



PATIENT & CAREGIVER EDUCATION

About Peripheral Neuropathy

This information describes peripheral neuropathy, including its causes and symptoms.

Peripheral neuropathy (peh-RIH-feh-rul noor-AH-puh-thee) is the general term used to describe changes that happen when peripheral nerves are damaged. Peripheral nerves are all of the nerves outside of your brain and spinal cord. There are 3 types of peripheral nerves:

- **Sensory nerves** that help you feel pain, touch, temperature, position, and vibration.
- **Motor nerves** that help you move and maintain muscle tone.
- **Autonomic nerves** that control things that happen automatically, such as how fast your heart beats and how much you sweat.

Symptoms of Peripheral Neuropathy

Many people with peripheral neuropathy have changes in feeling in their toes, feet, fingers, hands, or face. These feelings may not go beyond your wrist or ankle.

The symptoms of peripheral neuropathy are different depending on which peripheral nerves are damaged. Sometimes, just 1 type of nerve is damaged. More often, several types are damaged, and you may have several symptoms.

- If your sensory nerves are damaged, you may have a feeling of “pins and needles” or “electric shocks.” You may also feel cold, prickling, pinching, or burning in your hands and feet. Some people become very sensitive to touch, while other people feel numbness.
- If your motor nerves are damaged, you may have muscle weakness, cramping,

and twitching. You may also have loss of balance and coordination. This may make it difficult to walk, drive, or handle small objects (such as holding a pen or buttoning a shirt).

- If your autonomic nerves are damaged, your heart may beat faster or slower than normal. You may also sweat more or less than you normally do and notice differences in your bowel and bladder function.

Be sure to discuss your symptoms with your doctor or nurse. They can suggest ways to manage them.

Symptoms of peripheral neuropathy can happen suddenly or develop slowly. They might come and go or get better or worse at certain times. Depending on what caused your peripheral neuropathy, your symptoms may get better over time, or they may be lifelong.

Causes of Peripheral Neuropathy

The most common cause of peripheral neuropathy is diabetes. Other causes of peripheral neuropathy include:

- Some medications, including certain types of chemotherapy. For more information, read the “Chemotherapy” section below.
- Lung cancer
- Multiple myeloma
- Alcohol abuse
- Some other forms of cancer (for example, leukemia-induced neuroleukemiosis)

If you have any of these possible causes of peripheral neuropathy, talk with your doctor or nurse. Tell them what medications you’re currently taking, including over-the-counter medications and supplements, and what medications you have taken regularly in the past.

Sometimes, there’s no known cause of peripheral neuropathy.

Chemotherapy

Some common types of chemotherapy drugs can also cause peripheral neuropathy. We have listed some of them below along with the kind of symptoms they cause.

- Bortezomib, carfilzomib
 - You may have numbness, pain, or burning feelings in your feet or hands.
- Cisplatin, carboplatin, oxaliplatin, and thalidomide
 - You may have trouble knowing where your hands and feet are in space. This is called position sense. If this happens, you could slip out of shoes or slippers if they aren't tied or if they don't come up past the middle of the top of your foot (your instep).
 - When you walk, you may not be able to feel the floor under your feet. You may feel like your bare feet have socks on them or like you're walking on broken glass.
- Paclitaxel, docetaxel, and nab-paclitaxel
 - You may have trouble feeling the shape of an object in your hand or picking up small objects.
- Vincristine, vinblastine, and paclitaxel
 - You may have trouble telling the difference between hot and cold temperatures.

With all of these medications, you may also have problems doing things that need muscle strength and coordination. For example, you may have trouble lifting your foot from the gas pedal to the brake while driving. Some people also describe a feeling of muscle cramps, heaviness, swelling that isn't there, or weakness in their arms or legs.

Some of these symptoms may get better over the first 6 to 18 months following treatment.

Managing Peripheral Neuropathy

Read the resource *Managing Peripheral Neuropathy* (www.mskcc.org/pe/managing_peripheral_neuropathy) for information about ways to manage symptoms of peripheral neuropathy and tips for staying safe while you have peripheral neuropathy.

If you have any questions, contact a member of your healthcare team directly. If you're a patient at MSK and you need to reach a provider after 5:00 PM, during the weekend, or on a holiday, call 212-639-2000.

For more resources, visit www.mskcc.org/pe to search our virtual library.

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