Will there be long-term affects to the arm?

The long-term functional ability of an infant’s arm is difficult to predict. If the return of function is rapid, this usually is a good sign. Typically most recovery of muscle strength occurs in the first year of life. Ultimately, most children are able to use their arms and hands to function in daily life; however after full recovery some residual weakness may remain.
Brachial Plexus

What determines the severity and outcome of these injuries?

Brachial plexus injuries vary in the degree of severity depending on:

- the number of nerves affected
- the amount of injury to the nerve

Although there are five nerves, in many instances, the first two nerves are the ones injured. When this occurs, the muscles stimulated by these nerves become weak or paralyzed — resulting in a condition called Erb’s palsy. If all of the nerve roots are affected, then the arm becomes completely paralyzed.

If the nerve has been slightly stretched and the bruise is mild, often it will heal completely and your child will regain the use of the muscle quickly. When multiple nerves are stretched or pulled, they may not regenerate and scar may result. When this occurs, the muscle becomes considerably weakened resulting in ongoing paralysis and a longer recovery.

How is the severity of an injury determined?

Observation is a key factor in determining the extent of an injury. In the brachial plexus clinic, we follow and observe your child and his or her movements to learn if additional tests and observations are needed.

What therapies are available?

Time plays a major role in the recovery from brachial plexus injuries; however, there are three therapeutic options:

- **Time and observation** — The team at the Pediatric Brachial Plexus Clinic will observe your child during his or her visits to the clinic. In infants, the injured nerves often recover completely over the first year of life allowing full use of the shoulder, arm, and hand. Typically, if there is rapid return of function, then the outcome is better. After a year’s time, if there is minimal improvement in function, sometimes there will be lingering losses in movement.

- **Physical and occupational therapy** — During the recovery period, physical therapy can be very helpful in keeping the upper limb flexible. The team at the Pediatric Brachial Plexus Clinic will initiate this therapy through home exercises or outpatient physical therapy. Occupational therapists also help children to become more independent in daily activities. At each visit to the clinic your child will be followed closely for gains in muscle strength.

- **Surgery** — Surgery may be necessary if sufficient muscle function is not restored within a realistic time frame. Sometimes, if improvement occurs but stops, the surgeon may decide to explore the brachial plexus to see if there is something that can be done to improve function. Surgery done directly on the brachial plexus is typically performed during the child’s first year of life. Sometimes older children with brachial plexus lesions may benefit from surgeries such as tendon transfers or bone rotation surgeries.