

### FLAT FEET

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#### What are flat feet?

Flat feet are extremely common and often are entirely normal. Those patients who have had flat feet all of their life (known as physiological flat feet) almost never require any treatment and in general are asymptomatic. If, however, the shape of the feet have changed and the arches of the foot become less prominent, it may be necessary to consider treatment.

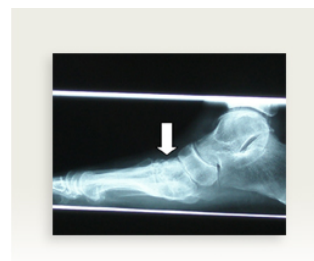
#### What causes flat feet in children?

It is entirely normal for young children to have very flat feet. The arches often do not develop until the age of nine or ten. As long as the feet are flexible then it is rare to need any treatment. Occasionally, children have persistent flat feet into their teens and if this becomes symptomatic it may be necessary to look for abnormal fusions between the bones of the foot, a condition known as tarsal coalition.

#### What causes flat feet in adults?

The two most common causes of acquired flat feet in adults are:

- Tibialis posterior tendon disorders - this is a degenerate condition that affects the main tendon that runs around the inner side of the ankle. This tendon plays a major role in supporting the arch of the foot.
- Arthritis of the midfoot joints – this causes painful collapse of the joints that support the arch of the foot (see x-ray, right).



#### What are the clinical features of flat feet?

The symptoms will depend on the cause:

- Tib Post Tendon problems – in the early stages, this causes pain and swelling around the inner side of the ankle. As the disease progresses, it becomes increasingly difficult to stand on tip toes and the arch will begin to collapse, with the heel moving outwards. The normal function and shape of the foot is lost, and pain gradually increases.
- Arthritis – in the early stages, there is pain across the middle of the foot, which tends to increase with time. As the joints collapse, the arch of the foot is lost and it becomes increasingly difficult to find comfortable footwear.

#### What is the treatment of acquired flat feet in adults?

- Non-surgical - in the early stages, whether the cause is arthritis or problems with the tib post tendon, we recommend trying an insole (orthotic) in your shoe. This will aim to support the arch and control the shape of the heel (see picture, right). In combination with physiotherapy and occasionally injections, this is enough to control symptoms sufficiently to defer or avoid surgery.
- Surgery for tib post tendon problems – in the early stages, it may be possible to decompress the tendon and remove any inflammation. As the disease progresses, however, the tendon will require reconstruction with one of the other tendons around the ankle (either tibialis anterior or flexor digitorum longus). This is usually combined with an operation to re-align the heel (an osteotomy). In the later stages, if the joints have lost their flexibility, it may be necessary to fuse the joints around the heel (a triple fusion), to restore the normal shape of the foot.
- Surgery for arthritis - in mild cases, injections may be of use. In more severe cases, however, it is usually necessary to fuse the affected joints. This removes what little movement is left, but allows the flat foot deformity to be corrected and, if successful, will remove the pain from the arthritic joints.



#### Are there any potential complications from the surgery?

There are risks with all surgical procedures. Risks of severe complications are increased in heavy smokers, and if there is significant deformity in the foot. Surgery is performed under a general anaesthetic. With modern techniques, the risk from the anaesthetic itself is now very low.

There are also general risks of the surgery, which include infection, pain, swelling, stiffness, blood clots, a failure of the joints to fuse (a non-union), nerve and blood vessel damage and a risk that the surgery may not fully cure the pain.