

# Neuropathy

## Answers to Commonly Asked Questions

### 1. What is Neuropathy?

This is a disease of the foot that affects the nerves and causes burning, tingling, numbness and sometimes cramps. It often starts out as a burning, tingling, stabbing sensation and the end result is the numbness. It may sometimes feel like a “pins and needles” sensation and is sometimes very painful and debilitating. It may affect ones sleep and is often worse in the evenings.

It usually begins in the toes and progresses slowly toward the ankle and sometimes below the knee.

### 2. What causes Neuropathy?

The most common causes are diabetes and drinking alcohol heavily for several years. Other causes may include medications, vitamin B-12 deficiency, thyroid dysfunction, vascular disease, exposure to heavy metals (ie. Mercury, lead or others), and a pinched nerve in the back or hip which may cause radiating pain down the leg to the toes.

### 3. How common is it in diabetes and can it be reversed?

Of the 18.2 million people who have been diagnosed with diabetes, roughly 60-70% will develop some form of neuropathy in their lifetime. It is often one of the first signs of diabetes and if one is able to control their blood sugar tightly it will sometimes reverse itself. Currently there is no available pharmaceutical agent in the United States that repairs the underlying nerve damage related to the neuropathy.

### 4. Why is Neuropathy and Numbness dangerous?

When one does not feel the bottom of their toes or feet they may step on something and not realize it. The skin may open and in a diabetic an infection may develop and become deep quickly. This may result in a loss of part of the foot or leg. This is equally true in a person with poor circulation because the opening in the skin (aka an ulcer) may heal very slowly or not at all. When the bottom of the foot is numb some patients have difficulty walking or driving a car and may lose their balance. This may result in the need for a cane or walker.

### 5. What are my Treatment Options?

#### Topical Creams:

- a. **Capsaicin (Zostrix or Capsin):** It is an extract of the hot capsicum pepper. It blocks pain signals by the depletion of substance P which is a key component to pain sensation. It is available over the counter and comes in two strengths (.025% and .075%). It is usually used for nerve pain but may be used for arthritis as well.

It should be applied 2-4 times a day and may cause a painful burning sensation during the first few weeks of use. This is usually only a temporary side effect. It does not have any systemic side effects.

When using this cream one should wash their hands immediately or wear a pair of latex gloves to avoid discomfort in the hands.

- b. **Cryoderm:** It is a topical pain relieving agent which contains essential oil and natural plant extracts (including MSM, arnica, boswellia, and ILEX). These ingredients are also anti-inflammatory and can be used with physical therapy. We often use this agent to alleviate painful neuropathy. This topical agent may be applied 2-4 times per day.

**Topical Patches:**

- a. **5% Lidoderm Patches:** These are topical pain patches which are applied over the ankle to help alleviate the discomfort. When applied to the ankle it helps all of the nerve branches in front of the ankle down to the toes. The patches are large and need to be cut in half for each foot. They are effective for a total of 12-18 hours and should be changed daily. We usually recommend applying them after a shower or bath. Using paper tape or coban will help them stay in place even though they have their own gentle adhesive. The patches may work immediately but we find they achieve their ultimate result after one month of use. They may be used alone or in conjunction with other oral medications.

**Oral Medications:**

- a. **Imipramine, Elavil, Desipramine, and Doxepin:** These are all anti-depressant medications which have been utilized for painful neuropathy as well. These medications in low doses have been studied in the medical literature to be very effective but have become less popular in recent years due to newer medications which have fewer side effects. The most common side effects from these medications are dry mouth, sedation, blurred vision and heart palpitations. These side effects occur less than 10% of the time.
- b. **Tegretol (Carbamazepine)**  
This is an anti-convulsant medication which has been used for many years for nerve pain. It has been proven to prevent overexcitation of nerve tissue by blocking nerve pathways. It is important to check the liver before and during the use of this medication as it may affect the liver enzymes (proteins) with long term use.
- c. **Neurontin (Gabapentin)**  
This oral medication is an anticonvulsant which binds to subunits of calcium helping alleviate the pain associated with diabetic neuropathy. It is important to check the kidney before starting this medication. The dosing of this medication should only be changed by your physician. The most common adverse effects include dizziness and fatigue. These side effects usually only last for the initial 2-3 weeks of therapy. Do not stop the medication suddenly as this may result in side effects. The usual dosing is 300mg each night initially. Some patients may take a much higher dose of 300-800mg three times a day.
- d. **Alpha Lipoic Acid**  
This is a sulfur-containing fatty acid found inside every cell of the human body. It is a potent biological antioxidant that has been shown to slow the oxidative damage in cells. Lipoic Acid increases glucose uptake in the cells and appears to reduce symptoms of diabetic complications including cataract formation, vascular damage, and polyneuropathy (nerve damage). This medication appears to have no significant side effects. It is typically given 1-2 a day.
- e. **Lyrica (Pregabalin)**  
Lyrica is an anti-epileptic drug which affects chemicals in the brain that send pain signals across the nervous system. Lyrica works by reducing the number of "extra" electrical signals that are sent out from damaged nerves in the body, hence, decreasing neuropathic pain. Side effects include dizziness, sleepiness, dry mouth, blurry vision, and possible weight gain. Dosages should only be adjusted by your physician and do not stop it suddenly. The usual starting dose is 75mg each night but many patients take this medication 75-100mg twice a day.
- f. **Metanx**  
This is a natural food medication which requires a written prescription from a doctor. It includes Vit. B6, B12, and Folic Acid. It works by increasing blood flow to the small blood vessels and assists in nerve repair. Take 1 tablet, 2 times a day.