

Clubfoot (*Talipes Equinovarus*)

Clubfoot is a relatively common foot deformity. Sometimes it affects the entire lower leg as well as the foot. In the most common type, clubfoot is the only birth defect present. Treatment starts with a series of casts. If this doesn't correct your child's deformity within a few months, surgery is recommended.

What is clubfoot?

Clubfoot is a congenital deformity (birth defect) in which the foot is out of position and doesn't have normal flexibility. One or both feet may be affected. The cause isn't always known, although clubfoot sometimes results from the baby's position in the womb. It is most often the only abnormality but may occur as part of a syndrome with other birth defects. Clubfoot is sometimes called by its Latin name, *talipes equinovarus*.

Clubfoot has to be treated or else your child won't be able to walk normally. Usually a series of casts are placed to stretch the foot toward the correct position; after that, a brace may be used. Surgery can be performed if needed. The treated foot isn't exactly the same as a normal foot, but your child will probably be able to walk normally.

What does it look like?

The clubfoot abnormality is obvious at birth. Sometimes it's seen on ultrasound scans before birth.

- The foot is turned inward from the normal position. Instead of facing down, the sole of the foot faces toward the inner side. The heel is higher than the ball of the foot.
- The foot is stiff; the joints can't be moved normally.
- The calf muscles may be smaller than normal.
- In about half of babies with clubfoot, both feet are affected.

What causes clubfoot?

There are three main types of clubfoot:

- *Congenital*. The most common type. The cause is unknown, but genetic (inherited) factors may play a role. Clubfoot is the only abnormality.
- *Positional*. This type of clubfoot occurs because the foot was in an abnormal position in the womb. It is the easiest to treat.
- *Teratologic*. Clubfoot accompanied by other birth defects. Clubfoot may be one sign of a general neuromuscular disorder (abnormalities of the nervous system or

muscles) or part of a syndrome of birth defects. Your baby will receive a careful physical examination to look for these other abnormalities

What are some possible complications of clubfoot?

- Correction by casts or surgery may not be totally successful.
- Pain or difficulty walking. Later in life, arthritis may develop. (Most children with positional clubfoot don't have these problems.)
- Because the calf muscle may be involved, there may still be problems with use of the leg even after foot position has been corrected.

What increases your child's risk of clubfoot?

- About 1 in 1000 babies has clubfoot at birth.
- Boys are more often affected than girls.
- Genetic factors affect risk:
 - For the congenital form, if you've had one child with clubfoot, the risk in future children is about 3%.
 - If one of the parents had clubfoot, the risk in children is 20% to 30%.

Can clubfoot be prevented?

There is no way to prevent clubfoot.

How is clubfoot treated?

Treatment for clubfoot starts immediately after birth. Your baby is evaluated by an orthopedic surgeon—a specialist in treating bone and joint diseases.

- *Nonsurgical treatment*. The first choice for treatment of clubfoot is usually stretching and casting:
 - To start with, the surgeon will gently move your baby's foot toward the desired position, then apply a plaster cast to hold the foot in that position.
 - A week or two later, the cast will be removed. The surgeon will stretch the foot a little farther, then put on another cast.
 - The process is repeated until your child's foot is in the correct position. The goal is to get the foot into the correct position by the time your baby is about 3 months old.
 - After casting, your baby will receive a brace or special shoes for some period of time. Parents play a very

important role during this time. If the brace isn't worn as recommended, the clubfoot may come back.

- If your baby is born prematurely, splints or taping may be used until he or she has grown enough to begin cast treatment.
- *Surgery.* If normal foot position isn't achieved by the time your baby is about 3 months old, surgery may be recommended.
 - The operation is usually performed some time between ages 6 to 12 months. The goal is to achieve full correction by the time your child reaches normal walking age.
 - Your baby's foot is put in a cast for a while after surgery. After the cast comes off, he or she will most likely wear a brace or special shoes for a year or longer.

The orthopedic surgeon will monitor your child's condition as he or she grows. After casting or surgery, most children with clubfoot can walk, run, and play normally.



When should I call your office?

The orthopedic surgeon will plan and carry out treatment for your child's clubfoot. Our office will continue to oversee your child's general medical care.

Call your orthopedic surgeon if there are any problems with your child's cast or brace, for example, if the cast comes off. Also, call the surgeon if your child's foot seems to be turning back inward after treatment.

- During cast treatment, get medical help immediately if there is any swelling or color change of the foot. 