

**Ponseti Treatment for Congenital  
Talipes Equino Varus (CTEV)  
Physiotherapy Service**

Congenital Talipes Equino Varus is a developmental abnormality of the foot. It is sometimes detected on the antenatal scan carried out in mid pregnancy. When the baby is born, the foot is fixed in a downward and inward position.

In the Aneurin Bevan University Health Board (ABUHB), the Children's Physiotherapy Service offers Ponseti treatment to babies born with CTEV. Treatment consists of weekly plaster changes, carried out by our physiotherapists in one of our Children's Centres. 5 to 8 casts are generally required. Most babies then need to undergo a small surgical procedure, to release the tight muscle tendon behind the ankle.

This is carried out by an orthopaedic surgeon, usually under local anaesthetic. After a further 3 weeks in plaster, the feet must then be held in an over-corrected position by a 'boots and bar' brace. This consists of open-toed sandals connected by a metal bar, with the feet held in a turned-out position. The brace is worn continuously (day and night) for 3 months, and then just at night until the child is around 5 years old. Most feet can be corrected well by this method. The long-term success depends on how well the boots and bar routine is followed.

### **Severe clubfoot**

Around 5% of babies born with clubfoot may have very severe, short, plump feet with stiff ligaments that are resistant to stretching. These babies may need surgical correction.

### **Starting treatment**

The treatment should begin during the first 2 weeks of life to take advantage of the elasticity of the tissues. However this may not be appropriate if the child is born prematurely, or has other health problems. Following gentle stretching, an above-knee plaster cast is applied to maintain the correction and to soften the ligaments. The displaced bones are gradually brought into correct alignment.



## Boots and Bar

After removal of the last plaster cast, we need to splint the baby's feet, in order to minimise any chance of the deformity recurring. The brace is worn for 23½ hours per day for 3 months. After that, the brace is worn just at night (12 to 14 hours). Babies may be unsettled for the first few days and nights, and this can be a difficult time for parents, but it's important that the brace isn't removed. The baby usually gets frustrated when trying to kick his / her legs, but will soon learn to kick them together. Children receiving this treatment usually sit, crawl and walk at the expected time.



Babies are reviewed by the physiotherapist at frequent intervals at first, usually weekly. The appointments become gradually less frequent, i.e. 2 or 3 times a year by the time the child is 2 years old. The Orthopaedic Surgeon will usually review the child once a year once he / she is established in the brace.

## Relapse

The most effective way to prevent a relapse (recurrence of the deformity) is to stick to the boots and bar routine. This can be very challenging for parents, but it's very important if the treatment is to be successful. If there is a relapse, further weekly plaster casts are applied. Occasionally, another tendon release may need to be performed. In some cases, despite proper bracing, a simple operation may be needed when the child is older than 2 years to prevent further relapses.

## General Advice

### Dealing with plasters

- Babies are sometimes uncomfortable for the first day after a plaster change.
- Fasten nappies securely to help prevent leakage down the plaster! Tuck the leg elastic above the cast.
- If the baby's toes become blue or swollen, or if the plaster slips (i.e. the toes disappear inside the cast) the plaster needs to be removed straight away. Between 9.00am & 4.30pm Monday to Friday the Children's Centre that you attend should be contacted. At evenings or weekends, take the baby to your local A & E Dept, taking with you your plaster room letter that is provided from physiotherapy.
- If the plaster becomes cracked or damp, contact the physiotherapy department (as above).

### Dealing with the boots and bar brace

- Put the shoes on first and then attach the bar.
- Make sure the heel is down in the back of the shoe and then fasten the strap securely. Check that the toes are not curled underneath the foot.
- Make sure the laces fasten firmly all the way up the foot.
- If the baby manages to pull his / her heel out of the shoe, the toes will be less visible. Remove the shoe and put it on again, making sure that the heel is down and the strap and laces securely fastened.
- For the first 3 months the boots and bar are worn for 23½ hours per day. The 30minutes without the boots and bar are for the baby to have a bath and a kick around.
- The skin around the feet must be carefully checked and if blisters or rubbing occur, the physiotherapist should be contacted straight away.
- If you are putting your child into a chair / buggy which has a bar between the legs, detach one foot from the bar, and attach it again once the child is in the seat.

### Further help

[www.steps-charity.org.uk](http://www.steps-charity.org.uk) is a website which parents can find very useful. It gives parents the opportunity to share information & ideas about coping with treatment.