



NEUROPATHIC PAIN

## Effective Nutrients for Treating Neuropathy

Holly Lucille, ND, RN | DIGITAL EXCLUSIVE

### WHAT YOU NEED TO KNOW

- The damage done by elevated blood sugar levels and type 2 diabetes happens slowly and isn't always noticed until serious harm has occurred.
- By recommending a sensible exercise regimen, disciplined eating habits and well-guided use of these nutrient ingredients, you can help patients overcome the pain, numbness and tingling of neuropathy.

If your patients have diabetes, there is a good chance they are also experiencing symptoms of neuropathy. If so, they may want to know what they can do about the “pins and needles” sensations in their feet, legs, and fingers.

An individual with diabetes most likely requires specific, non-invasive care that includes supplemental assistance and actionable lifestyle changes. As for supplementation, there are specific ingredients that can stop - and even reverse - the symptoms and causes of neuropathy.

#### The B Vitamins

A study published in the journal *Clinical Nutrition* reported on patients with hyperglycemia, finding 14 of 34 patients were deficient in vitamin B<sub>6</sub>. Members of the group who were given pyridoxal-5-phosphate (P-5-P), the active form of vitamin B<sub>6</sub>, showed reduced blood glucose levels after only seven days.<sup>1</sup> Other B vitamins, including thiamin, help the body metabolize carbohydrates effectively and turn those calories into energy.<sup>2</sup>

*Benfotiamine*, a fat-soluble form of vitamin B<sub>1</sub>, is over three times more bioavailable than water-

soluble thiamine and can reduce pain and the sharp, prickling feeling in feet and legs.<sup>3,4</sup> In a clinical study, patients with diabetes were treated with a combination of benfotiamine and vitamin B<sub>6</sub> for 45 days. At the end of the study, 86 percent of the patients reported a highly significant reduction in overall pain.<sup>4</sup>

Additionally, pain due to light pressure, touch or temperature was reduced from 77 percent of the patients to 22 percent by the conclusion of the study. Pain caused by the loss of muscle fibers was reduced from 90 percent of the patients to just 32 percent. The researchers felt these results “confirmed benfotiamine was a good starting choice for the treatment of diabetic polyneuropathy.”<sup>4</sup>

*Methylcobalamin* is an active form of vitamin B<sub>12</sub> requiring no conversion by the liver. It is critical for nerve structure and signal strength. According to a study published in the *Annual Review of Nutrition*, up to 15 percent of individuals over 60 years of age are B<sub>12</sub> deficient.<sup>5</sup> Many of your own patients may fit that demographic.

Research published in the journal *Reviews in Neurological Diseases* found that L-methylfolate, methylcobalamin, and P-5-P improved epidermal nerve fiber density (ENFD) in 73 percent of treated patients with type 2 diabetes in just six months. Additionally, 82 percent reported reduced frequency and intensity of the “pins and needles” feeling or of the painful sensation (or *lack of sensation*) brought about by simple touch and contact.<sup>6</sup>

*Riboflavin* [vitamin B<sub>2</sub>] helps keep glutathione - the body’s natural free-radical fighter - active in the eyes. In clinical research, the greatest reduction in cataract risk was seen in those taking a combination of riboflavin and *niacin* [vitamin B<sub>3</sub>] compared with other tested nutrients.<sup>7</sup>

As seen with deficiencies of other B vitamins, a lack of *pantothenic acid* [vitamin B<sub>5</sub>] can cause numbness and tingling in the feet. The nutrient’s primary role in the body is as coenzyme A, which is involved in many important functions, including healthy tissue formation (e.g., nerve endings, blood vessels). However, high blood sugar can affect levels of coenzyme A, so pantothenic acid is a valuable nutrient for overcoming diabetes-related deficiencies and treating neuropathy.<sup>8,9</sup>

### Alpha-Lipoic Acid

A review of studies by researchers at Oregon State University showed that *alpha-lipoic acid* fights diabetic neuropathy by normalizing intake of blood sugar by the muscles, reducing the pain and tingling of peripheral nerves.<sup>10</sup> One clinical study found 600 mg of alpha-lipoic acid daily reduced triglycerides and symptoms of diabetic neuropathy, and improved quality of life in just 40 days.<sup>11</sup>

Other research reviews have recommended alpha-lipoic acid for individuals with early neuropathic symptoms, especially when conventional analgesics would be risky for patients with cardiovascular issues or difficulties tolerating those types of medications.<sup>12</sup>

Other laboratory research published in the journal *Diabetes* found that alpha-lipoic acid reversed markers of diabetic neuropathy and improved peripheral nerve function.<sup>13</sup>

### Key Minerals

Minerals are important therapeutic ingredients as well. *Chromium*, known for its metabolic actions,

also activates insulin receptors, helping to prevent the buildup of glucose in the bloodstream. In an= clinical study, individuals taking chromium reduced their fasting blood glucose level from an average of 197 to 103 in just three months, and brought down their triglyceride and LDL cholesterol levels as well.<sup>14</sup>

Zinc stabilizes pancreatic storage of insulin, and inhibits the oxidative stress that promotes insulin resistance and diabetes. Research published in the journal *Diabetes, Obesity, and Metabolism* reported that reduced zinc levels in the pancreas are associated with diabetes, and proper amounts of this mineral tend to keep insulin levels at an even keel.<sup>15-16</sup>

### Don't Forget About Boswellia

An herbal powerhouse, boswellia (*Boswellia serrata*) is one of nature's most effective anti-inflammatory medicines. It is a specific inhibitor of 5-LOX, making it ideal for treating the pain that accompanies nerve damage.<sup>17-18</sup>

### Natural Hope for Neuropathy

The damage done by elevated blood sugar levels and type 2 diabetes happens slowly over time and isn't always noticed until serious harm has occurred. But through a sensible exercise regimen, disciplined eating habits and well-guided use of these nutrient ingredients, the pain, numbness and tingling of neuropathy can be overcome.

There is a growing awareness of the benefits of nutrients for slowing or reversing disease. For example, in the journal *Diabetes Research and Clinical Practice*, researchers concluded that vitamins B<sub>1</sub>, B<sub>2</sub>, B<sub>6</sub>, B<sub>12</sub>, folic acid, zinc, and other nutrients could "ameliorate diabetic neuropathy symptoms."<sup>19</sup> That should give you and your patients a sense of hope.

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