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Thornton Natural Healthcare's Better Health News

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Special Interest Articles:

- Melatonin and cluster headaches
- Toxic mushrooms and lipoic acid
- Food sensitivity and migraines
- Magnesium and headaches
- Vitamin D and pneumonia
- Lipoic acid and carpal tunnel syndrome
- Vitamin C and disease

Lipoic Acid and Neuropathy

Alpha-lipoic acid is a powerful antioxidant. It also helps the muscle cells to utilize glucose, making it a useful supplement for diabetics. There is a body of research that supports the use of lipoic acid to treat neuropathy in diabetics. A meta-analysis of studies was published in *Diabetic Medicine* (2004; 21(2): 114-21) found that 300 milligrams of lipoic acid given

intravenously for three weeks significantly reduced neuropathy symptoms in diabetic patients. Another study published in the *Netherlands Journal of Medicine* (2010 April; 68(4): 158-62) found similar results for intravenous use of lipoic acid; it also found that oral supplementation (600 milligrams per day) also produced benefits for patients with neuropathy.

Asthma and Vitamin D

A cross-sectional, case-control study was published in the *Journal of Pediatrics* (Volume 156, Issue 6, June 2010) looked at 113 African American children (between six and 20 years of age) and compared vitamin D levels in those with asthma and those without asthma. Vitamin D deficiency was found in 86% of the asthmatic subjects as compared to 19% in the control group.

Other research, published in the *Journal of Pediatrics* (published online Sept 25, 2010) and involving Italian children produced similar results. Only 9.4% of the 75 children with asthma had adequate vitamin D levels. Furthermore, low vitamin

D levels correlated with poorer breathing capacity (forced vital capacity percent and the Childhood Asthma Control Test).

The *Journal of Allergy and Clinical Immunology* (Volume 126, Issue 1, Pages 52-58.e5, July 2010) looked at vitamin D levels in 1,024 children with mild to moderate asthma. Vitamin D (25(OH)D) levels were below 30 ng/ml in 35% of the subjects. Also, poor vitamin D status was associated with an increased risk of hospitalization or needing to go to the emergency room.

Melatonin and Cluster Headaches

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Cluster headaches are one-sided headaches that occur in cyclical patterns (clusters). Bouts of frequent attacks are called cluster periods; they may last for weeks or even months. The cluster periods are usually followed by periods of remission when the headaches are absent. Remission periods can last for months or even years. Generally the onset of the headache is sudden. The pain is extremely severe, and one-sided, and is usually around the eye. In fact patients often say that it feels like a hot poker being shoved into the eye. There is often redness, swelling and excessive tearing on the affected side. The eyelid may droop and the pupil may be constricted. Often the patient experiences migraine-like symptoms, including nausea, sensitivity to light and sound, and aura.

During a cluster period, headaches typically occur every day, sometimes several times a day. The attacks may between 15 minutes and several hours. They generally occur at the same time of day. During an attack patients appear restless, and may pace or rock back and forth while sitting. The

movement helps to soothe the attack. In contrast to migraine patients, people with cluster headaches generally avoid lying down during an attack because lying down seems to increase the pain.

In patients with cluster headaches there is generally a decrease in nocturnal melatonin levels. A double-blind, placebo-controlled study, appearing in *Cephalgia* (1996;16:494-496) looked at 20 patients with cluster headaches and the effect melatonin supplementation had on symptoms. For two weeks subjects were given either 10 milligrams of melatonin at bedtime or a placebo. The group receiving the melatonin experienced fewer headaches and took less medication than the placebo group. After three to five days of treatment, half of the patients in the treatment group stopped having headaches until the melatonin was discontinued. The journal, *Neurology* (September 2003;61(2 of 2):865-866) cites three cases where melatonin effectively relieved idiopathic stabbing headaches. The article actually recommends doses.

