



## Why choose Washington University Orthopedics for brachial plexus injuries?

Brachial plexus injuries require a delicate level of precision and expertise. We are one of the few surgical teams in the region who have the experience and training to treat these types of injuries. The breadth of training and surgical experience of our team allow us to offer all treatment options to patients with brachial plexus injuries, ranging from nerve grafting, nerve transfers, tendon transfers, and free-functioning muscle transfers.

### TEAM APPROACH

We offer a Multidisciplinary Complex Nerve Clinic, with a team of specialists who are dedicated to the evaluation and treatment of patients with complex nerve injuries such as brachial plexus.

### At the Multidisciplinary Complex Nerve Clinic, we offer:

- Comprehensive treatment in one location
- Advanced training and highly-skilled surgical expertise for complex cases
- Collaborative environment, working closely with the disciplines of orthopedics, physical medicine and rehabilitation, electrodiagnostics, neuroradiology, and hand therapy



ORTHOPEDICS

## | Brachial Plexus Injury

### Schedule an appointment:

 (314) 514-3500

 [ortho.wustl.edu/BrachialPlexus](http://ortho.wustl.edu/BrachialPlexus)



## Orthopedics



Physicians

NATIONAL LEADERS IN MEDICINE

BARNES-JEWISH HOSPITAL

WASHINGTON UNIVERSITY PHYSICIANS

**Brachial plexus** is the term for a group of nerves that run from the neck through the shoulder. A brachial plexus injury affects the nerves in the shoulder, elbow, forearm, wrist and fingers.

### CAUSE OF BRACHIAL PLEXUS INJURIES

Brachial plexus injuries can occur from any type of accident or trauma, but most often occur after:

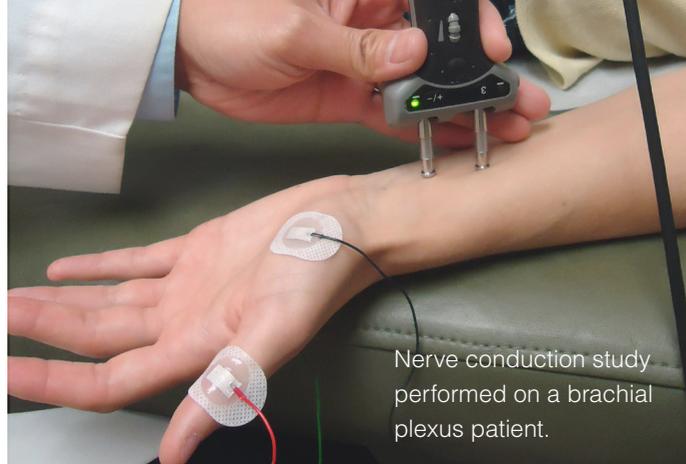
- Car accidents
- Motorcycle accidents
- ATV accidents
- Falls
- Injuries such as stabbing or gunshot wounds

We also treat birth brachial plexus palsy. More information on this can be found at [ortho.wustl.edu/PedsHand](http://ortho.wustl.edu/PedsHand).

### SYMPTOMS

**Brachial plexus injuries may cause symptoms such as:**

- **Inability to feel and touch objects**
- **Inability to move parts of the shoulder, elbow, wrist, hand, and fingers**
- **Burning pain or tingling in the shoulder, elbow, forearm, wrist or finger**



Nerve conduction study performed on a brachial plexus patient.

### DIAGNOSIS

#### When to refer to an orthopedic surgeon?

Ideally, a patient would begin seeing an orthopedic surgeon within a few weeks or months after the injury. It is especially important for a patient to be evaluated if they have not sufficiently recovered from their injury. **Surgical intervention, if needed, must be done in a timely manner. The available treatment options may change depending on whether too much time has passed between the injury and evaluation.**

#### Evaluation

Our evaluation begins with a detailed interview, physical examination and electrical study for nerve assessment. Imaging tests such as an MRI or a CT scan may also be ordered depending on the case. We will then review the information and discuss an overall treatment plan with the patient.

### TREATMENT OPTIONS

A patient's treatment plan will depend on injury severity and time lapsed since injury. Options may include:

- **Observation** to determine if the nerves will recover on their own
- **Physical therapy** to strengthen muscles and keep joints limber
- **Surgery** to repair or reconstruct the nerves and ultimately improve muscle function

### SURGERY

If surgery is determined necessary, a combination of the surgeries listed below are often used to help restore function.

**Direct repair:** in some cases, a direct nerve repair is possible.

**Nerve grafting:** the non-working portion of the nerve is removed and replaced with a segment of nerve from another part of the body.

**Nerve transfer:** part of a working nerve is “borrowed” to serve the function of an injured nerve.

#### Scar tissue removal and nerve decompression:

the scar surrounding from the nerve is removed and the nerve is decompressed from any tight surrounding tissues.

**Muscle transfer:** healthy and working muscle (with its own blood and nerve supply) can be transferred from another part of the body (such as the back or thigh) to the injured arm to help provide motion.

**Tendon transfer:** healthy and working tendons can be transferred within the arm to help with motion of joints that are close by.

### RECOVERY

Brachial plexus injuries are life-altering, traumatic injuries that create a “new normal” for patients. Recovery typically takes several months to several years and depends upon the severity of the injury.

**+** To meet our physicians and learn more about our Multidisciplinary Complex Nerve Clinic, visit: [ortho.wustl.edu/NerveClinic](http://ortho.wustl.edu/NerveClinic).