

Peripheral Neuropathy & Vitamin B6

What is peripheral neuropathy?

Peripheral neuropathy (PN) is numbness or tingling in the hands and feet, and is caused by damage to nerve endings. Other symptoms may include weakness or feelings of burning, tickling, or pricking in the arms, hands, legs and feet.

Chemotherapy and PN

Some chemotherapy drugs can cause PN. If you notice any feelings of numbness, tingling, prickling, or pain in your limbs, tell your doctor immediately. Below are the chemotherapy drugs that are the most commonly noted to cause PN:

- Velcade[®] (bortezomib)
- Taxol[®] (paclitaxel)
- Taxotere[®] (docetaxel)
- Thalidomid[®] (thalidomide)
- Eloxatin[®] (oxaliplatin)

What is vitamin B6 and how is it related to PN?

Vitamin B6, or pyridoxine, is a vitamin that has many important functions in the body. One of its roles is to help the nervous system work well. The nervous system is what is affected by peripheral neuropathy(PN).

Some cases of PN have been linked to vitamin B6 deficiency. However, due to the fact that B6 is supplemented or occurs naturally in so many foods, a lack of this vitamin is very rare.

Use of vitamin B6 to prevent or alleviate PN

Vitamin B6 is often prescribed for PN in the amount of 50-300 milligrams (mg) per day. Research done on animals has shown that vitamin B6 may help to prevent or treat PN. However, research showing the same effect in people is scarce. The benefit of taking extra vitamin B6 to treat PN seems to be useful only in people who are deficient in B6. More studies have shown the potential for vitamin B6 supplementation to actually *cause* PN than to treat it.

Vitamin B6 toxicity and its link to PN

Studies have shown that long-term supplementation of large doses of vitamin B6 may actually *cause* PN. Doses of greater than 200 mg may cause peripheral neuropathy, uncoordinated movement, breathing difficulties, fatigue, and vomiting. These appear reversible after stopping use.

The safe upper level (UL) for vitamin B₆ is 100 mg per day for all adults. As intake increases above the UL, the risk of side effects increases. It is important to remember that vitamin B6 is widely present in the food supply as well as in standard multivitamins. Taking extra vitamin B6 should be carefully considered. If you have questions about using vitamin B6, talk to your pharmacist, doctor and dietitian.