

flat feet

what is a flat foot?

A flat foot is most commonly defined as a foot that has an abnormally low arch. Many other names are used to describe this foot shape including a pronated foot, over-pronation, fallen arch, valgus foot, pes planus, and pes planovalgus. However, there is no widely agreed upon medical definition of these terms. The amount of “flattening” of the arch that is abnormal or bad for your foot has not been established.

what does a flat foot look like?

A flat foot has 3 characteristics:

- 1) A low or absent arch on the inside of the foot
- 2) Eversion or valgus of the heel. This means the heel points outward when you look at it from the back. This eversion of the heel makes the ankle look like it is pointing inward or collapsing inward.
- 3) The foot rotates outward relative to the leg. As a result, most individuals with flat feet will walk with their feet pointing outward (out toe).

The great majority of flat feet are flexible. A flexible flat foot typically looks “normal” at rest and only becomes visible when it is standing. The flexible flat foot can easily be returned to a normal or neutral position.

what causes flat feet?

The majority of flat feet are caused by increased flexibility of the ligaments of the foot that allow the feet to collapse more than average when you stand. Individuals who are generally flexible throughout their body are more likely to have flat feet. Flat feet that are not flexible can be caused by abnormal connections between the bones of the feet (tarsal coalition), congenital deformities of the foot, or neurologic diseases.

how common are flat feet?

This depends on the definition of a flat foot. The incidence of flat feet has been shown to be very high in preschool children. Around 50-60 percent of 3-year-olds have flat feet. This decreases to about 25 percent of 6-year-olds. Flat foot is quite common in adults as well, occurring in 5-20 percent of military recruits.

do flat feet get worse with growth or age?

In general, the incidence of flat foot decreases with age. Both X-ray and foot print studies show that the arch gets higher with age. However, the condition does not resolve in everyone and commonly continues into adulthood.



are flat feet bad for you?

Having a low arch or flat foot has traditionally been considered undesirable in the US. It has often been associated with being clumsy, slow, nonathletic or out of alignment. It has also been assumed to contribute to foot and ankle pain, athletic injury, and joint problems in the rest of the leg or spine. These historical beliefs have often been reinforced by medical professionals. The significance of flat feet is still debated by non-orthopaedic health professionals and treatment is often recommended for children with flat feet that are not causing any symptoms.

The long term consequences of flat feet in childhood is not certain. In general, scientific studies on the consequences of flat feet have produced conflicting results. However, there is no consistent evidence that flat feet result in an increased risk of foot and ankle pain, athletic injury, or arthritis. There is also no consistent evidence that flat feet result in an increased risk of pain or arthritis in the knees, hips or low back.

Arch height has been shown to have no effect on speed or athletic performance in children. Furthermore, the US military has conducted a number of studies on military recruits and have not demonstrated that recruits with flat feet have an increased risk of foot pain or foot injury during military training. As a result of these scientific studies, pediatric orthopaedic surgeons believe that the long term outcome of flat feet in children is usually good.

is there a cure or treatment for this foot shape?

There is no conservative or nonsurgical treatment that will change the shape of a child's foot or improve their arch when they are older. Development of the arch is not improved by wearing shoes, in fact some studies suggest that shoe wear could be harmful to arch development. Exercises and stretching have also not been shown to prevent flat feet. Controlled scientific studies have shown that shoe inserts (orthotics), heel inserts, and corrective shoes have **no benefit** in "improving" foot shape or correcting flat feet. Invasive surgery to implant a metal device (arthroereisis) or reshape the foot by cutting bones and changing their shape can result a change of the shape of the foot but have significant risks without any proven long term benefit. All of these treatment options may need to be considered in children with painful flat feet. However, flat feet with no symptoms do not require treatment and will not benefit from treatment.

what if my child is having foot pain?

Children with flat feet certainly can and do develop foot pain and foot injuries. Often the pain is not related to the shape of the foot but is caused by a condition that occurs in children regardless of foot shape. However, children with severe flexible flat feet or rigid flat feet can have pain or other symptoms as result of their foot deformity. In this case supportive shoes, arch support orthotics, physical therapy, or other treatment options may be necessary to relieve the symptoms associated with flat feet. Surgical correction of flat feet can be considered but is always reserved as the last option when less severe treatment fails. It's usually best to delay surgery until the foot is done growing or nearly done growing.

