



## **Brachial Plexus Injuries**

### **What is the brachial plexus?**

The brachial plexus is a network of nerves that exits the spinal cord in the neck and travels across the shoulder and down the arm. This core nerve group supplies all of the sensory and motor nerve function to the arm.

### **What types of injuries can occur to the brachial plexus?**

The brachial plexus can be injured if it is compressed, stretched, or torn. The most common example of this is the “stinger” that some football players experience. This is a stretching injury to the brachial plexus during a tackle when the neck is pushed one way and the shoulder the opposite direction. It results in numbness and weakness of the arm which recovers over time. More severe brachial plexus injuries can occur with motor vehicle and motorcycle accidents which can even result in the nerve roots being torn causing loss of arm function.

### **How are brachial plexus injuries diagnosed?**

History and physical examination will typically include a history of trauma followed by immediate sensory and strength loss to the arm on the affected side. In more minor cases such as a “stinger,” repeat physical examination can show improvement of the arm function which confirms the diagnosis. If there is concern for more significant injury, magnetic resonance imaging (MRI) of the brachial plexus and electromyography with nerve conduction study will confirm the injury and provide information on the severity.

### **How are brachial plexus injuries treated?**

Most minor brachial plexus injuries which result from quick stretching or compression without structural damage to the nerve will improve over time. Physical therapy can be helpful and avoiding repeat exposure to the stretching or compression force during recovery is key. More severe brachial plexus injuries in which there is damage to the nerves may require surgical intervention such as nerve transfer to restore arm function.