



Exercises for Children with Brachial Plexus Birth Injuries

The aims of physiotherapy are:

- To prevent stiffness developing in the joints of the affected arm
- To encourage your baby to move their arm
- Increase your baby's awareness of their arm
- Monitor your baby's development

A physiotherapy home program may include:

- Exercises to keep your baby's muscles and joints flexible and ready to work if and when the nerve and muscle function improves
 - How to move and handle your baby when caring for them
 - Positions to use for sleep and play
 - Advice on activities to help with your baby's development
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Range of Movement Exercises

The aim of these exercises is for your baby to gain and maintain full movement of their joints.

They should be performed with your baby lying flat on a firm surface. Their changing mat is an ideal place.

- Conduct the exercises at every diaper change, at least 3 times a day. You can set a timer as a reminder.
- Perform slowly and gently
- Hold for 10 seconds at the end of the range
- Repeat each exercise 5 times
- Try to do the exercises when your baby is calm and relaxed or use distraction. It can be difficult to do when they are resisting.

It is extremely important that you do not attempt to perform these exercises until you have been shown by a physiotherapist. They will inform you which specific exercises are appropriate for your baby.

Remember to hold each exercise at the end of range.

These exercises should be done at least 3 times a day.

Shoulder Exercises

1. Shoulder Elevation

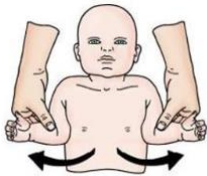


Gently hold your baby's forearm and hold their shoulder blade down firmly with the palm of your other hand.

Raise their arm slowly up over their head as far as you can. Keep the arm close to their ear and hold.

2. Lateral Rotation

***This is probably the most important exercise.**



Bend both your baby's elbows to 90° and keep elbows tucked into the side of your baby's body. Take their hands out to the side towards the mat and hold.

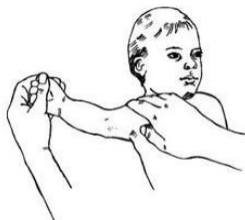
You can do both arms together, so you can compare the affected arm with the unaffected arm and to ensure your baby doesn't roll and limit their movement.

3. Shoulder Lateral Rotation with Shoulder Abducted



This exercise resembles "bicycle signals." Raise your baby's arm out to shoulder level and bend their elbow to 90°. Keep this position, rotate your baby's arm back so that the arm touches the bed. Hold. Rotate the arm down so that the palm touches the bed. Hold.

4. Shoulder Abduction

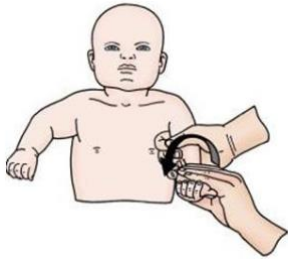


Start with your baby's arm by their side with thumb pointing to the ceiling.

Hold their shoulder blade down firmly with the palm of one hand. Using your other hand move your baby's arm (thumb leading) along the surface away from their body up to their ear. Hold.

Elbow Exercises

1. Pronation and Supination



Bend your baby's elbow to 90°. Hold firmly around your baby's wrist and rotate their forearm so that their palm turns towards their face and then toward their feet. Hold (palm up and palm down).

Note: It is important that you hold onto the forearm and not their wrist.

2. Flexion and Extension



Hold your baby's arm above and below the elbow and gently bend and straighten their elbow fully.

Hold when fully bent and hold when fully straightened for 10 seconds.

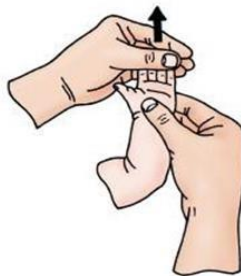
Wrist, Finger and Thumb Exercises

1. Wrist Extension



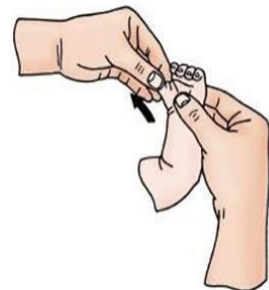
Hold your baby's hand and bend their wrist backwards. Hold.

2. Finger Extension



Hold your baby's finger and straighten all of their finger joints fully. Also do this with their wrist bent backwards.

3. Thumb Extension



Hold your baby's thumb below where it joins the hand, and straighten the thumb fully, making sure that you stretch the space between their thumb and index finger.

Reaching Exercises



Lay your baby on their side with the affected arm uppermost. You may need to support your baby in this position by placing cushions or rolled up towels behind and in front of them. Put toys in front of them to encourage activity of the affected arm.



Place your baby on the floor and suspend or hold a toy above them. Encourage your baby to reach for the toy especially with their affected arm.

Support/Weight Bearing Exercises



Place your baby on the floor on their front with their arms forward. Initially you may need a rolled-up towel under their chest to support them. Encourage them to put weight through their affected arm and then progress this exercise by encouraging them to reach for a toy with each arm.

Two Handed Exercises



Place your hands on your child's arms and encourage them to reach for a toy in front of them with both arms (assist the affected arm as necessary). You can also do clapping to encourage the use of both hands. This can be done with your child on their back, sitting in a baby seat/car seat or sitting alone.

Sensation Exercises



Your baby may have reduced sensation in their arm. To increase your baby's body awareness, you can:

- Rub a variety of textures against your baby's skin, e.g., velvet for soft sensations, a bath towel for rough ones
- Gently stroke and massage
- Rest your baby's hand on your breast/bottle during feeding
- Bring your babies hand to their mouth

Some babies may not tolerate this because of increased sensitivity, but it will increase the awareness of the affected arm.

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