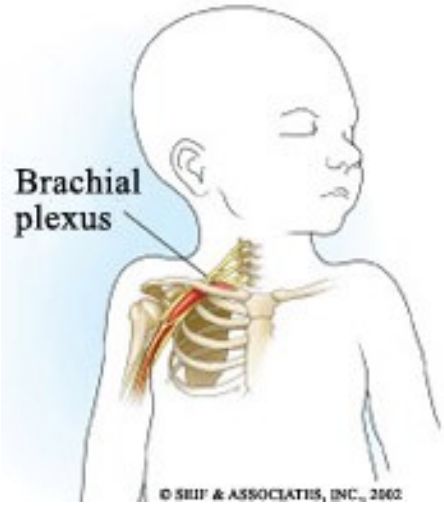
Brachial Plexus Birth Injuries

The brachial plexus are nerves that go from the spine to the shoulder, arm, and hand. These nerves enable your shoulder, arm, hand, and fingers to move. They also carry feeling from these parts of the body to the brain. Brachial plexus injuries (BPI) are caused by damage to those nerves.
Nerves can be stretched or torn. A stretch is less severe than a tear.



CAUSES

This injury can happen when the baby's shoulders get stuck in the mother's pelvis during labor (*shoulder dystocia*). As a result, the brachial plexus is stretched or torn during delivery. Stretching the head away from the shoulders, or other similar injury, causes BPI. In most cases, delivery was difficult. BPI can also happen in what seems to be normal labor, and in a cesarean delivery (*C-section*). The chance of a problem is lower if you have a cesarean delivery.

SYMPTOMS

Symptoms may include a limp or paralyzed arm, lack of muscle control in the arm, hand, or wrist, and lack of feeling or sensation in the arm or hand. Nerves to the eye can be injured, causing the eye to droop. This can also cause smaller pupil size and no sweating on the side of the face. One side of the diaphragm (*muscle below the lungs*) may not work, due to injury to its nerve. Symptoms may be temporary or permanent, depending on the type and severity of injury.

DIAGNOSIS

Diagnosis is usually obvious at birth. The baby's arm and/or hand does not move normally.

TREATMENT

Minor brachial plexus injuries may heal completely. More severe injuries may be permanent. Treatment for brachial plexus injuries includes physical therapy, usually after a period of waiting. Exercise, stretching, and movement of the shoulder, arm, hand, and fingers can:

- Prevent the joints and ligaments from getting stiff and stuck (*contractures*).
- Keep the arm muscles strong.
- Prevent deformity of the arm.

Other treatment may be needed, such as:

- Splints or positioning of the arm or hand.
- Electrical stimulation.
- Massage.
- Surgery. This is usually only done after a period of waiting for the body to heal itself. Nerves can be repaired, muscles repositioned, and bone deformities corrected.

HOME CARE INSTRUCTIONS

- Follow the instructions given by your baby's caregiver about how to keep the arm or hand positioned.
- Do not pull on your baby's arm.
- Do not lift your baby up by the arms or under the arms. Pick your child up by the trunk.
- Do the stretches, range of motion and strengthening exercises only as directed by your baby's caregiver.
- Teach all people who care for your child proper handling and exercising methods.

SEEK MEDICAL CARE IF:

- You notice drooping of an eye.

- You have any questions about treatment or follow up.

SEEK IMMEDIATE MEDICAL CARE IF:

- Your child has an oral temperature above 102° F (38.9° C), not controlled by medicine.
- Your baby is older than 3 months with a rectal temperature of 102º F (38.9º C) or higher.
- **Your baby is 3 months old or younger with a rectal temperature of 100.4º F (38º C) or higher.**
- You child has breathing problems. Look for:
  - Rapid breathing.
  - Grunting sounds when breathing out.
  - Space under or between the ribs sucking in, when breathing in.
  - Wheezing or whistling sound, when breathing out.

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