FACT SHEET – CLUBFOOT

What is Clubfoot?

Clubfoot or "Congenital Talipes Equinovarus" is a condition where the foot turns inward and points down in a fixed position.

- **Congenital** – means present at birth
- **Talipes** – refers to the foot and ankle
- **Equinovarus** – refers to the position of the foot – pointing down and turning inwards.

One to 2 in every 1000 babies is born with a clubfoot. It can be unilateral or bilateral and is more common in males. It is not clear what causes clubfoot; it may be due to an abnormality in the development of the soft tissues and bones of the ankle and foot.

About 50% of cases can be detected by ultrasound before birth; post commonly at the 18-20 week scan. Or it might be picked up on the newborn examination. Clubfoot is a very treatable condition and the treatment will not stop your child from developing normally.

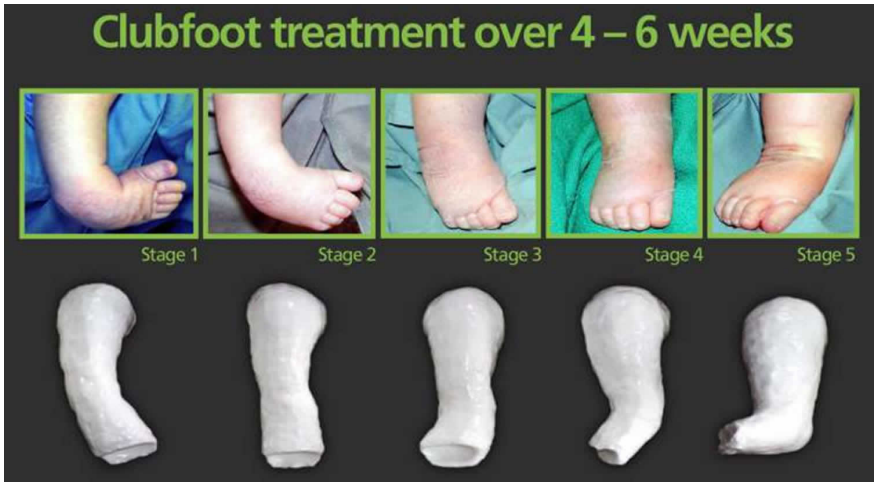
Types of Clubfoot

1. Positional – is the simplest and most easy to correct. The bones, muscles, and tenons of the foot are normal. The curved position of the foot in utero has led to the appearance of a clubfoot.
2. Teratologic – often part of a neuromuscular condition where the muscles and tendons are not formed well. It can occur in conditions such as arthrogryposis or spina bifida.
3. Idiopathic – occurs when the muscles, tendons, and bones develop abnormally, for no known reason. This occurs during the first 3 months of pregnancy and can be more difficult to correct.

What is the treatment?

All babies with clubfoot should be treated. They should be referred to a paediatric orthopaedic surgeon as soon as possible for treatment to commence.

A technique called the Ponseti method is the standard of treatment for clubfoot and is proven to deliver excellent results. This involves a series of weekly manipulation/gentle stretching of the foot and casting. The cast extends from the toes to the groin, holding the foot in the new position. The treatment slowly stretches the tendons and muscles around the foot, bringing it into a more normal position. Casting continues for approximately 6 weeks. About 80% of clubfeet cannot be completely corrected with manipulation and casting alone because the achilles is too tight. To get the final correct position a small surgical procedure is needed to release the achilles tendon (heel cord). This is done under local anesthetic and a final cast is applied and left in place for 3 weeks.



NOTE: The day of the clinic visit the parent can unwrap the cast and do stretching exercises with the foot. At this time the child can have a bath and you can apply lotion to the legs.

Maintaining the Position

Children's feet grow quickly and as it grows the foot can start to curl in again causing a recurrence of the deformity. The child may end up walking on the outside of the foot. To prevent this from occurring a brace is worn. A brace such the Denis-Browne "boot and bars" is used. The brace is used to both maintain and overcorrect the feet, holding them in dorsiflexion, external rotation (foot pointing out) and valgus (flattened arch). The bracing starts once the foot has been fully corrected. The brace will be fitted by the orthotist once the last cast is removed.

The brace is used until 3-4 years of age. The brace is worn 23hrs per day for the first 4 months following cast removal. It is removed for stretching and bathing. After this they are worn for nighttime and nap time (12-16hrs per day) until the age of 4. Bracing is essential to keep the foot/feet in the correct position. We check the feet in clinic every 3-6 months.

Figure 1. Foot abduction brace

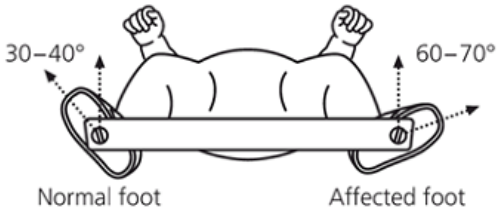


Figure 2. Foot positioning

In about 30% of the children, the clubfoot recurs. It happens about age 2-3 years, even if the child wears the braces. This may require further manipulation in casting and in some cases, surgery is required. You doctor will discuss and advise on the best option for your child.

Putting the Boot On

1. Dress your child in light cotton socks that are long enough to cover their foot and leg. Change to clean socks daily. Choose socks that are free of seems or patterns
2. Loosen the strap and laces of the boots. Place the most difficult/affected foot into the boot first.
3. Bend your child's knee as you push the heel down into the boot. Hold the foot and heel down as you tighten the ankle strap. (Figure 3)
4. Lace the shoe tightly. Check heel is down by feeling with your finger. (Figure 4)

Figure 3. The heel is pushed down into the boot with the knee bent to 90 degrees

Figure 4. check the hole at the back of the boot with your finger to make sure the heel is sitting down

5. Tighten strap one more hole if possible and tighten laces again. Check heel is down again.
6. Repeat with the other boot.
7. Apply bar to correct angles, as marked on the bottom of the boots.

NOTE: If there are any concerns with the fitting of the shoes or pressure sores/blistering is noted contact your doctor or orthotist immediately to schedule an appointment.

RESOURCES:

https://whenithurtstomove.org/wp-content/uploads/Clubfoot-Booklet-EN.pdf