the foot is in a supinated position.

This condition affects children generally between the ages of 8 to

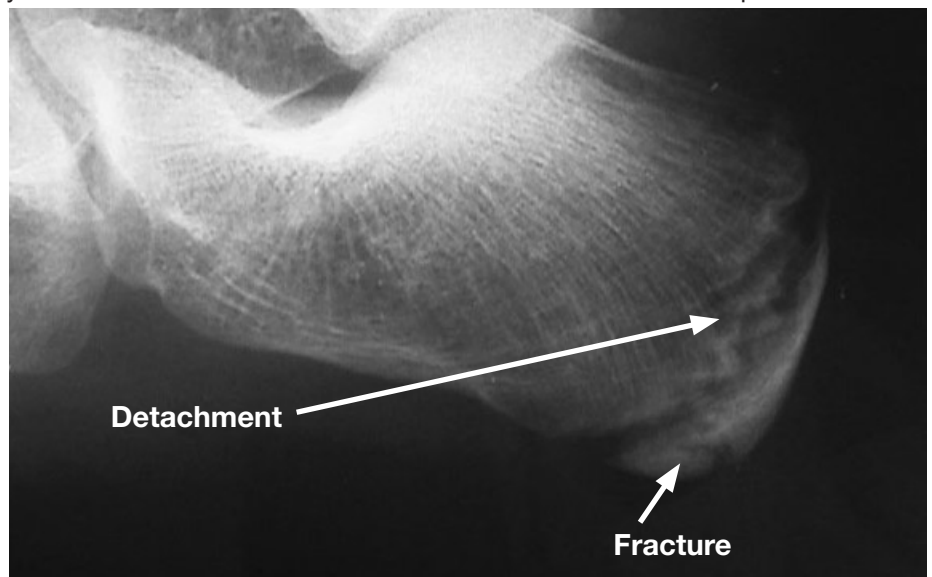
13 years. Severs condition is more common in boys than in girls.

### **Q** What Causes Severs Condition in Young Children?

Between the ages of 8 and 13 years, children's bones are still in the growth stage and the growth plates have not yet become ossified.

to dangerous to the child and affect their long-term health and ability to partake in leisure and sporting activities.

General treatment is rest, however telling a highly active sporting child to refrain from all sporting activities is often quite difficult - and does not treat the cause of the problem. Rest



**X-ray of child suffering Severs: growth plate detachment and fracture**

The combination of growth, bad biomechanical structure and function combine to cause inflammation and pain at the point where the tendo-Achilles inserts onto the calcaneus or heel bone. Excessive pronation is a major contributing factor together with the child's growth spurt pattern.

In very severe cases the growth plate can be detached from the calcaneus. Fractures or micro fractures can completely detach the growth plate, pulling it out of position causing osteochondritis desiccans.

If detachment occurs it can be quite

will prevent further injury for that time, but once sporting activities are resumed, the pain will reoccur.

Use of orthotic therapy is an excellent regime as it will realign the biomechanical structure and control the excess pronation of the foot, stabilising the heel bone and its growth plate.

Deep tissue massage of the calf muscle in combination with an orthotic device is a very successful mode of treatment. Do not prescribe stretching for the calf muscles as this may cause tearing at the attachment.

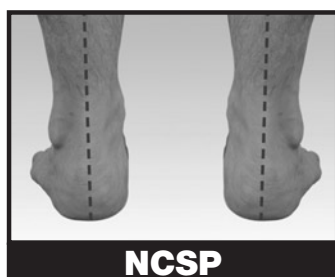
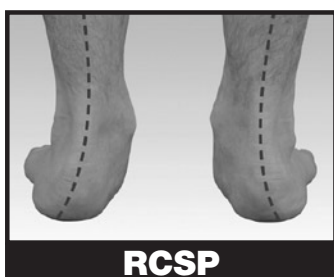
Mobilisation and adjustments of the foot should be undertaken after assessment to realign and reposition the joints.

Follow these simple steps to effectively treat Sever's Condition:

**1.** Identify if the child does have Sever's Condition - Medial lateral calcaneal squeeze test (pictured below).



**2.** Check the child for pronation



**3.** Use strapping (Low Dye Technique) to assist in the short-term.

**4.** Prescribe an orthotic to realign and control the structure - adding a temporary heel lift to both feet for 1-2 weeks to take the strain off the Achilles tendon. (Orthotic with Heel Lift addition pictured below)



Deep tissue massage is also helpful. Ensure the child is reviewed closely and regularly to monitor the child's progress. Advise the parents that the effectiveness of the orthotic will diminish over time, becoming uncomfortable as the child grows. Therefore advise them that the orthotic will need to be changed and upgraded to a larger orthotic in time.

Contraindication is when a patient is exhibiting detachment of the growth plate and should be referred to their local GP for referral to an pediatric orthopedic specialist for either plaster casting or possible surgical intervention. Detachment of the growth plate may need to be in a cast for 4-6 weeks. X-rays are required before removal of the cast or brace, and no weight bearing movements during the casted period.