# Patty's PT Tips

**Patty's PT Tips** **August 16th and 23rd, 2023**

## PART ONE

## Neuropathy and Spasticity — Bad Actors in the Same Neighborhood

**Neuropathy** is damage or dysfunction of a nerve. The condition can affect any nerve in the body, and the type of nerves and pattern of involvement depends on the cause.

**Neuropathic Pain** happens from "short circuiting" of the nerves that carry signals from the brain to the body because of the damage from MS. These pains feel like burning, stabbing, sharp and squeezing sensations. In MS you can experience acute and chronic neuropathic pain.

The nervous system comprises two primary areas: your central nervous system (your brain and spinal cord) and your peripheral nervous system (all the remaining nerves throughout your body).

Pain in a person with MS is often from the brain and spinal cord lesions but that does not mean you aren't experiencing peripheral nerve problems. You can develop carpal tunnel symptoms because you do a lot of hammering or use a computer keyboard a lot. Sometimes it is tricky for a clinician to tease out the cause and provide the best treatment intervention. It may require multiple tests such as EMG or nerve conduction studies to determine the root cause.

**Types of acute neuropathic pain:**

- **Trigeminal neuralgia(TN)-**a stabbing pain in the face or jaw area that occur as an initial symptom of MS or as a relapse(exacerbation).
- **Lhermitte's sign**-a brief, stabbing, electric-shock-like sensation that runs from the back of the head down the spine and often into the arms or legs, brought on by bending the neck forward. It typically means there is or has been damage from MS in the cervical spine (neck). When this happens for the first time it could be a relapse or a first sign of MS.

- **MS Hug**-a squeezing sensation around the torso that feels like a blood pressure cuff when it tightens. This too is from damage to the spine from MS and could be the first symptom of MS or a relapse.
- **Paroxysmal spasms-**intermittent painful tightening of muscles, such as in your arm or leg that may occur many times throughout the day or night.

**Chronic Neuropathic Pain:**

This pain can be experienced on a daily or nearly daily basis and can be unpredictable. These pains can be increased by stress, fatigue, illness/infection (UTI or flu) or being overheated.

- **Dysesthesias**-a type of chronic pain that is not typically associated with a relapse. These are painful sensations that can affect the legs, feet, arms and hands and feel like burning, prickling, stabbing, ice cold or electrical sensations. They can interfere with daily activities, sleep and overall quality of life.
- **Pruritis** (itching) is a form of dysesthesias and may occur as a symptom of MS. It is one of the family of abnormal sensations-such as "pins and needles" and burning, stabbing, or tearing pains.

**Musculoskeletal Pain**- what people experience from a sprained ankle or back. People with MS get these aches and pains too! Spasticity and falls can aggravate these pains.

If you have not had these symptoms-**have no fear**-you may never experience them or you may only have them for limited periods with the right treatment interventions. Sometimes treatments may not eliminate the pains entirely but treatment can modify them significantly and reduce their impact on your day-to-day life!

**Spasticity and Muscle Spasms-How they are different from Neuropathy/Neuropathic Pain**

**Spasticity** is a symptom of MS that causes your muscles to feel stiff, heavy and difficult to move. It may make it difficult to move a limb at all. Spasticity can range from mild to severe.

**Muscle Spasm** is a sudden stiffening of a muscle which may cause a limb to kick out or jerk towards the body. They can also vary in intensity, frequency and duration. In a person without a neurological disease, a muscle spasm can occur from torn, inflamed tissue surrounding peripheral nerves as seen in low back strains.

**A flaccid muscle** is one that does not contract at all-these are more frequently seen in a stroke or spinal cord injured patients where there is no neural connection to the muscle at all.

A person with MS will usually show signs of **spasticity and muscle spasms** that can fluctuate with position, speed of movement, external stressors (core temperature changes/infection/level of fatigue/tight clothing/loud noises). The neurologist tests for the degree of spasticity by testing your patellar tendon or biceps tendon reflex. This test does not usually appear brisk with someone who has a muscle/tendon sprain. Spasticity can sometimes be helpful. For instance, if your legs are weak, a degree of stiffness in your legs may help you walk or transfer from a bed to a chair.

On the other hand, spasticity may produce feelings of pain, or tightness in and around joints. It can contribute to joint contractures or difficulties in changing positions that can lead to pressure sores.

Spasticity and muscle spasms don't usually allow for muscles and tendons to return to a normal resting length most of the time. So, you are operating on a "short leash" most of the time. This contributes to muscle weakness, compression on blood vessels and nerves and often pain. It can change your posture and your capacity to weight bear efficiently on your joints.

In our next session together, we will talk about how you can address these problems at home and how to discuss them with your neurology team, your PT's, OT's and Speech Therapists.