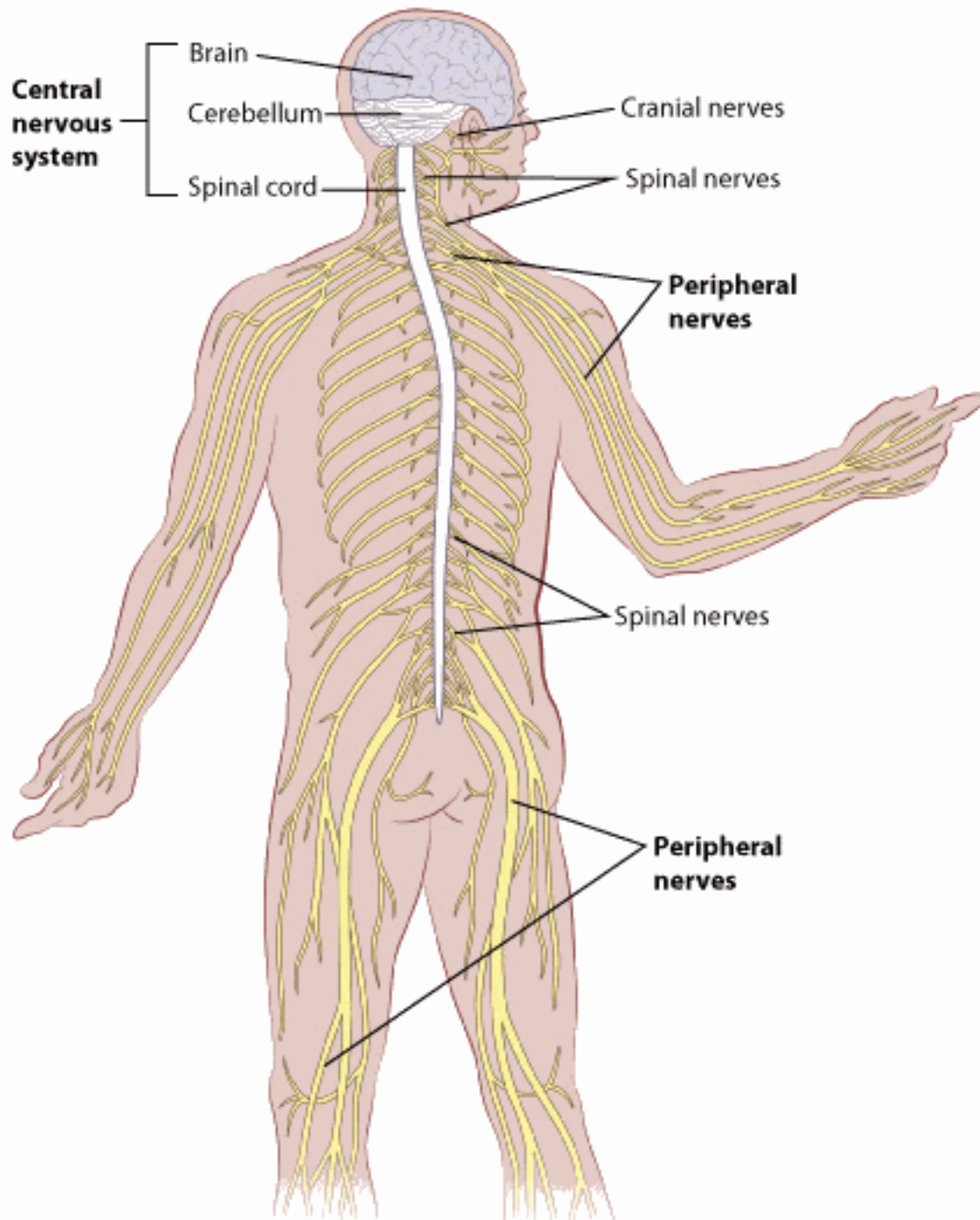


Peripheral Neuropathy

Peripheral neuropathy is the name for damage to the peripheral nervous system that sends signals between the central nervous system (the brain and spinal cord) and all other parts of the body.

