



## Clubfoot Splint Instructions

A foot abduction orthosis is used only after the clubfoot has been completely corrected by serial casting, manipulation, and possibly a tenotomy. Even when well corrected, clubfoot has a tendency to relapse until the child is approximately three years old. When used properly and as described in this document, the foot abduction orthosis – the only successful method of preventing a relapse – is effective in 95-percent of patients. Using the orthosis will not cause your child to have development delays.

### Foot Abduction Orthosis

The orthosis consists of an adjustable aluminum bar with adjustable footplates on to which straight-last shoes (shoes that can go on either foot) attach. The orientation of the footplates to the bar is set by the orthotist. The shoes are setup with the buckles on the inside, so that you do not have to turn the child over to tighten the strap and laces. The foot strap is the key to this device; it does not matter if the strap goes through the top or bottom of the holes on the sides of the shoe. On the inside of the shoe, above the heel, there is a pad that creates an area for a normal heel to develop and grow into; it also helps to prevent the heel from coming out of the shoe.

### Wearing Schedule

Use the orthosis once the last set of casts is removed. The child wears the orthosis for 23 hours a day for the first three months following cast removal. He/she should only be out of it for baths. For the next three to four years, the orthosis is used for night and naptime only. The duration varies depending on the severity of the clubfoot; your physician will decide this. Do not end treatment early. If you are unsure about a recommendation, contact our office at (970) 351-0900.

### Wearing Instructions:

1. Always use cotton socks that cover the foot everywhere the shoe touches the child's foot and leg. His/her skin may be sensitive after the last casting, so you may want to use two pairs of socks for the first two days only. After the second day, only use one pair of socks.
2. If your child does not fuss when you put the orthosis on, focus on getting the worst foot in first and then the better one. However, if your baby tends to kick when putting on the orthosis, focus on the better foot first, because the baby will tend to kick into the second shoe.
3. Hold the foot into the shoe and tighten the strap first. The strap helps keep the heel firmly down into the shoe. Do not mark the hole on the strap that you use, because with use the leather strap will stretch and your mark will be useless.
4. Check that the child's heel is down in the shoe by pulling up and down on the lower leg. If the toes move backwards and forwards, the heel is not down, so you must retighten the strap. A line should be on the insole of the shoe, indicating the location of the child's toes. The toes will be at or beyond this line if the heel is down.
5. Lace the shoes tightly. Do not cut off circulation. Remember: the strap is the most important part. The laces are used to help hold the foot in the shoe.

6. Be sure all of the child's toes are out straight and that none of them are bent under. Until you are certain of this, you may want to cut the toes out of a pair of socks so you can clearly see all of the toes.

### **Set-up of Orthosis**

Change the shoes only when the baby's toes completely curl over the edge of the shoe. The forefoot adduction usually does not recur, so waiting will not effect the correction, but it will save you money. If you do not know what size shoes were used on the bar, measure the length of the shoe and contact us. New shoes will be two sizes larger than the current shoes. Screws are used on the bottom of the shoes to attach the shoes to the footplate on the bar. Mark the joints on the bar before changing the shoes to ensure a return to the proper alignment. Attach the shoes with the buckles toward the inside. You should adjust the width of the bar at this time. Measure the distance between the outside of the shoulders. This will be equal to the distance between the center heel screws in the shoe. Lengthen the bar to match your measurements. Mark a line for the location of the toes the first time the shoes are worn, to indicate that the heel is down.

### **Helpful Tips**

1. Expect your child to fuss in the orthosis for the first two days. This is not because the orthosis is painful, but because it is something new and different.
2. Play with your child in the orthosis. This is a key to getting over the irritability quickly. The child is unable to move his/her legs independently of each other. You must teach your child that he/she can kick and swing the legs simultaneously with the orthosis on. You can do this by gently flexing and extending the knees by pushing and pulling on the bar of the orthosis.
3. Make it a routine. During the three to five years of night/naptime wear, put the orthosis on any time your child goes to the "sleeping spot." He/she will learn that when it is that time of the day, they need to wear the brace. Your child is less likely to fuss if you make this use of the orthosis is part of the daily routine.
4. Pad the bar. A bicycle handle bar pad works well for this. By padding the bar you will protect your child, yourself, and your furniture from being hit by the bar when the child is wearing it.
5. Never use lotion on any red spots on the skin. Lotion will make the problem worse. Some redness is normal with use. Bright red spots or blisters, especially on the back of the heel, usually indicate that the shoe was not worn tight enough. Make sure that the heel stays down in the shoe. If you notice any bright red spots or blistering, contact your physician.
6. If your child continues to escape from the orthosis, try the following (check after each step to see if the heel is down, if not proceed to the next step):
  - Tighten the strap by one more hole.
  - Tighten the laces.
  - Remove the tongue of the shoe (Use of the orthosis, without the tongue, will not harm your child).
  - Try lacing the shoes from top to bottom, so that the bow is by the toes.
7. Periodically tighten the screws on the bar. Tools have been provided.