

A better understanding of a “burner or stingers”

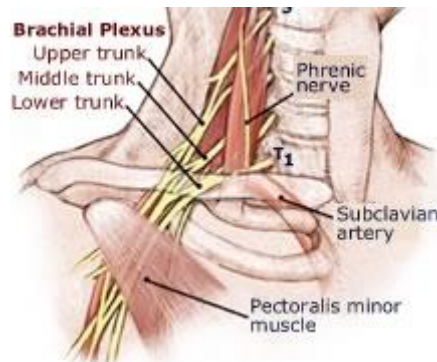
A “burner or stinger” is not really a big deal is it? We used to not know or understand the extent of the severity of such an injury many years ago, however, now with hundreds of studies done we now know the damage is far beyond the extent we once thought. So they must be taken very seriously, especially, in sports where there is a possibly of a repeat “burner or stinger” involvement.

What are Brachial Plexus Injuries?

The brachial plexus AKA “burner or stinger” is a network of nerves that conducts signals from the spine to the shoulder, arm, and hand. Brachial plexus injuries are caused by damage to those nerves. Symptoms may include a limp or paralyzed arm, lack of muscle control in the arm, hand, or wrist, and lack of feeling or sensation in the arm or hand. Although injuries can occur at any time, many brachial plexus injuries happen during birth: the baby's shoulders may become impacted during the birth process causing the brachial plexus nerves to stretch or tear. There are four types of brachial plexus injuries: *avulsion*, the most severe type, in which the nerve is torn from the spine; *rupture*, in which the nerve is torn but not at the spinal attachment; *neuroma*, in which the nerve has tried to heal itself but scar tissue has grown around the injury, putting pressure on the injured nerve and preventing the nerve from conducting signals to the muscles; and *neuropraxia* or *stretch*, in which the nerve has been damaged but not torn. Neuropraxia is the most common type of brachial plexus injury.

Depending on the severity and extent of the injury the first symptoms may vary individually:

- Some patients have good or moderate use of their fingers, but little or no control over the muscles of shoulder and elbow.
- Some patients can use their arm, but have little or no control of the fingers.
- Some patients have a completely flaccid limb with no sensory or motor functions.



Paralysis of muscles in the shoulder, elbow, and/or hand subsequent to a nerve problem can be more dangerous than just lost of arm function for life. The Brachial Plexus is a group of nerves that provide movement and feeling to the arm. This group of nerves connects the spine to the muscles to the arm and hand. When there is a problem with these nerves, the signals going to the appropriate muscles may be blocked or weakened, preventing the muscles from moving normally. In some cases, a problem with the Brachial Plexus also involves partial paralysis of the diaphragm and/or partial paralysis of the eye's pupil on the affected sided. Paralysis of the eye's pupil is referred to as Horner's Syndrome. Partial paralysis of the diaphragm is called hemidiaphragmatic palsy.

How many are affected from this type of injury? There are many thousands of adults worldwide with varying degrees of disability caused by brachial plexus injuries. Some of the se affected were injured at birth and many others have been injured later in life. However, regardless of when such an injury accrued that person must see medical personal as soon as possible that have been medically trained with a background in brachial plexus injuries. The type and extent of injury is ascertained by clinical evaluation utilizing EMG, seeking out sensory and motor changes in the affected limb, MRI scan and possibly CT Myelogram may needed to be done. The types of injury can range from mild lesion or severe where there is a complete lost of all function or feeling to the arm indefinitely.

How long can this type of injury take? Some mild injuries recover quite quickly and spontaneously. Other injuries if they recover is months to possibly years. Paralyzed/paralysed muscle tissue will atrophy and may not be receptive to nerve impulses after a period of time. It should be emphasized that just as the many possible complex variations of the injury occur so does the rate and extent of recovery for each individual patient. As a general rule the smaller the fine control muscles in the hand are in the most danger of being lost as the regeneration of damaged nerves is slow, approximately 1 inch or 3 centimeters a month. Therefore, by the time any nerve recovery reaches the patient's hand, atrophy may have resulted in lost function. Some injuries unfortunately do not respond to treatment and are so severe that they are permanent. The increasing in stretching of the nerve, especially in sports, exceedingly increases the patient's chances of such long term effect.

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