

Clubfoot and the Ponseti Method

Exercises for Your Child



The Ponseti Method Clubfoot Clinic *of the Rubin Institute for Advanced Orthopedics*

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Stage 1:

Full-time Boots and Bar

Your child will wear the boots and bar for 22-23 hours a day after the final cast is removed. We recommend that you perform exercises with your child during the hour that he or she spends out of the brace. Although stretching is not part of Dr. Ponseti's original protocol, it is gaining wider acceptance as a very useful part of the treatment process. Stretching can help your child's foot stay flexible by maintaining the correction that was achieved after casting and tenotomy.

1. *Massaging the Foot*

After the cast is removed, your baby's foot might be sensitive to touch. During the hour that the child spends out of the boots and bar, you should gently massage the foot with lotion or cream. Use different strokes (e.g., tapping, tickling) and surfaces (e.g., cotton balls, wash cloths) to rub the foot. This will help desensitize the foot.

2. *Stimulating the Muscles*

Because of the original clubfoot deformity, the muscles that pull your baby's foot *in and down* are stronger than the ones that pull it *out and up*. To help balance the strength of these muscles, stimulate the outside border of your baby's foot and watch it fan out and up!



3. Stretching Into Abduction and Dorsiflexion (Out and Up)

Stretch your baby's foot out (i.e., abduction) and up (i.e., dorsiflexion) when your child spends time out of the boots and bar. Think about how the last cast looked, and try to stretch the foot into the same position. Hold the stretch for 20 seconds and repeat five times.



4. Stretching Into Plantar Flexion (Down)

The muscles on the front of your child's ankle might become tight because of the amount of time that the child must spend in a cast to correct the clubfoot deformity. It is important to stretch these muscles so that your child will be able to achieve a full toe-down foot posture.

To stretch your child's ankle, place one thumb across your child's lower shin (just above the ankle joint) and the other thumb across the midfoot. Push down on your child's foot to stretch it into a toe-down posture. Hold the stretch for 20 seconds and repeat five times.



If your baby is consistently pulling a foot out of the boot or if your child develops a sore, you need to contact the clinic as soon as possible to make an appointment. If the child does not have a sore or if the boots and bar are not making the sore any worse, please try to reapply the boots and bar until the appointment.

Exercises for Your Child

Stage 1 (continued)

If you are unable to reapply the boots and bar, you should stretch your baby's foot out and up several times a day until the child can be examined at the clinic. Hold the stretch for 20 seconds and repeat five times. Perform this stretch at every diaper change or at least five times a day. This stretch does not replace the benefits of wearing the boots and bar. It is critical that you contact the clinic if your child is consistently experiencing difficulties with the boots and bar.

Notes:

[illegible]

Stage 2:

Wearing the Boots and Bar at Night and During Naps

After 3 months of full-time wear, your child will then graduate to the nights and naps stage. You should continue to perform stretches and strengthening exercises that will help your child's feet as they grow.

If you notice that your child's foot is becoming stiff or regressing towards the original clubfoot appearance, perform these stretches three times a day and call to make a clinic appointment as soon as possible.

1. Stretching the Achilles Tendon

With your child's knee straight, cup your child's heel in the palm of your hand. Pull down on the heel as you use your other hand to push up on the midfoot; be careful not to push up on the toes. Hold the position for 20 seconds and repeat five times.



Stage 2 (continued)

2. Playing in a Squat Position

Once your child is walking, encourage him or her to play in a squat position with both heels flat on the floor. This position stretches the calf muscles and keeps the ankles and feet flexible. As your child becomes older, encourage him or her to jump like a frog, walk like a bear, and waddle like a duck!

3. Strengthening the Muscles

As your child grows, it is very important to strengthen the muscles that pull the foot *up and out*. Help to activate these muscles by placing your finger near the outer edge of the foot and asking your child to use his or her toes to touch your finger.

Notes:

Alternative Exercises

Another way to strengthen the muscles is to play in a sandbox or a plastic tub with the bottom full of sand. Have your child sit with his or her heel down in the sand and then use the foot to sweep the sand outwards. Your child can use this motion to build mountains of sand and then stomp through them afterwards!

Using the foot to draw pictures in the sand is also fun. Your child can make pictures of rainbows by using a windshield-wiper action and big outward movements of the foot. Ask your child to try to keep the heel down in the sand while performing these movements.

As your child becomes older, he or she can perform other strengthening exercises such as walking on the heels and walking on the inside borders of the feet. When your child learns the alphabet, ask him or her to use the foot to draw letters in the air!

Notes:

Useful links:

Our Website:

www.limblength.org

Ponseti International Website for Parents:

<http://www.ponseti.info>



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