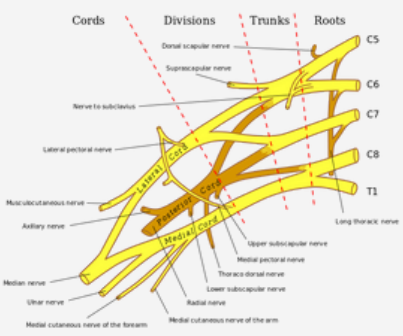
BRACHIAL PLEXUS INJURIES

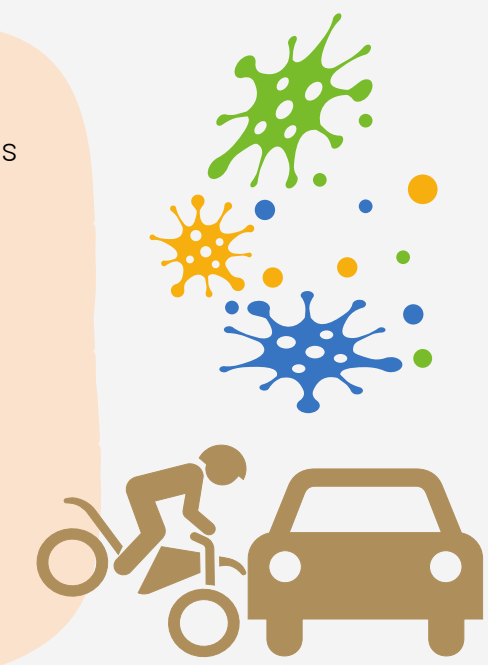


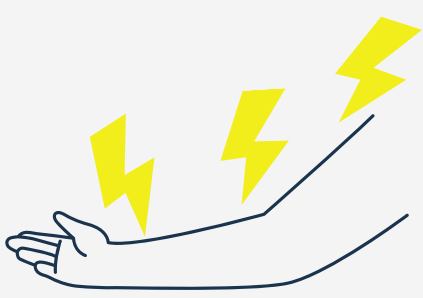
WHAT IS THE BRACHIAL PLEXUS?

The brachial plexus is a nerve network located on the shoulder, responsible for sending movement and sensory signals from the spinal cord to the arm and hand. Injuries to the brachial plexus occur when the nerves are stretched, damaged, or subjected to pressure or stress. Types of brachial plexus injuries include avulsion, stretch (neuropraxia), and ruptures.

CAUSES

- **Birth difficulties**: an increased risk for brachial plexus injuries can happen at childbirth due to newborns having a high birth weight, breech positioning, and prolonged labour. Examples: Erb's palsy, Klumpke's palsy
- **Contact sports**: the nerves in the brachial plexus can overstretch during sport collisions
- **Trauma**: injuries that can result from motorcycle and car collisions, falls, or bullet wounds.
- **Tumours and cancer treatments**: radiation treatment to the chest may cause pressure or damage to the brachial plexus. Tumours can also invade the area.

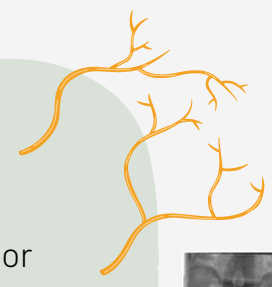




SYMPTOMS

There are various symptoms based on the location and type of injury. Common symptoms include:

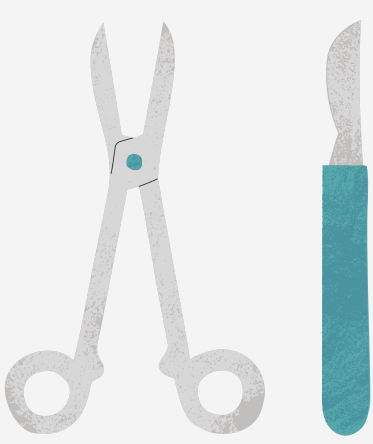
- Numbness and weakness in the arm or hand
- Burning sensation or feeling of electric shock down the arm
- Loss of movement and control
- Loss of sensation



DIAGNOSIS

Diagnosis of brachial plexus injuries may involve an examination of the hand and arm to test for function or sensation abnormalities. Other diagnostic tests used are:

- X-ray of the neck area to identity injuries to the bone and tissues
- MRI or CT scans to indicate nerve damage
- Nerve conduction study or electromyogram to analyze nerve activity.



TREATMENT

Many brachial plexus injuries often heal spontaneously, especially if they are mild. Physical therapy may be recommended if the nerves need a prolonged time to heal. Other nonsurgical treatments include:

- Corticosteroid creams or injections
- Assistive devices
- Medications
- Occupational therapy

Surgical treatments may be required if the injuries are unable to heal on their own. Examples include:

- nerve repair
- nerve graft
- muscle or tendon transfers
- neurolysis

References
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