Toxic Mushrooms and Lipoic Acid

Amanita is a toxin found in poisonous mushrooms that can cause destruction of the liver. Research published in the *Journal of Orthomolecular Medicine* (1998;13(1):44-48) details the treatment of hepatic necrosis resulting from a patient eating toxic mushrooms. An intravenous infusion of alpha-lipoic acid given within 30 hours by Dr. Burton Berkson gave the patient relief within the hour. Subsequent treatment of

patients with amanita poisoning yielded promising results. In a paper presented to the International Amanita Symposium (1980: 197-202) cited the treatment of 75 patients with amanita poisoning. Of the group, 67 recovered fully and eight of the patients died. The time interval between ingestion of the poison and the start of the lipoic acid IV protocol was inversely related to the success of the treatment.

Food Sensitivities and Migraines

Finding and eliminating food sensitivities may help some, but not all, patients with migraine headaches. A study that was presented at the International Pediatric Symposium (March, 1991;6/9) looked at 32 migraine patients between the ages of 10 and 20. The patients were allowed to eat an unrestricted diet for three weeks. Afterwards they were placed on a strict elimination diet for an additional three weeks. During the course of the study the 27 subjects who completed the study kept a headache diary. A subject who had reduction of 50% (or better) in the number of days with a headache while on the elimination diet was considered to be a "responder". Seven of the subjects (or just over 25%) were classified as responders. All of the subjects were given *in vivo* and *in vitro* allergy tests, and the tests were negative for all subjects (including the responders). This shows that there is a relationship between food and headaches in at least some patients.

Other research appearing in *Headache* (1989;29(5):315-6) looked at 102 migraine patients. The study had the same parameters, which was three weeks of an unrestricted diet, followed by three weeks of an elimination diet. Of the 74 subjects that completed the study, 38 experienced improvement of symptoms while on the elimination diet. The researchers were able to trigger 44 migraine attacks in the group by reintroducing specific foods.

A similar result was obtained in a separate study, published in *Cephalgia* (June 1991;Suppl. 11(11):117), with 50% of the subjects experiencing at least a 50% reduction in headache frequency while on an elimination diet. In this study those who responded to the elimination diet were given antihistamines over a period of eight weeks, but the drugs were not effective in preventing migraines. This suggests that the food sensitivity is not related to an immune response.

In an older study, appearing in the *Lancet* (May 5, 1979;966-969), 60 migraine patients were placed on a very strict elimination diet that consisted of only lamb, pears and bottled water for five days. They were then challenged with certain foods to see if the food triggered a migraine attack. Attacks were triggered in 33% of the patients by corn, yeast and cane sugar. Of the foods tested, wheat triggered headaches in the most patients, causing migraine attacks in 78% of the patients. Coffee and tea each triggered attacks in 40% of the patients. Oranges triggered attacks in 65% and eggs triggered attacks in 45% of the patients.

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Magnesium and Headaches

According to the National Institute of Neurological Disorders and Stroke, migraine headaches affect 28 million Americans, 75% of whom are women. Migraine headaches cost an estimated \$13 billion in missed work and reduced productivity each year. Back in 1991, according to the *Journal of the American Medical Association* (January 1, 1991;267(1):64-69) there were 8.7 million women and 2.6 million men who suffered from moderate to severe migraine headaches. So there has been an increase in the number of Americans suffering from migraines in the last 20 years.

There is a fair amount of research that shows that magnesium supplementation may offer some relief for many migraine sufferers. An article appearing in *Clinical Neuroscience* (1998;5;24-27) pointed out that magnesium affects serotonin receptors as well as the synthesis and release of nitric oxide. One study, appearing in *Cephalgia* (1993;13:94-98) looked at the level of magnesium in the red blood cells of 90 migraine sufferers (30 with aura and 60 without aura) and compared it to 30 healthy, matched controls. During the period between headaches, the magnesium levels in migraine patients were lower than that of the healthy controls. The patients who had migraines with aura tended to have lower magnesium levels than the patients who did not have an aura. An active headache did not change the magnesium levels in the migraine patients. Other research appearing in *Cephalgia* (1992;12:21-7) also found lower serum and salivary magnesium levels

in headache patients when compared to healthy controls.

