

The Years Ahead - Maintaining The Correction

Children's feet grow fast. As it grows, the foot can start to curl in again and the child may end up walking on the toes or the outside of the foot. To prevent this the child is fitted with a brace, such as Denis-Browne boots and bars. These keep the foot in the correct position, and the tendons stretched, during the years when feet grow most. The brace is used until 3 years of age.

The child wears the brace for 24 hours a day, except for bathing, until she/he starts to stand up.

When the child can stand, he/she only wears the brace at night and for naps. We check the foot monthly in the clinic.

Once the child can walk, he/she wears the brace only at night. We check the foot in the clinic every 3 to 6 months.

In about 30% of the children, the clubfoot recurs. It happens at about age 2-3 years even if the child wears the braces. Again the two treatment options are surgery and BOTOX® with manipulation and casting. BOTOX® is often preferred but there are always some feet that are more severe. In these cases surgery is required. Surgery is often more successful after tendons have been stretched with casting. Your doctor will discuss and advise on the best option for your child.

Long Term Follow-Up

We check the feet in the clinic every 6 months to a year from ages 3 to 15 years. These clinic visits are important. Problems can be attended to before the foot gets stiff leaving surgery the only option.

Call the Orthopedic Clinic Nurse with your questions or concerns:
604-875-2609.

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Clubfoot



An agency of the Provincial
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4480 Oak Street
Vancouver, B.C. V6H 3V4
604-875-2345
1-888-300-3088
www.bcchildrens.ca

What is Clubfoot?

Clubfoot or “talipes equinovarus” is a condition where the foot turns inward and points down in a fixed position. 1 to 2 in every 1000 babies is born with a clubfoot. It is more common in males.

There Are Three Types Of Clubfoot

1. **Positional Clubfoot** is the simplest to correct. This is because the bones, muscles and tendons of the foot are normal. The foot was held in a curved position in the uterus. This has caused the problem.
2. **Teratologic Clubfoot** is a foot where the muscles and tendons are not formed well. This is often part of a neuromuscular condition such as arthrogryposis or spina bifida.
3. **Idiopathic Clubfoot** comes about when the muscles, tendons and bones develop abnormally, for no known reason. This happens during the first 3 months of pregnancy. This kind of clubfoot is more difficult to correct.

Treatment

The aim of treatment is to correct all aspects of the clubfoot. The goal is a foot that looks and works like a normal foot and is pain-free. The person can wear normal shoes and lead an active life. The earlier the treatment begins, the better the chance of correcting the foot without surgery.

How It Is Done

Treatment involves weekly clinic visits. Each week the doctor turns the foot a little more (called manipulation), and then puts it in a cast. The cast goes from the toes to above the knee. It holds the foot in the new position. The treatment slowly stretches the tendons and tight muscles. Over time it brings the foot into a more normal position. This casting and manipulation goes on each week until it no longer improves the foot position (usually between 4-10 weeks of treatment).

Note: The day of the clinic visit the parent unwraps the cast and does stretching exercises with the foot. At this time, the child can have a bath and you can apply 100% Shea butter. We will show you how to do this on your first clinic visit.

About 80% of clubfeet cannot be corrected completely with manipulations only. The achilles tendon is too tight. The doctor has to lengthen the tendon before the foot will turn all the way into the correct position. There are two options:

- 1) **Surgery:** The surgeon cuts the tendon. This is done in Daycare Surgery with a general anesthetic.
- 2) Using **Botox®** to weaken the tight tendon.

How BOTOX® works?

Botox® is the trade name for Botulinum Toxin type A, a chemical that acts on the nerves that control the muscle. It causes some partial paralysis (weakening) of the muscle by preventing muscle contractions (tightening). As part of the treatment for clubfoot, Botox is injected into the child's calf muscle. In about 1 week the Botox weakens the Achilles tendon. This allows the foot to be turned into a normal position, over a period of 4-6 weeks, without surgery.

The weakness from a Botox injection usually lasts from 3-6 months. (Unlike surgery it has no lasting effect). Most club feet can be corrected with just one Botox injection. It is possible to repeat injections if it is needed. There is no scar or lasting damage.

The injection is given in the clinic. We put a cream (EMLA) on the skin to numb the area so that the child feels little pain from the needle.

If you, and the orthopedic surgeon, decide to treat with Botox then the injection is done after 4-6 manipulations. After the Botox the weekly casting goes on for about another 4 weeks. In most cases the foot will be in a normal position by then.