

Clubfoot

Fast Facts about Clubfoot

- Clubfoot is a congenital defect, meaning it occurs during fetal development and is present at birth.
- An ultrasound during pregnancy can sometimes find a clubfoot deformity.
- The foot turns inward to the inside and downward.
- Clubfoot can affect one foot or both feet.
- A baby's position inside the womb does not cause clubfoot, but it may cause a baby's foot to temporarily turn in.

Common Birth Defect

- Clubfoot is the most common birth defect affecting the leg.
- It is a genetic condition. Sometimes clubfoot happens because of another condition that a doctor will check for.
- About 1-3 of every 1,000 live births are born with a clubfoot.
- It is twice as common in male infants as female infants.
- Half of the children with clubfoot have the condition in both feet.
- Most babies born with clubfoot are otherwise healthy.

Symptoms of Clubfoot

- Clubfoot does not cause any pain for an infant.
- The clubfoot affects the leg below the knee:
 - The foot turns inward and downward (like Image 1 below).
 - The calf muscle on the leg with clubfoot looks smaller than the other leg.
 - The bones in the clubfoot are smaller and misshapen.
 - The ligaments in the clubfoot are stiffer and the tendons are shorter.
 - In 80% of babies with clubfoot, one of the arteries in the leg does not form.



Image 1: Clubfoot deformity

Treatment for Clubfoot

- Treatment should begin as early after birth as possible, preferably in the first week of life.
- An appointment with a pediatric orthopaedic surgeon is needed because he or she has special training in the treatment of clubfoot.
- The *Ponseti Method* is the standard method used by orthopaedic surgeons to treat clubfoot. This method uses repeated stretching and casting to correct the deformity.

Stretching and Casting

- The first part of treatment involves gentle stretching of the clubfoot by the surgeon in the office.
- After stretching the foot for about one minute, a plaster cast (like Image 2 below) is applied from the foot up to the groin.
- The cast must go above the knee so that the foot can start untwisting. The knee is casted into a bent position.
- The cast is removed a week later and the process is repeated 5-10 times, depending on the progress of the clubfoot correction.



Image 2: Clubfoot cast

Achilles Tenotomy

- Often the Achilles tendon (tendon in the back of the ankle) is tight in infants with clubfoot.
- The surgeon may need to release the tendon to allow it to stretch out to a normal length.
- This simple procedure is done in the operating room under general anesthesia (putting the baby to sleep).
- After the tendon is released, the surgeon casts the leg one more time and this cast stays on for 3 weeks.

Bracing

- The child will be fitted for a special brace after the process of casting is finished
- The brace looks like 2 open-toe leather shoes connected by an aluminum bar (like Image 3 below).
- The bar is custom-made for each child to keep the feet hip-distance apart.
- The child wears the brace almost 24 hours a day for 3 months after casting.
- After 3 months, the child wears the brace during sleeping and napping for 2-4 years.



Image 3: Clubfoot brace



Clubfoot

Outcome of Treatment

- The goal of treating clubfoot is to get the foot into a normal position where the sole of the foot can be placed flat on the ground.
- The hope is to correct the clubfoot before the child begins learning to walk.
- The success rate of treating clubfoot with the Ponseti Method is very good. About 60-70% of children treated with this method have a corrected clubfoot.
- Children with a corrected clubfoot are able to run, play sports and wear normal shoes, with a few differences:
 - The treated foot is smaller than the other, about 1 – 1 ½ shoe sizes smaller.
 - The calf on the treated side is smaller.
 - The treated foot is less flexible than the normal foot.

Complications

- Recurrence (the clubfoot coming back) is a problem if the treatment is not followed closely.
- Parents need to keep up with the weekly castings and the brace wear.
- Sometimes, even when parents follow their surgeon's treatment, more difficult clubfeet need surgery to be completely corrected.
 - The surgery is usually done around 6 – 12 months of age.

Helpful Tips

- Early treatment is best, so make an appointment with a pediatric orthopaedic surgeon in the first week of your child's life if he or she has a possible clubfoot.
- Stay positive and keep up with your child's treatment.
 - As children get older it can become more difficult to make sure they wear the brace.
 - Make it part of his or her routine to make it easier for you and your child.
- Call your surgeon if you become concerned about the way the cast or the brace are fitting:
 - If in the cast the toes change color or swell, or the cast becomes loose enough for the toes to disappear inside.
 - If the brace seems to be fitting too loosely or if your child's feet fall out of the shoes.

Sources for More Information

- **American Academy of Orthopaedics Surgeons**
www.orthoinfo.aaos.org/topic.cfm?topic=a00255
- **National Library of Medicine, National Institutes of Health**
www.ncbi.nlm.nih.gov/pubmedhealth/PMH0002208/
- **Global HELP: Health Education Using Low-Cost Publications***
http://www.global-help.org/publications/books/book_cfparents.html

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**Our orthopaedic providers can help answer
your questions about clubfoot.**

Call our office at (404) 321-9900 for an appointment!