

totalhealth™

FOR LONGEVITY

**FIGHTING
CHRONIC FATIGUE
SYNDROME**

**MANAGING
YOUR MOODS
NATURALLY**

**SUGAR
SAVVY
101**

**WHAT IS
AUTISM?**

**NATURAL
BLADDER
SUPPORT**

**STEPS TO THE
FOUNTAIN OF
YOUTH**

Denise Austin
Health and Fitness
Dynamo

totalhealthmagazine.com



\$3.99 US / \$4.99 Can

February 2008 - Vol.30 No.1

DIABETIC NEUROPATHY

Experts Say It's Not What You Eat; It's What You Don't Eat That Hurts You

by Mark L. Gostine, M.D., and Lawrence Pawl, M.D.

Diabetic neuropathy is a common complication of diabetes, in which nerves are damaged as a result of hyperglycemia (high blood sugar levels). Of the 20.8 million reported diabetics in the country, an estimated 70 percent, or 14.6 million, have or will develop some form of diabetic neuropathy.

While the treatment of diabetic neuropathy has improved with the use of antiepileptic drugs and antidepressants, most of the commonly used medications have anticholinergic side effects or cause sedation.

The goal of this study was to determine if the patients' report of pain and numbness could be improved with the utilization of nutritional supplements that may partially address the causes of diabetic complications. It was found that restoring a group of five dietary vitamins, minerals and antioxidants was very effective in alleviating a number of key symptoms, including burning, numbness and overall pain. It's not just that people are eating too much bad food; it's that they are eating too little of high quality foods. In other words, it's not what you eat; it's what you don't eat that hurts you.

During the six-month long study, patients were asked to rate eight parameters using a modification of the Wong-Baker FACES Pain Rating Scale where pain is rated on a scale from 1 to 10. The patients who participated in the study reported an average rating of 6.59 for "burning pain in hands and feet" before taking the combination of micro-nutrients and a 2.44 rating after 12 weeks, a 63 percent decrease. In addition, patients reported an average rating of 6.54 for "overall pain" before taking the combination of micro-nutrients and a 2.85 rating after 12 weeks, representing a 56 percent decrease.

About the Study Population

Patients enrolled in the study were selected from a practice of podiatrists specializing in surgical and non-surgical care of the feet and ankles. The nature of their practice results in a large population of patients suffering from complications of the diabetic foot including ulcers, infections, calluses and neuropathy.

Patients complaining of symptoms of neuropathy, despite maximal medical therapy, were entered in the study to investigate the use of nutritional supplements for controlling

their pain. Thirty patients were enrolled and 28 completed the study over a six-month period extending from November 2006 through May 2007 with 12 men and 16 women participating. The average age was 68 with a range from 48 to 94. Most patients had comorbid conditions including hypertension, obesity and hyperlipidemia.

Secondary Research Critical to Study

The foundation of the study was shaped by extensive data mining of the PubMed database established by the National Institute of Health and National Library of Medicine, which catalogues thousands of journals and millions of articles in the field of medicine. Based on this effort, five nutritional supplements—N-acetyl-cysteine (NAC), alpha-lipoic-acid (ALA), L-carnitine (LCA), vitamin C and selenium—were selected and provided to patients over a three-month period. Baseline status was assessed using a modification of the Wong-Baker FACES Pain Rating Scale (rating scale from 1 to 10). The following eight parameters were judged:

- Burning pain
- Numbness
- Overall pain
- Perceived level of impairment of function
- Perceived level of impairment of concentration
- Perceived level of impairment of thought clarity
- Perceived level of impairment of alertness
- Perceived level of impairment of energy

The last four parameters were secondary endpoints that were assessed because an earlier pilot investigation indicated this group of nutritional supplements had a beneficial effect on mental function. Patients were followed for three months with ratings at initiation and every four weeks thereafter.

It is interesting to note from the results that every parameter improved at the four-week assessment during the study, which suggests if the patients were followed over a longer period of time there would likely be further improvement. At the end of the day, the study supports the original hypothesis—that there are health benefits for diabetics who include these key nutrients in their diet while continuing to watch their calories.

Results

	Initiation	4 weeks	8 weeks	12 weeks	% change 4 weeks	% change 8 weeks	% change 12 weeks
Burning	6.59	4.71	3.06	2.44	-29 %	-54 %	-63 %
Numbness	7.41	6.21	5.16	4.37	-16 %	-30 %	-41 %
Overall Pain	6.54	4.98	3.67	2.85	-24 %	-44 %	-56 %
Impairment of Function	4.3	3.93	2.96	2.76	-9 %	-31 %	-36 %
Impairment Concentration	3.11	2.91	2.33	2.26	-6 %	-25 %	-27 %
Impairment Clarity	2.18	2	1.78	1.74	-8 %	-18 %	-20 %
Impairment Alertness	2.39	2.2	1.69	1.52	-8 %	-30 %	-36 %
Impairment Energy	4.89	4.29	3.61	3.33	-12 %	-26 %	-32 %