



# News and Views

## Summer 2008

### Armstrong Clinic for Naturopathic Medicine

#### **Your Daily Dose: What to Know About Thiamine—Vitamin B1**

Thiamin or thiamine, also known as Vitamin B<sub>1</sub> and aneurine hydrochloride, is one of the B Vitamins. It is soluble in water, methanol, and glycerol. Thiamin is essential for neural function and carbohydrate metabolism. A severe thiamin deficiency results in *Beriberi* which is a nerve and heart disease. In less severe deficiency, nonspecific signs include malaise, weight loss, irritability and confusion.

Thiamin is found in a wide variety of many foods at low concentrations. While yeast and liver are the most highly concentrated sources of thiamin, these foods are not commonly consumed in the American diet. Cereal grains, however, are the most important dietary sources of thiamin in the diet. Of the cereal grains, whole grains contain more thiamin than refined grains. Thiamin is found in the outer layers of the grain as well as the germ layer. During the refining process these parts of the grain are removed, therefore decreasing the thiamin content in products such as white rice and white bread. For example, 100 g of whole wheat flour contains 0.55 mg of thiamin while 100 g of white flour only contains 0.06 mg of thiamin. In addition to cereal grains some vegetables and meats are also good sources of thiamin. Listed below are foods rich in thiamin.

- Yeast
- Oatmeal and Brown Rice
- Whole grain flour (rye or wheat)
- Asparagus
- Kale
- Cauliflower
- Potatoes
- Oranges
- Pork
- Cured ham
- Liver (beef or pork)
- Eggs

#### **Thiamine deficiency and overdose**

Systemic thiamin deficiency can lead to a myriad of problems including neurodegeneration, wasting and death. A lack of thiamin can be caused by malnutrition, alcoholism, a diet high in thiaminase-rich foods (raw freshwater fish, raw shellfish, ferns) and/or foods high in anti-thiamine factors (tea, coffee, betel nuts)

Well-known syndromes caused by thiamin deficiency include Wernicke-Korsakoff Syndrome and Beriberi, diseases also common with chronic alcoholism.

Many people with diabetes have a deficiency of thiamin and that this may be linked to some of the complications such as diabetic neuropathy.

#### **Drug/Nutrient Interactions**

Impaired thiamin utilization occurs with a magnesium deficiency. Magnesium is required for the binding of thiamin to thiamin-using enzymes within the cell.

Magnesium can be depleted by chronic consumption of diuretics such as caffeine or alcohol.

#### **Lab Testing**

A positive diagnosis test for thiamine deficiency can be ascertained by measuring the activity of the enzyme transketolase in red blood cells.

#### **Thiamine as an Insect Repellent**

Some studies have shown that taking thiamin 25 to 50 mg three times per day is effective in reducing mosquito bites. A large intake of thiamin produces a skin odor that is not detectable by humans, but is disagreeable to female mosquitoes. Thiamin takes more than 2 weeks before the odor fully saturates the skin.

#### **Diabetes, Neural Pain and Thiamine**

Benfotiamine is an allithiamin, a naturally-occurring fat soluble form of thiamine. Benfotiamine has shown to be an effective intervention for the treatment of diabetic neuropathy, retinopathy and nephropathy and has been proven to be effective in the treatment of patients with nerve damage and nerve pain such as sciatica.

*Your Registered Naturopathic Doctor takes into account individual patient needs. Blood lab testing, and accurate case taking and knowledge of other medications and supplements taken by a patient is critical to determine safe and accurate thiamine supplementation levels.*

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## Parkinson's Disease and Glutathione - Part 2

Parkinson's is a slowly progressing disease of the nervous system that results in progressive destruction of brain cells (neurons) in an area of the brain called the substantia nigra. One of the mechanisms known to destroy neurons is damage by free radicals or reactive oxygen species - destructive molecules produced by the oxidation of the neurotransmitter dopamine.

### **The Role of Dopamine**

The cells of the substantia nigra use dopamine to communicate with cells in another region of the brain called the striatum. The typical symptoms of PD - motor function deficiencies characterized by muscle rigidity, jerky movements, rhythmic resting tremors - are the result of low levels of dopamine in the striatal region of the brain.

Most dopaminergic drugs used to treat PD are aimed at temporarily replenishing or mimicking dopamine. They improve some symptoms, but do not restore normal brain function nor halt brain cell destruction. Dopaminergic drugs are generally effective at first in reducing many PD symptoms but over time they lose their effect. There is evidence that these drugs may also cause neural damage.

The medications also cause severe side effects because they overstimulate nerve cells elsewhere in the body and cause confusion, hallucinations, nausea and fluctuations in the movement of limbs.

### **The Role of Antioxidants**

When dopaminergic neurons are lost in the course of Parkinson's disease, the metabolism of dopamine is increased - which in turn increases the formation of highly neurotoxic hydroxyl radicals.

The most important free radical scavenger in the cells of the substantia nigra is the powerful brain antioxidant, glutathione. As we age levels of glutathione in the dopaminergic neurons of the substantia nigra decrease. This appears to hasten cell death and advance the progression of PD.

At least 80 percent of the substantia nigra cells are lost before symptoms of Parkinson's disease become apparent. It is essential to protect or maintain these cells under oxidative stress from a prevention perspective.

### **How does Glutathione help in Parkinson's Disease?**

Several factors explain why glutathione is so beneficial in Parkinson's disease.

