



Peripheral Nerve Injuries

What is a peripheral nerve injury?

A peripheral nerve is any nerve that carries messages from the brain and spinal cord to the rest of the body. There are 3 main types of peripheral nerves:

- *Sensory nerves*: nerves which carry messages about sensations such as pain and heat from the body to the brain or spinal cord.
- *Motor nerves*: nerves which carry messages about function from the brain and spinal cord to the muscles telling them to contract to move the body.
- *Mixed nerves*: nerves which have both sensory and motor components.

No matter which type of nerve it is, each nerve consists of a grouping of nerve cells known as fascicles surrounded by a protective sheath. Injuries can occur from the nerve being compressed, stretched, cut, or torn.

How are nerve injuries diagnosed?

- History and physical examination can provide strong clues about the cause and severity of the nerve injury by the location of the numbness and the degree of strength loss.
- Electromyography and nerve conduction study is the definitive test for diagnosing nerve injury and severity.
- Ultrasound can be another useful way to evaluate nerve size and injury

How are nerve injuries treated?

- Non-surgical options can alleviate symptoms and improve function as a nerve heals if it is only compressed or if some fascicles are injured but the outer sheath remains intact. If the nerve is cut or torn they will not heal on their own and surgery is recommended.
 - Rest and time as some types of nerve injuries will heal on their own
 - Physical or occupational therapy
 - Anti-inflammatories or other medications may be useful to alleviate symptoms of nerve injury
- Surgical options may be necessary if a nerve is more severely injured as in the case of partial or complete disruption of the nerve. If there is concern that the nerve has been disrupted it is best to be evaluated as soon as possible to discuss treatment options. Surgical treatment may include:
 - Nerve decompression
 - Nerve repair
 - Nerve grafting
 - Nerve transfer