

Clubfoot Casting and Beyond

If your baby has been born with one or both feet that curl or turn inwards you hopefully you will be under the care of an experienced doctor and care team. Our bodies have both plastic and elastic qualities. Holding the foot with a cast or brace targets the plasticity in our system, to bring about change. They gradually encourage each foot affected into a normal position by holding the foot and lower leg in a continued stretch.



When your baby is born their feet are immature with 22 partially developed bones, taking 15 years to fully mature. There is more space and soft tissue present than bone (see image), compared to the fully developed adult foot. The lack of structure is what makes it possible for a foot to curve inwards, the amount of soft tissues and the fact that it is still growing makes it possible to treat clubfoot successfully with the Ponseti Method and Iowa Brace.



While you are adapting to life with your baby and juggling the challenges of having one or both legs in casts or brace, here are a few ideas and things you can do safely at home to start and support the process of change....

Massage

Massage provides important touch to the body - both for stimulation and relaxation. Touch conveys love, build trust and enhances the bond between you and your baby. Massaging your baby's legs daily before casting, when the cast is being changed or at bath-time when they are out of their brace helps support the change!



Movement

We were born to move, in fact movement started well before your baby was born. With clubfoot movement of your baby's knees and ankles will be completely restricted during casting and bracing will limit any ankle movement.



It is important that you keep your baby moving to encourage natural development of what movement they can do - the floor is their best friend and they will slowly work out how to move despite cast and brace. They don't know any different so allow time for their brain to work things out.

Getting started

- Massage skin to skin is best, use organic/cold-pressed plant oil if you like. For upper body massage use pressure that makes a slight dent when you push in, be gentle and slow.
- Movements need to be rhythmical and slow. Or follow your baby's lead.
- Grab moments when your baby is awake, eyes bright and they are happy, tend to all their other needs first. If they start fussing or crying stop as it may be enough stimulation, or they may need something else

Massage - Legs & Feet

Follow this routine daily before casting, when casts are being changed (when possible) and at bath-time when they are wearing the brace. Times you repeat a stroke are given as a guide.

- Hold their legs in your hands, bounce them up and down. See if they will let go and give you the weight of their legs (this can be down during casting too).
- Take one leg and sweep your hand from their hip to toes (x5). Repeat on other leg.



- Place the fingertips of your right hand gently into their right groin and slowly stroke towards their inside ankle, stretching their leg straight, if possible, continue under their foot to the toes (x5). Repeat on left leg with your left hand.

- Use your thumbs or fingertips to stroke the soles of their feet from their toes to heels.
- Then, using thumbs or fingertips massage in small circles the top of their foot from toes to ankle.



- Continue these small circles up the front of their leg (x2). Repeat on other leg.
- Repeat the small circles up the side of their leg from ankle to hip (x2). Repeat on other leg.

Turn your baby over on to their tummy. Either flat on the floor, on a cushion or put them over your legs.

- Starting at their bottom, slowly stroke down their legs to the heel on the back of their legs, again straightening the legs as much as you can without force (x5). Repeat on right.

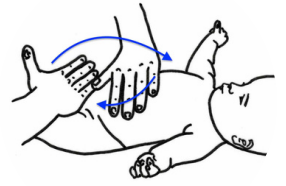


If your baby is in a cast or brace head down to the toes. This is the furthest part of the body from their brain and needs stimulation to help build nerve pathways. Gently touch, squeeze and massage each toe. Introduce counting and rhymes - have some fun.

Massage - Tummy & Upper Body

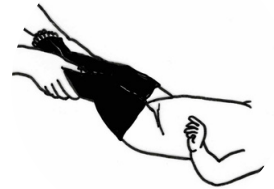
Tummy - this routine is also great for colic & digestion, repeat several times a day if your baby is showing signs. Ensure your baby's umbilical has healed before doing any strokes

- Place your hand across baby's tummy and hold. Massage is a great time to make eye contact and connect with your baby.
- With your hand across their tummy, scoop downwards towards their legs, then place your other hand on their tummy and scoop down. Repeat 5x.



- Place both hands on your baby's tummy with thumbs facing towards their head. Sweep outwards with your thumbs just under their ribs. Repeat lower down towards their legs. Repeat 3x.
- Gently lift their legs towards their chest, try and bring their knees gently together without forcing them, hold for a count of 30. Count out loud or sing to them. If they are in casts, move on to the next move.

- Hold their legs, gently bounce them up and down, encouraging them to let go and relax.



Upper body, back and arms



- Place your hands on their tummy again, sweep up and out over their shoulders and back to their tummy. Repeat 5x.
- Repeat above stroke, this time sweep out and down their arms to finger tips.
- Massage each hand and all their fingers. Introduce counting and use rhymes.

Roll your baby over - you can massage their back either on their tummy or lying over your lap.

- Using your finger tips make small circles either side of their spine.
- Massage their bottom in a similar way.
- To finish, stroke all the way from the top of their head to their toes, squeeze the toes. Repeat 5x.



You can play music, sing or chat when you massage your baby. Follow their cues, they will let you know when they have had enough, or are not in the mood!

