

Image: Children's Healthcare of Atlanta

Brachial Plexus Birth Palsy

(Erb's Palsy)

What is the brachial plexus?

The brachial plexus is a group of nerves in the neck that branch from the spinal cord to the shoulders, arms and hands.

What are nerves?

Nerves are fibers that send and receive messages from the brain and spinal cord to other parts of the body to control movement and feeling.

The brachial plexus nerves control the movement and feeling in the shoulders, arms and hands.

What nerves make up the brachial plexus?

There are 5 nerves, named for where they exit the spinal cord (C5, C6, C7, C8 and T1)

Children with injuries to the upper nerves of the brachial plexus may be able to move their fingers but not their shoulder.

Children with injuries to both the upper and lower nerves of the brachial plexus may be unable to move the entire arm (paralysis).

What is brachial plexus birth palsy?

Brachial plexus birth palsy (BPBP) is a nerve injury that happens when a baby is being born. The baby's shoulders have trouble passing through the birth canal. During delivery, the nerves in the neck can stretch, rupture or even completely tear off from the spinal cord.

The injured nerves can affect the feeling, movement and growth of the arm and shoulder.

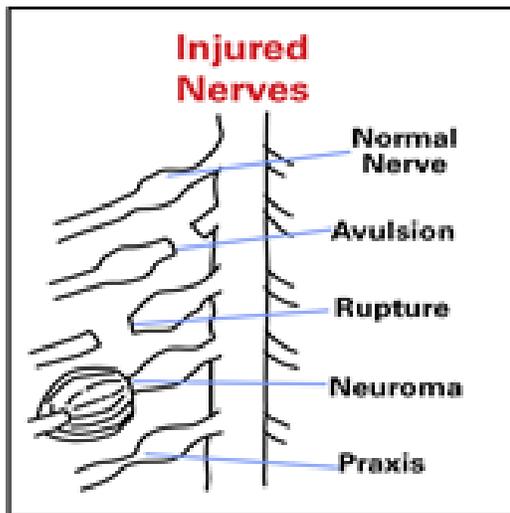


What causes brachial plexus birth palsy?

About 1-4 babies for every 1000 births will have BPBP.

It is commonly related to:

- Maternal diabetes
- A large baby and/or a baby with shoulders that are too large for the birth canal (shoulder dystocia)
- Prolonged labor



What are the types of nerve injuries?

Avulsion – a stretch injury in which the nerve is torn from the spinal cord. These injuries do not heal on their own and cannot be repaired. Some function can be restored with surgery.

Rupture – a stretch injury in which a nerve is torn apart. These injuries do not heal on their own but can be repaired with surgery.

Neuroma – a stretch injury in which damaged nerves form scar tissue that presses on other healthy nerves. These nerves can partially heal on their own, usually in 4 to 6 months.

Praxis – a stretch injury that does not tear the nerve, these injuries heal on their own in 6 to 8 weeks.

Nerve injuries in growing children can cause problems, especially early in life. Your physician and occupational therapists will work together to evaluate the severity of your child’s injury and to develop a treatment plan.

Guidelines	BIRTH TO 1 YEAR	1 TO 3 YEARS	3 TO 8 YEARS	8 to 17 YEARS
Appointments	Every 1 – 2 months	Every 3-6 months	Every 6 months	As needed
Evaluations	Nerve recovery	Muscles	Muscles	Muscles
	Shoulder joint	Shoulder joint	Shoulder joint	X-ray
	Ultrasounds	MRI	CT scan	
Possible Treatments	Therapy	Therapy	Therapy	Therapy
	Splinting	Splinting	Splinting	Splinting
	*Botulinum toxin & casting	*Botulinum toxin & casting	Shoulder arthroscopy	Bone surgery
	Nerve surgery	Shoulder arthroscopy	Muscle surgery	
		Muscle surgery		

*Off label use