



FAQs For Patients

What is peripheral neuropathy?

Peripheral neuropathy is a set of symptoms caused by damage to the nerves that are further away from the brain and spinal cord. These distant nerves are called peripheral nerves. They carry sensations (feeling) to the brain and control the movement of our arms and legs. They also control the bladder and bowel.

What is diabetic peripheral neuropathy or DPN?

Peripheral neuropathy, or nerve damage in the extremities, is one of the most common complications of diabetes. It is characterized by pain and numbness in the feet, legs, and sometimes the hands and arms. It is estimated to affect between 10-90% of people with diabetes, depending on the testing method and the population being tested.

The risk of developing diabetic peripheral neuropathy rises the longer a person has diabetes. In addition to causing discomfort, peripheral neuropathy can cause problems with balance and mobility. It is the primary cause of slow-healing foot wounds and amputations, in large part because a person who has lost sensation in his feet cannot feel when he has an injury to his foot.

What is chemotherapy-induced peripheral neuropathy or CIPN?

Some of the chemotherapy drugs used to treat cancer damage peripheral nerves. When this happens, it is called chemotherapy-induced peripheral neuropathy. Chemotherapy-induced peripheral neuropathy (CIPN) can be a disabling side effect of cancer treatment.

What are other causes of peripheral neuropathy?

Peripheral neuropathy can also be caused by:

- Cancer treatments, like surgery or radiation
- Tumors pressing on nerves
- Infections that affect the nerves
- Spinal cord injuries
- Diabetes
- Alcohol abuse
- Certain antibiotics
- Some medications which are used to treat the symptoms of peripheral neuropathy
- Cholesterol-lowering 'statin' medications
- Shingles
- Low vitamin B levels
- Some autoimmune disorders
- HIV (human immunodeficiency virus) infection
- Poor circulation (peripheral vascular disease)
- Cancer itself (for instance, multiple myeloma can cause PN)

It's very important to know what's causing your peripheral neuropathy so that the right treatment can be given.

What are the symptoms of peripheral neuropathy?

The symptoms or signs of peripheral neuropathy depend mostly on which nerves are involved. PN typically affects the feet and hands bilaterally (meaning both hands or both feet). Some patients have symptoms only in their feet OR hands.



The most common symptoms are:

- Patients often describe the pain (which may be constant or come and go) as shooting, stabbing, or prickly pain. It can be sharp or dull and achy as well
- Burning Pain (can be intense or background burning pain)
- Tingling (“pins and needles” feeling) or electric/shock-like pain
- Numbness Loss of feeling (can be numbness or just less ability to sense pressure, touch, heat, or cold)
- Trouble using your fingers to pick up or hold things; dropping things
- Balance problems
- Trouble with tripping or stumbling while walking
- Touching or squeezing or any Pressure may hurt more than usual
- Temperature may hurt more than usual (mostly cold; this is called cold sensitivity)
- Muscle weakness
- Decreased or no reflexes

Peripheral Neuropathy can cause severe pain and affect your ability to walk, drive a car, write, button your shirt, maintain your balance, or pick up coins. You may have trouble sleeping, experience falls or have a real fear of falling.

What are the current treatments for peripheral neuropathy?

Current treatments for reducing neuropathy pain include tricyclic antidepressants, certain anti-seizure drugs, opiates, capsaicin ointment, and transcutaneous electrical nerve stimulation (TENS). Some of these treatments help some of the people some of the time. These treatments may help with the pain, but they mask the symptoms; they don't address the cause. In addition, little can be done to help with numbness or loss of sensation. Neuropathy will never go away on its own and is progressive.

What other treatments exist?

One treatment that is receiving increasing attention in the medical community uses red & infrared energy to increase blood circulation to the affected nerves and surrounding tissues.



How does it work?

Infrared energy is invisible to the human eye, but people experience its effects every day. So-called far-infrared energy is felt as heat—from the sun, fires, space heaters, and heat lamps, for example. Near-infrared energy, which does not normally feel hot, is what television remote controls use to communicate with the TV.

The energy is produced by light-emitting diodes (LEDs) embedded in a hard case enclosure. The device is placed in contact with the skin in areas of numbness or pain. The infrared energy is believed to relieve the pain of neuropathy and possibly improve nerve function by increasing blood flow to the affected area and, over time, spurring the growth of new capillaries in the area. It does this by causing red blood cells and the cells lining the blood vessels to release nitric oxide.

What is nitric oxide?

Nitric oxide is a chemical produced by cells in the body and used for a number of important functions. One of those functions is to cause blood vessels to dilate or widen, allowing blood to flow easily and ensuring adequate oxygen and nutrient delivery to cells.

For most people, one way to safely increase the amount of nitric oxide released by cells and to improve blood vessel health throughout the body is to perform regular aerobic exercise. Aerobic exercise can sometimes help with neuropathy symptoms, but it isn't enough. The use of light therapy is a safe way to increase nitric oxide availability.

If the cause of neuropathy is diabetes, improving and maintaining good blood glucose control is the first line of therapy. Ensuring good blood circulation to the extremities is important too, since blood carries needed oxygen and nutrients to the nerves and skin. Poor blood circulation to the extremities contributes to the slow healing of wounds.



What can I expect at my first appointment?

All patients start with a 20-40 minute examination and assessment:

The examination and assessment may include the following testing: neurological, orthopedic, muscle strength, range of motion, gait and balance, blood pressure, blood O2 levels, and more. We then complete the Toronto Neuropathy Screening along with (SWM) monofilament test and (VPT) vibration perception threshold test. By performing this combination of tests we now have an objective baseline to compare future results against.

The ROF - Report of Findings:

You will meet with our nurses to review the findings from all of our exams and testing, and have your questions and concerns answered. We then make recommendations for treatment of your peripheral neuropathy symptoms, which include a combination of therapies. During the exams, we typically find about 20% of patients have permanent nerve damage or untreatable conditions, and are not candidates for our treatments. To them we say we are very sorry, we can't help you. Your nerves are just too far-gone to try to bring back. For the rest we recommend that care start immediately as time is critical. The longer you wait the worse your neuropathy can get. Remember, neuropathy will not go away on it's own.

We then go over the financial matters as light therapy is relatively new, and, even though it has been proven to work, at this time Blue Cross & Blue Shield, Medicare, Medicaid, Tricare, or any other state or federal major medical health insurance does not cover it.