

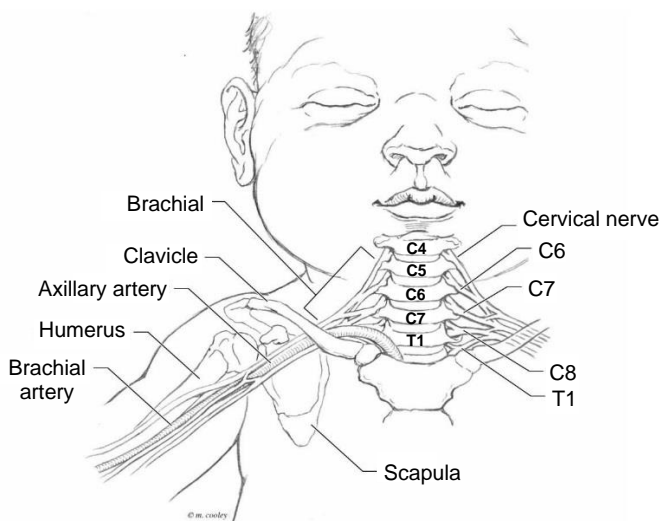
Brachial Plexus Injury

The brachial plexus (**bray-kee-ul plek-sis**) is a group of nerves that start in the spinal cord at the neck (Picture 1). These nerves control the movement and feeling (sensation) of the hands, wrists, elbows, and shoulders. If the brachial plexus is injured, it can damage the nerves. This can lead to movement and sensation changes in the shoulder, arm, or hand on that side of the body.

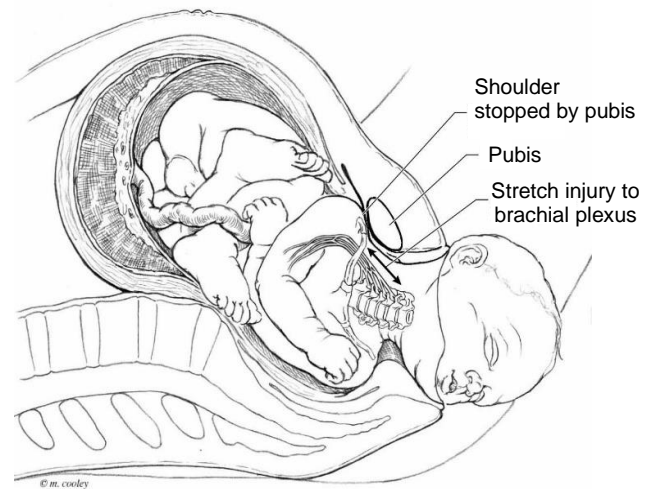
Causes

In many cases, the injury happens at birth. It may have happened for a few reasons.

- The main cause is the birth of a large baby through a small birth passage (Picture 2).
- If the baby has trouble breathing or is in a hard birth position, the doctor may have to use tools to help deliver the baby. A brachial plexus injury may happen if the neck and shoulder of the baby are stretched during delivery.
- Trauma, like car crashes, sports injuries, or falls, can cause brachial plexus injuries in older children.



Picture 1 Brachial plexus



Picture 2 Brachial plexus injury during birth

Symptoms

Symptoms can vary based on which nerves were injured and how bad the injury was. Your child may have all or a few of these symptoms on their injured side:

- Limited or no movement in the shoulder, arm, and hand
- Weak muscles or a limp arm
- Loss of feeling in the shoulder, arm, and hand
- A more specific form of this injury may include:
 - Drooping eyelid
 - Smaller (constricted) pupil in the eye
- Babies born with brachial plexus injuries may also have broken bones (fractures) during the birth process. This is typically a fracture of the clavicle (collarbone) or of the humerus bone in the upper arm.

What to Expect

Your child's treatment depends on their injury.

- In most cases, an occupational therapist will see them first. The therapist may recommend ongoing therapy and/or a visit with our brachial plexus team.
- Your child will learn special exercises at therapy. These will help keep their muscles from getting stiff.
- At each visit, your child's arm movement will be checked to see if it's gotten better.
- If use of the arm doesn't get better with time and exercises, your child may need surgery. Surgery timelines will be based on your child's injury but may be needed as early as 3 months of age.

Positioning Your Baby

If your child had a fracture during delivery, follow recommendations specific to the fracture.

- If your child did **not** have a fracture, you can gently move their arm. Doing this is an important part of recovery.
- Support your child's injured arm when picking up or holding them.
- When dressing your child, it may be easier to dress their injured arm first.
- Hold your baby on both sides at all times, including at feedings. This lets your baby practice turning their head to both sides.
- Put toys and mirrors beside your child on the side of their injury. They should try turning their head to look at them.
- Your baby can do tummy time as long as someone is watching them. It's an important part of their development.