Peripheral neuropathy (also called PN, neuropathy, chemo-induced peripheral neuropathy, or CIPN) is damage to nerves that control sensations and movements of our arms, legs, hands, and feet. Some chemotherapy drugs can cause peripheral neuropathy.

What causes neuropathy in people with cancer?

Certain types of chemotherapy drugs can cause CIPN. When symptoms of CIPN happen and how severe they get depends on the dose of chemo and how often chemo is given. It often gets worse as treatments go on or if doses are increased.

- It can also be caused by:
  - Other cancer treatments, like surgery or radiation
  - Tumors pressing on nerves
  - Infections that affect the nerves
  - Spinal cord injuries
  - Diabetes
  - Alcohol abuse
  - Shingles
  - Low vitamin B levels
  - Some autoimmune disorders
  - HIV (human immunodeficiency virus) infection
  - Poor circulation (peripheral vascular disease)

It may not be possible to prevent CIPN, but it’s important to talk to your health care team as soon as you notice any of these sensations in your hands or feet:

- Tingling (or a “pins and needles” feeling)
- Burning or warm feeling
- Numbness
- Weakness
- Discomfort or pain
- Decrease in ability to feel hot and cold
- Cramps (in your feet)
Tips to manage CIPN
So far, there's no sure way to prevent CIPN. It is a common problem for some people that may last for weeks, months, or even years after treatment is done. There are things you can do to manage your symptoms. These actions must be started right away to prevent long-term damage that won’t get better.

- Take pain medicines for CIPN as your doctor prescribed them. Most pain medicines work best if they are taken before the pain gets bad.
- Prevent injuries and avoid things that seem to make your symptoms worse, such as touching hot or cold items with your bare hands and feet, or wearing clothes or shoes that are too snug.
- Don’t drink alcohol. It can make CIPN worse.
- If you have diabetes, control your blood sugar to help prevent more damage to nerves.
- If you have CIPN in your hands, be very careful when using knives, scissors, box cutters, and other sharp objects. Use them only when you can give your full attention to your task.
- Protect your hands by wearing gloves when you clean, work outdoors, or do repairs.
- Take care of your feet. Look at them once a day to see if you have any injuries or open sores.
- Always wear shoes that cover your whole foot when walking, even at home. Talk to your doctor about shoes or special inserts that can help protect your feet.
- Be sure that you have ways to support yourself if you have problems with stumbling while walking. Hand rails in hallways and bathrooms may help you keep your balance. A walker or cane can give you extra support.
- Use night lights or flashlights when getting up in the dark.
- Protect yourself from heat injuries. Set hot water heaters between 105° to 120°F to reduce scalding risk while washing your hands.
- Use oven gloves and hot pads when handling hot dishes, racks, or pans.
- If you take baths, check the water temperature with a thermometer.

Treatment
Treatment is mostly given to relieve the pain that can come with CIPN. Researchers are looking at which drugs work best to relieve this kind of pain. It may take more than one try or one type of treatment to find out what works best for you.

Some of the drugs and other treatments that may be ordered include:

- Your doctor may temporarily stop chemotherapy or adjust your chemotherapy dose if CIPN becomes too bothersome or serious.
- Steroids, but only for a short time until a long-term treatment plan is in place
- Patches or creams of numbing medicine that can be put directly on the painful area (for example, lidocaine patches or capsaicin cream)
- Anti-depressant medicines, often in smaller doses than are used to treat depression
- Anti-seizure medicines, which are used to help other types of nerve pain
- Opioids or narcotics, for when pain is severe
- Clinical trials can help researchers find out more about what helps. Talk with your cancer care team if you are interested in finding a clinical trial.
- Other treatments such as electrical nerve stimulation, physical or occupational therapy, relaxation therapy, or acupuncture are some ways to ease nerve pain.
- It’s important to work closely with your doctor or nurse to manage peripheral neuropathy caused by chemotherapy.

Talk to your health care team.
Tell your health care team about neuropathy changes you are feeling. Let them know when you notice the changes, what you have trouble with, or things that make the changes worse or better.

For cancer information, day-to-day help, and emotional support, call the American Cancer Society at 1-800-227-2345 or visit us online at www.cancer.org. We’re here when you need us.

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