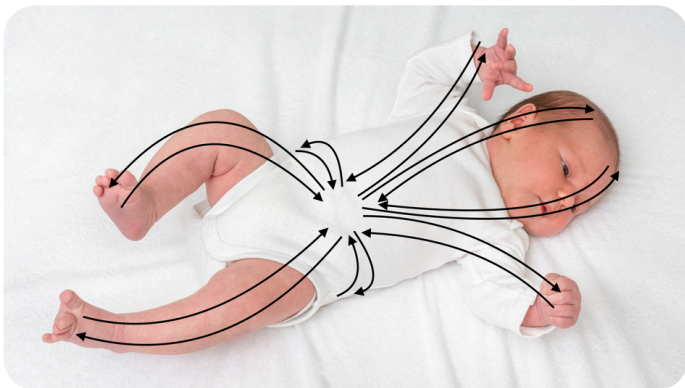
Massage Integration

This activity bring awareness to your baby of their extremities - head, arms, legs and tail, in relation to their centre or core. Some call it 'navel radiation' or you can think of it like a starfish.



During most of this routine you will keep one hand on your baby's tummy, you can alternate hands as you need. Describe the connections in the body to your baby and your hands move - suggestions given. Each move starts and finishes at the tummy (their centre) and can be done over clothes, casts and braces. Your baby can be lying on the floor or your lap.

- *"Your tummy is connected to your head"* Start at their tummy and stroke both of your hands up their chest. Continue with your fingertips over their cheeks either side of their face to the top of their head, gently squeeze their head. *"Your head is connected to your tummy"* Return behind their ears over their chest back to their tummy.
- Keeping one hand now on their tummy, stroke out and down their right arm. *"Your tummy is connected to your right arm"* Gently squeeze their hand and fingers, return to their tummy. *"Your arm and hand is connected to your tummy"* Repeat on left arm.



- Keeping one hand on their tummy, stroke out and down their right leg (over the cast/brace), gently squeeze their toes, return to their tummy. Repeat on left. *"Your tummy is connected to your left/right leg and foot - and your foot and leg is connected to your tummy"*
- Wrap both hands around their waist, your fingers meeting under their bottom, then sweep back to tummy. *"Your tummy is connected to your back and you back is connected to your front"*

Now connect arms and legs, same sides and opposites

- With one staying on their tummy, stroke out the right arm then down to the right foot, then back to their tummy. Repeat on the left. *"Your right/left arm is connected to your right/left leg and foot, and both are connected to your tummy"*
- Keep one hand on their tummy and stroke to the right hand and then down to the left foot. Then to the left hand and right foot. *"Your right hand is connected to your left foot...etc"*

Do this once a day, especially when cast and in a brace. You can do an abbreviated version on just the legs every time you change their nappy.

Movement

Carrying, holding and rocking your baby as they grow continues to develop their vestibular system (relating to balance and spatial awareness). As they develop head control options for movement increase.

Movements you can do include (once head control established):

- Jiggling or bouncing them on your knees
- Spinning around with them (don't fall over!)
- Swinging them in your arms
- Lifting them up and down above your head



Floor-time - Active and Passive

Floor time is an important part of your baby's everyday life. Whilst it may become tempting once they gain head control to have them sitting, propped up try and avoid this. Of course car seats and push chairs/buggies can be used for transporting your baby, and carrying them, wearing them and sitting them on your lap is absolutely fine.

The first 2 years are crucial for them to develop and master foundational movements. Physical development precedes cognitive learning (reading/writing) which makes sense but is often overlooked.

The floor provides the perfect environment for your baby to develop all the physical capabilities they will need to be able to walk - and more important for your clubfoot baby. The more time your baby has preparing to walk the better, they will soon catch up if you give them these early opportunities.

Active floor time



Place your baby on the floor (in a safe place) for increasingly longer periods during the day - on their back **and** their tummy (even when they are in casts/brace). Observe their movements as they discover what they can do.

- Put objects either side, or in front of them to look at and try to reach.
- Use a play mat with different textures for tummy-time or a mobile above them.
- When turning them from back to front and vice versa, gently help them roll over.

Passive floor movements (you move them)

Place your baby on the floor and do the following movements - gently and without force

- Cross their arms both ways (right over left and vice versa).
- Touch left arm to right leg/cast and vice versa.
- Reach their arms above their head, or out like a starfish.
- Gently scissor kick their legs up and down.
- Holding their legs gently push and pull so that you see their body move and head nodding.

Bracing and Beyond

Congratulations on making it through the casting phase of treatment. You've still got a way to go so hang in there - your baby will be crawling, walking and running before you know it. Continue to follow the instructions and guidelines from your doctor and care team. While the Iowa Brace is doing its magic you can help by providing your infant with a stimulating environment, one that allows freedom of movement and exploration.



With the new challenge of having your baby in a brace, here are a few ideas and things you can do safely at home to continue supporting the process of change...

Massage



- Continue to massage their upper body, massage legs and feet when out of their brace.
- Use the integration 'starfish' technique to reinforce the connection of their feet to the rest of their body.

Movement

Movement of your baby's ankle will continue to be restricted while in the brace. Help your baby move by providing plenty of safe space for them, remember the floor is their friend and they will slowly work out how to move despite the brace.

- Getting out and about in nature provides more stimulation, mix up their experience with carrying them, using a push chair or buggy and putting them on the ground to explore.
- Remember limit the amount of sitting. If they can't get into a sitting position by themselves they're not really ready to be sitting. Sitting is a result of movement, not a place to be put.
- Continue with the passive movements if your baby enjoys them, or just play with them.



Finding Their Feet

Be patient - your baby has all they need inside to develop. With space, love and encouragement they will find their feet.

As your infant 'finds their feet' and transitions out of their brace continue to encourage floor time for the final development of rolling, crawling, climbing, standing through to walking. This can be achieved with activities such as:

- Commando courses under and over pillows, chairs etc
- Crawling chasing games - indoors and outdoors
- Lying down to look at books on their tummy
- Rolling down grassy slopes

