

Clubfoot.co.za

About Clubfoot

Congenital Clubfoot is one type of a lower leg deformity of unidentified causes (see Reasons that Clubfoot occurs) that occurs in otherwise healthy infants. It is one of the most common congenital disorders.

Clubfoot causes the foot to turn inward and point downward. Shortened tendons and ligaments on the inside of the lower leg restrict outward movement and cause the foot to turn inward. Tight Achilles tendons cause the foot to point downward.

Clubfoot is now generally thought to develop after the first trimester of pregnancy and can sometimes be picked up on ultrasound from about 20 weeks. It can be either unilateral (one foot) or bilateral (both feet) clubfoot.

In Caucasians, the rate of occurrence is about one per 1,000 births (some sources say 1:750). In South African blacks it occurs three times as frequently and in Polynesians, six times as frequently. It occurs about twice as frequently in boys.

The congenital clubfoot appears to be of genetic origin, but no one is entirely sure what causes it. Some families report having a history of it, in others it is apparently an isolated case.

If you have a clubfoot your chance of having a baby with clubfoot is increased - if one parent is affected with clubfoot, there is a three to four percent chance that the offspring will also be affected. When both parents have clubfoot, their children have a 15% chance of developing clubfoot. In one study it was concluded that if a family already has one baby with clubfoot, the chance of having another increases to 1 in 35.

Clubfoot must be corrected in order for the child to walk properly. It is not difficult to correct, however which treatment to use has a subject of controversy for over 150 years. Although surgery became more popular than manipulation and serial casting during the 1950's, there is now a growing demand for non-surgical techniques, particularly the Ponseti Method.

Dr Ponseti says in his book:

A well-conducted orthopaedic treatment, based on a sound understanding of the functional anatomy of the foot and on the biological response of young connective tissue and bone to changes in direction of mechanical stimuli [*correct manipulation of the foot ligaments, joint capsules, and tendons and casting – my inserted comment*] can gradually reduce or almost eliminate these deformities in most clubfeet. Less than 5 per cent of infants with very severe, short, fat feet with stiff ligaments unyielding to stretching will need surgical correction. The parents of all other infants may be reassured that their baby, when treated by expert hands, will have a functional, plantigrade foot which is normal in appearance, requires no special shoes, and allows fairly good mobility.

Reasons that Clubfoot Occurs

In pinpointing the specific cause of clubfoot, the condition is classified into four types, congenital, teratologic, syndrome complex, or positional. This information on this site is about Congenital Clubfoot. The four types are determined by the cause as follows:

1. **Congenital clubfoot** is by far the most common form of clubfoot and is also referred to as "idiopathic" clubfoot, meaning that the condition arises spontaneously from an unknown cause. A child with congenital clubfoot has no other abnormalities, and the clubfoot is an isolated incident. The condition occurs more frequently within certain families, prompting scientists to believe that genetics play an important role in causing congenital clubfoot.
2. **Teratologic clubfoot** occurs as a part of an underlying neuromuscular disorder, such as spina bifida or arthrogryposis multiplex congenita. Clubfoot may or may not be present in children with these disorders. Teratologic clubfoot often is severe and nearly always requires early, radical surgery to achieve correction.
3. **Syndrome Complex clubfoot** occurs when a child is born with one of a number of genetic disorders, and clubfoot is part of the bigger disorder. Children with chromosomal abnormalities such as Down syndrome may also have Syndrome Complex clubfoot.
4. **Positional clubfoot** occurs when an otherwise normal foot is held in a deformed position in utero, and thus is "moulded" incorrectly. A small uterus, the presence of twins and abnormal foetal position have all been associated with positional clubfoot, although many such pregnancies result in babies without clubfoot. Positional clubfoot responds readily to non-surgical treatments, such as splinting and casting. Because positional clubfoot is not an inherent defect, but instead a "packaging" problem, some physicians do not consider it a true clubfoot.

References:

1. American College of Foot and Ankle Surgeons
2. Congenital Clubfoot. Fundamentals of treatment, by Ignacio V. Ponseti (Oxford University Press, 1996)