



Flatfeet in children

A flatfoot occurs when the medial longitudinal arch of the foot is not present and the heel sits in valgus. Children with flatfeet are usually asymptomatic.

A flexible flatfoot is the most common presentation in children. This describes a loss of the medial arch of the foot with valgus alignment of the heel on standing. When on tiptoes, the arch is recreated and the heel swings in to varus.



Left: Photographs showing flexible flatfeet on standing with collapse of the medial arch of the foot and the heel in a valgus alignment (pointing away from the midline).

Right: Photographs showing the same feet on tiptoe stance with restoration of the arch of the foot and the heel tilting in to varus (towards the midline).

Flexible flat feet are normal variants caused by increased flexibility of the joints and ligaments of the foot. This is present in 90% of 1 year olds and up to 20% of adults. The arch of the foot usually takes up until 10 years of age to completely develop.

Flexible flatfeet are normal and do not require treatment as a routine. In a small proportion of older children, there can be aching in the arch of the foot and the ankle on prolonged standing or walking. Tightness of the Achilles tendon can make the foot stiffer and cause pain as a result. Treatment with arch supports in these circumstances can reduce these symptoms. They do not alter the way the foot develops or affect the risk of future musculoskeletal problems. Stretches for a tight Achilles tendon can commonly resolve symptoms.

Treatment for flexible flatfeet:

1. Reassurance that this is a normal variant
2. Stretches for children with a tight Achilles tendon (see physio site)
3. Medial arch supports if arch pain is present on standing or walking

Flexible flatfeet are usually bilateral and rarely cause significant pain. If the flatfoot is not flexible or significant pain exists then other diagnoses should be considered:

Differential diagnosis of flatfeet

Tarsal coalition (rigid flatfoot)	Painful ankle with limited subtalar motion. May describe a history of recurrent ankle sprains and pain on sports. No recreation of arch on tiptoeing and the heel remains in valgus.
Accessory navicular	Medial arch pain with focal tenderness over navicular. More painful on sporting activities.
Vitamin D deficiency	Aching pains in the limbs particularly at night time may be related to vitamin D deficiency (See vitamin D leaflet).

Summary

Flexible flatfeet are normal in children. They do not require treatment unless symptomatic. If the foot is symptomatic, then arch supports can be bought online. If the Achilles tendon is tight then posterior stretches should be performed with arch supports in situ (see physio website). If there is a rigid flatfoot or ongoing symptoms despite treatment with arch supports then the child should be referred for orthopaedic assessment.