Research in the journal *Headache* (2001;41:171-177) looked at the effect intravenous magnesium sulfate had in treating acute migraine attacks. The subjects of the single-blind, placebo-controlled study were 24 women and six men who presented to a headache clinic. One gram of intravenous magnesium sulfate was given to 15 of the patients, with the other 15 receiving a placebo. In the group receiving the magnesium, 13 of the 15 subjects experienced complete relief of pain, with the other two subjects experiencing a reduction in symptoms. In the placebo group, only one patient experienced a reduction in pain.

Research has also shown that magnesium supplementation may help prevent migraine headaches. A study that appeared in *Cephalgia* (1996;16:257-63) looked at 81 migraine patients experiencing a mean attack frequency of 3.6 migraines per month. They were randomly divided into two groups and given either 600 milligrams of magnesium per day or a placebo for 3 months. In the final month of treatment, the frequency of attacks in the group receiving the magnesium was reduced by over 41%, with the placebo group experiencing only a 15.8% reduction in migraine episodes. The patients receiving the magnesium were also able to reduce the amount of medication taken.

Lipoic Acid and Carpal Tunnel Syndrome

A number of studies have shown that patients suffering neuropathy (particularly diabetic patients) improve when given lipoic acid. One study, appearing in the *European Review for Medical and Pharmacological Sciences* (2009; 13(2): 133-9) looked at lipoic acid supplementation (in conjunction with other nutrients) and its effect on patients with carpal tunnel syndrome. The subjects of the study were 112 patients with moderate to severe carpal tunnel syndrome. They were randomly assigned to receive either a combination of alpha-lipoic acid (600 milligrams per day) and gamma linolenic

acid (360 milligrams per day) or a B vitamin supplement (containing B₆, B₁₂ and thiamin). After 90 days, the group receiving the lipoic acid and gamma linolenic acid had a reduction in symptoms and improvement in function compared to the control group.

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Vitamin D and Pneumonia

A double-blind, placebo-controlled study that appeared in *Tropical Medicine and International Health* (Volume 15, Issue 10, pages 1148–1155, October 2010) looked at the use of a single, high dose vitamin D supplement and the effect it had on children recovering from pneumonia. The subject of the study were 453 children, with pneumonia, between the ages of one and 36 months. They were randomly divided into two groups. One group

received antibiotics as treatment and the other group received a single 100,000 IU dose of D3 along with the antibiotic treatment. There was no difference in the amount of time it took for recovery between the two groups. The group receiving the vitamin D, however, demonstrated a 22% reduced risk of having a repeat bout of pneumonia when compared to the placebo group.

Vitamin C and Disease

As I see it every day you do one of two things: build health or produce disease in yourself.—Adelle Davis

A cross-sectional study appearing in the *American Journal of Epidemiology* (Aug 15; 170 (4):464-71) correlated vitamin C levels and other disease markers in 979 nonsmokers. The subjects of the study were men and women between the ages of 20 and 29 years, who were participating in the Toronto Nutrigenomics and Health Study. Serum ascorbic acid (vitamin C) levels were measured in fasting, morning blood samples. Dietary intake was assessed for one month with a 196 item food frequency questionnaire.

It was determined that 14% of the subjects were deficient in vitamin C, and 33% had suboptimal levels of the nutrient. Low ascorbic acid levels were associated with high C-reactive protein levels. C-reactive protein (CRP) is a globular protein that increases in the serum as a response to injury or inflammation. It turns out to be a good predictor for cardiovascular disease. A study appearing in the *Journal of the American Nutritional Association* (2005;8(1):43-44), involving more

than 27,000 women, found that CRP was a better predictor of cardiovascular disease than LDL (bad) cholesterol. High CRP levels are actually associated with increased mortality from all causes. A CRP level greater than 3 mg/L in men was found to increase the likelihood of death by nearly two-fold, according to research appearing in *Clinical Chemistry* (2008 Feb;54(2):335-42). The high CRP levels increased the likelihood of heart attack by a factor of 2.15 and increased the likelihood of cancer by a factor of 1.6.

The vitamin C deficient subjects also tended to have higher waist circumference, body mass index and blood pressure than did subjects with normal vitamin C levels. At least part of the problem was diet; one in seven of the subjects did not consume the recommended daily intake of vitamin C.

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