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Numb Painful Feet?

By: Katharine Leppard, MD, PT

If you have numb or painful feet, it may be a sign you have a peripheral neuropathy, a condition that affects 20 million Americans. Yet most people have never heard of it.

Peripheral nerves are the nerves outside the brain and spinal cord that travel into the arms and legs. Neuropathy means illness of the nerve.

There are many types and causes of peripheral neuropathies. Symptoms include pain, numbness, burning, stinging, uncomfortable tingling, shooting sensations, weakness, or balance difficulties. Typically symptoms affect the longest nerves first, the nerves in our feet, followed by the nerves in our hands. Nerve pain can be especially severe at night, and often does not respond to standard pain medications.

It is hard to understand how a numb foot can also feel severe pain. One way to look at a peripheral neuropathy is that it is a short circuit of the nerves. The injured nerves cannot feel the normal sensations, yet those same injured nerves may register a normally non-painful stimulus, something as simple as a sheet touching a foot, as painful. Any number of sensations can occur such as stinging pains, burning, or feeling that bugs

are crawling on the skin. Some patients describe it as if they are walking on river rocks, Lincoln logs or sand. Others notice balance problems mentioning that when they close their eyes to wash their hair in the shower they lose their balance.

There are many causes and types of peripheral neuropathies. The most common in the US is diabetes; the most common worldwide is leprosy. Other underlying causes include thyroid disease, vitamin B12 deficiency, heredity, alcohol abuse, renal disease, toxins such as heavy metals, or damage from medications including some forms of chemotherapy.

Over 30% of peripheral neuropathies have no identifiable cause and are called idiopathic neuropathies. Idiopathic neuropathies can be very frustrating and hard to understand when diagnosed in an otherwise healthy person. There are genetic tests for various forms of neuropathy especially those occurring early in life. Most peripheral neuropathies occur later in life, and there are no genetic tests for these types.

Diagnosis is made with physical examination and by an EMG (electromyography) test. An EMG consists of two separate tests. The first part, the

nerve conduction studies, consist of an electrical stimulus applied to the nerve enabling the doctor to measure how well the nerve conducts the signal, the speed of onset of the nerve response, the amplitude, and the conduction velocity along the nerve. Each nerve has a specific pattern that is normal, and different disease states present in different manners. For the second portion of the test a thin wire with an attached microphone is inserted into strategic muscles fed by different nerves. This examines the electrical activity in the muscle and gives information about the health of the muscle, and also the nerve innervating that muscle. It can help differentiate between a peripheral neuropathy and leg symptoms due to spinal nerve compression.

If the EMG study is normal, a person may have a small fiber neuropathy. This is typically a painful neuropathy that affects the very smallest fibers in the skin. The larger nerve fibers are functioning well, thus the EMG which can only test the large fibers is normal. Small fiber neuropathy is confirmed with a skin biopsy.

When peripheral neuropathy is first diagnosed bloodwork to look for underlying treatable conditions such as undiagnosed diabetes, hypothyroidism, and

vitamin deficiencies should be completed. Vitamin B12 deficiencies are commonly found, and easily treated. Other types of peripheral neuropathies have specific treatments options as well.

Once nerve damage has occurred, the medical treatment options are limited. If no treatable underlying condition is found, it is a symptom management situation. There are medications to help with neuropathic pain such as Lyrica, Cymbalta and Neurontin, but these medications do not improve nerve function or reverse nerve damage. Healthy diet, minimizing alcohol, and vitamin B tablets are all good ideas. Six hundred milligrams per day of alpha lipoic acid, an anti-oxidant, has been suggested, however the con-

trolled studies have not shown good results. A study is currently underway testing alpha lipoic acid in peripheral neuropathies caused by chemotherapy. Although treatment options are limited, for most patients with pain, having an explanation for their pain is considered as important as a cure.

Peripheral neuropathies do increase the risk of falls. One study found a fourfold higher incidence of falls in senior citizens with a peripheral neuropathy. People with neuropathies need to be especially cautious; night-lights and removing loose throw rugs is recommended. Exercise classes can improve balance and stamina, while a cane or walker can improve balance and safety. Patients with a peripheral

neuropathy should not trust their feet to test the temperature of bath water as burns can occur. Foot care is important, as a small sore on a numb foot can go unnoticed, and turn into a larger infected wound. This is especially important in diabetes as wound healing can be poor.

It is estimated that 20% of people over the age of 60 have peripheral nerve dysfunction. If you are having these symptoms please seek medical evaluation. Good online resources include www.neuropathy.org and www.diabetes.org where you then search neuropathy.

To schedule an appointment or for more information call Medical Rehabilitation Specialists at 719-575-1800.

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