- [What are the symptoms of peripheral neuropathy \(PN\)?](#)
- [What causes peripheral neuropathy \(PN\)?](#)
- [What medicines are most likely to cause chemotherapy-induced peripheral neuropathy \(CIPN\)?](#)
- [Managing peripheral neuropathy \(PN\)](#)
- [What questions should I ask about peripheral neuropathy \(PN\)?](#)
- [Talk to your cancer care team](#)



There are three main types of peripheral nerves:

- **Motor** nerves help us move
- **Sensory** nerves help us use our senses (for instance, hearing, smell, taste, and

touch).

- **Autonomic** nerves help control our automatic body functions such as breathing and digestion

What are the symptoms of peripheral neuropathy (PN)?

Peripheral neuropathy can feel like:

- Tingling (or a “pins and needles” feeling)
- Burning or warm feeling
- Numbness
- Weakness
- Discomfort or pain
- Less ability to feel hot and cold
- Cramps (in your feet)

What causes peripheral neuropathy (PN)?

Some of the most common causes of peripheral neuropathy are medicines used to treat cancer. When this happens, it is called **chemotherapy-induced peripheral neuropathy (CIPN)**. The risk of CIPN depends on the type of chemotherapy and dose given, and increases with each cycle of chemotherapy. CIPN can make it hard to get around and do things you used to do.

Peripheral neuropathy can cause severe pain and can affect things like the way you walk, write, button your shirt, or pick up coins. Peripheral neuropathy can last for weeks, months, or even years after treatment is done. If it gets worse, it can also cause changes in your heart rate and blood pressure, falls, trouble breathing, and not being able to move on your own. It’s important to let your cancer care team know if your symptoms get worse.

Peripheral neuropathy also can be caused by things other than chemotherapy, such as:

- Other cancer treatments, like surgery or radiation
- Tumors pressing on nerves
- Infections that affect the nerves
- Spinal cord injuries

- Diabetes
- Drinking too much alcohol
- Shingles infection
- Low vitamin B levels
- Some autoimmune disorders
- HIV (human immunodeficiency virus) infection
- Poor circulation (peripheral vascular disease)

It's important to know what's causing peripheral neuropathy so that the right treatment can be given. The information on this page is about peripheral neuropathy (PN) as a side effect of chemotherapy.

What medicines are most likely to cause chemotherapy-induced peripheral neuropathy (CIPN)?

Certain cancer medicines are more likely to cause CIPN. Some of the more common ones include:

Chemotherapy

- Platinum drugs like cisplatin, carboplatin, and oxaliplatin
- Taxanes, including paclitaxel (Taxol), docetaxel (Taxotere), and cabazitaxel (Jevtana)
- Plant alkaloids, such as vinblastine (Velban), vincristine (Oncovin), vinorelbine (Navelbine), and etoposide (VP-16)

Non-chemotherapy drugs

- Immunomodulating drugs like thalidomide (Thalomid), lenalidomide (Revlimid), and pomalidomide (Pomalyst)
- Proteasome inhibitors, such as bortezomib (Velcade), carfilzomib (Kyprolis), and ixazomib (Ninlaro)

If you're not sure if a cancer treatment you're getting might cause CIPN, ask your cancer care team.

Managing peripheral neuropathy (PN)

During treatment, your cancer care team will ask you about your symptoms and watch you to see if the PN is getting worse. Your team may need to delay your treatment, use smaller doses of the chemo drugs, or stop treatment with the drug that is causing the PN until your symptoms get better. These actions must be started right away to prevent long-term damage that might get worse over time.

Can peripheral neuropathy be treated?

There is no sure way to prevent peripheral neuropathy but things can be done to manage your symptoms. Treatment can often help ease symptoms of PN. Sometimes these symptoms go away shortly after treatment is done, but sometimes they last much longer. Severe PN may lessen over time but may not go away completely.

Treatment focuses on relieving the discomfort that can come with PN. Some of the medicines used include:

- **Patches or creams with numbing medicine** that can be put right on the painful area (for example, lidocaine patches or capsaicin cream)
- **Opioids or narcotics**, when pain is severe
- **Antidepressants (duloxetine)**, to decrease pain

Sometimes more than one type of treatment is needed. Tell your cancer care team if medicine used to treat PN is not working so that something else can be tried. Other [non-medical treatments](#)¹ can be tried to ease nerve pain and its effect on you.

What can I do to cope with peripheral neuropathy ?

