What Is Peripheral Neuropathy?

Peripheral neuropathy is a set of symptoms caused by damage to the nerves that are outside the brain and spinal cord. These distant nerves are called *peripheral nerves*. They carry sensations (a feeling in different parts of your body) to the brain and control the movement of our arms and legs. They also control the bladder and bowel.

If you have peripheral neuropathy, you may notice some of these sensations in your hands or feet:

- 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?

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

CIPN can cause severe pain and can affect your ability to do things like walk, write, button your shirt, or pick up coins. CIPN can last for weeks, months, or even years after treatment is done. If it gets very bad, it can cause more serious problems like changes in your heart rate and blood pressure, dangerous falls, trouble breathing, paralysis, or organ failure.

Peripheral neuropathy can be caused by other things besides chemotherapy; such as:

- 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’s very important to know what’s causing peripheral neuropathy so that the right treatment can be given. The focus here will be on peripheral neuropathy that’s a side effect of chemo – CIPN.

**What drugs are most likely to cause CIPN?**

Certain chemo drugs are more likely to cause CIPN. Some of the more common ones include:

- Platinum drugs like cisplatin, carboplatin, and oxaliplatin
- Taxanes, including paclitaxel (Taxol®), docetaxel (Taxotere®), and cabazitaxel (Jevtana®)
- Plant alkaloids, such as vinblastine, vincristine, vinorelbine, and etoposide (VP-16)
- Immunomodulating drugs (IMiDs), 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 chemo drug you’re getting might cause CIPN, ask your cancer care team.

References