There are some things you can do to better manage the symptoms of PN, such as:

- Drink at least 8 cups of water a day and eat fruits, vegetables, and whole grains to get enough fiber.
- Take pain medicines as instructed by your cancer care team. See [Cancer Pain](#)² to learn more about pain, how to talk about it, and how to manage it.
- If you have diabetes, control your blood sugar. High blood sugar levels can damage nerves.
- If you have [constipation](#)³, talk to your cancer care team about medicines that might help you.

- Avoid or limit alcohol.

What should I do to avoid injury?

If you have peripheral neuropathy, the loss of sensation or balance might put you at a higher risk of injury. Here are some things you can do to stay safe:

- If you have neuropathy in your hands, be careful when using knives, scissors, box cutters, and other sharp objects.
- 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. Be sure that shoes aren't too tight. Talk to your cancer care team about shoes or special inserts that can help protect your feet.
- Use handrails, a cane, or a walker (assistive devices) to support yourself and keep your balance. .
- 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.
- Keep your hands and feet warm and well covered in cold weather. For example, consider keeping a pair of gloves in your car. Avoid extreme temperatures, hot and cold, that can make PN worse.

What questions should I ask about peripheral neuropathy (PN)?

Here are some questions you might want to ask your cancer care team:

- Is the treatment I'm getting likely to cause peripheral neuropathy?
- Am I at risk for peripheral neuropathy?
- What symptoms do I need to watch for and report to you?
- Have you treated peripheral neuropathy in other people? How? Did it work?
- What can I do to manage my peripheral neuropathy?
- If my peripheral neuropathy gets bad and is very painful, will it change my treatment

plan?

- Is it likely that my peripheral neuropathy will get better or go away after treatment is over?

Talk to your cancer care team

It's important to work closely with your cancer care team to manage peripheral neuropathy.

Talk to your cancer care team:

- About any changes in how you feel, and any trouble you have walking or holding things.
- About how your symptoms affect the things you do every day.
- If the medicines for CIPN are or aren't helping or if new problems start up.
- About whether you can get into a clinical trial to help deal with your peripheral neuropathy.
- If you are concerned about how future treatments might affect your quality of life.
- About what's most important to you.

Remember that only you decide if you want to get, or keep getting, a certain treatment.

Hyperlinks

1. www.cancer.org/cancer/managing-cancer/side-effects/pain/cancer-pain/non-medical-treatments-for-cancer-pain.html
2. www.cancer.org/cancer/managing-cancer/side-effects/pain.html
3. www.cancer.org/cancer/managing-cancer/side-effects/stool-or-urine-changes/constipation.html

References

ACSO. Nerve problems or peripheral neuropathy. *Cancer.net*. Updated June 2023. Accessed November 17, 2023 at <https://www.cancer.net/coping-with-cancer/physical-emotional-and-social-effects-cancer/managing-physical-side-effects/nerve-problems-or-peripheral-neuropathy>.

Desforges AD, Hebert CM, Spence AL, Reid B, Dhaibar HA, Cruz-Topete D, Cornett EM, Kaye AD, Urits I, Viswanath O. Treatment and diagnosis of chemotherapy-induced peripheral neuropathy: an update. *Biomed & Pharmacother.* 2022;147:112671. Accessed November 17, 2023 at <https://doi.org/10.1016/j.biopha.2022.112671>

Kanda K, Ishida K, Kyota A, Ishihara C, Fujimoto K, Hosokawa M, Mochizuki R. Randomized clinical trial quantifying the effectiveness of a self-monitoring intervention in cancer patients with peripheral neuropathy: A quantitative study. *Asia Pac J Oncol Nurs.* 2023;10(4):100198. Accessed November 17, 2023 at <https://doi.org/10.1016/j.apjon.2023.100198>

Li T, Park SB, Battaglini E, King MT, Kiernan MC, Goldstein D, Rutherford C. Assessing chemotherapy-induced peripheral neuropathy with patient reported outcome measures: a systematic review of measurement properties and considerations for future use. *Qual Life Res.* 2022;31(11):3091-107. Accessed November 17, 2023 at <https://doi.org/10.1007/s11136-022-03154-7>

National Cancer Care Center Network (NCCN). Adult Cancer Pain. Version 2.2023. Accessed November 16, 2023 at https://www.nccn.org/professionals/physician_gls/pdf/pain.pdf.

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