1. Glutathione increases the sensitivity of the brain to dopamine. So although glutathione doesn't raise dopamine levels, it allows the dopamine in the brain to be more effective.
2. Glutathione's powerful antioxidant activity protects the brain from free radical damage during the aging process and when dopaminergic neurons are limited..

Individuals that have genetic defects or weaknesses in their detoxification pathways are at far greater risk to the brain damaging effects from a wide variety of toxins, such as heavy metals and pesticides.

Glutathione is the most important component of the liver's detoxification system. Glutathione therapy is one of the most effective techniques for enhancing liver and brain detoxification.

Glutathione and N-acetyl-L-cysteine (a glutathione precursor) have been shown to be very effective in protecting the nerves in the substantia nigra from being destroyed by oxidative stress.

### **Glutathione Therapy in Parkinson's Disease**

The practical problem in increasing glutathione levels is that taking glutathione itself as a supplement does not boost cellular glutathione levels, since glutathione breaks down in the digestive tract before it reaches the cells. However, intravenous glutathione therapy and taking glutathione precursors are both effective in boosting intracellular levels of glutathione.

### ***Intravenous Glutathione Therapy:***

Intravenous glutathione injections have been shown to have substantial results.

Dr. David Perlmutter MD, a pioneer in this therapy, has developed a protocol utilized at the Perlmutter Health Center for administering intravenous glutathione to Parkinson's patients. Following even a single dosage of intravenous glutathione - often in as little as 15 minutes - the ability to walk, turn around and move their arms is almost completely restored. Further information can be found from the website [www.brainrecovery.com](http://www.brainrecovery.com)

The Registered Naturopathic Doctors at the Armstrong clinic administer intravenous glutathione, among other IV therapies, to people for Parkinson's support and generalized detoxification programs. Many other neurological conditions such as MS, Post-Polio Syndrome, and Heavy Metal Toxicity benefit greatly from IV Glutathione.

Your Registered ND will also assess individual prescriptions for dietary changes, for safe and therapeutic supplementation and how to optimize neurotransmitter levels. Neurotransmitter and detoxification assessment testing is also available while under the care and supervision of your registered ND at the Armstrong Clinic. It is recommended that one test the levels so that the patient can determine an objective measure for his or her condition before, during and after treatment.

# CAND Update: Bill C51 June 27 2008

## What is the Status of Bill C-51?

The House of Commons recessed for the summer on June 20, 2008. Debate following second reading of Bill C-51 was not completed. The Bill will now be moved to the fall sitting of the House of Commons scheduled to begin September 15, 2008.

## What has happened since the last update on June 13, 2008?

The CAND met with Health Minister Clement's Chief of Staff, the Director General of the NHPD and Opposition Health Critics. Our concerns have been heard and we will continue to work with the Minister's office, the NHPD and the Opposition Health Critics to find solutions.

Health Minister Tony Clement has proposed amendments to Bill C-51 that include the creation of a separate category for natural health products and that outline the roles and responsibilities of inspectors. The government is to be commended for taking this step in addressing the concerns expressed by stakeholder groups and Canadians across the country. The amendments will be posted on the CAND website.

The proposed amendments do not address access to all substances for naturopathic doctors and their patients and the CAND will continue its work with the Federal Government on this important issue.

The granting of prescribing rights has always been a provincial responsibility. Bill C-51 does not change this. The definition of "practitioner" in the current draft of the Bill makes it very clear that the Federal Government intends to respect the mandate of the provinces to regulate the practice of health care professionals and to grant controlled acts, such as prescribing. At this time the naturopathic associations and regulatory boards in British Columbia, Alberta and Ontario are engaged with their respective Health Ministries in obtaining prescribing rights for NDs.

## What is the CAND doing?

Over the summer the CAND will:

- Work with the government, the NHPD, Opposition Health Critics and MPs.
- Prepare recommendations on amendments to Bill C-51.
- Prepare a brief for submission to the Standing Committee on Health.
- Revise the letter templates for NDs and their patients to use with government and MPs.
- Continue dialogue with other stakeholders, concerned NDs and members of the public.

As the national association the CAND is the lead on issues that affect the profession at a federal level. Moving forward we will continue to update and engage in dialogue with the provincial associations, schools and regulatory boards regarding Bill C-51 to ensure we are speaking to government with a unified voice. Contact: 1.800.551.4381 or [www.cand.ca](http://www.cand.ca)

***Join the Sauna Club at the Simcoe clinic location: call 519.426.4275 to discuss our package rate and bring a friend along for free! One sauna session is \$20 while 12 sessions cost \$200 – a savings of \$40 or two sessions for free.***

## **The Armstrong Clinic Wants Your Opinion!**

Have your say by joining The Advisory Panel.

Simply email the clinic at [info@armstrongclinic.com](mailto:info@armstrongclinic.com) with the subject heading 'Advisory Panel'

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## Colon Hydrotherapy

How are your bowel habits? Do you eliminate regularly AND is the process efficient and effective at removing waste from your body? If you do eliminate regularly but tend to vary in the effectiveness or efficiency of the whole process, the answer may be to bring your colon muscles for a workout. The circular muscles of the colon expand when the contents arrive after a meal. A little expansion does not trigger a contraction and so the contents will not be released. As more arrives over the course of a 24 hour time frame, the expansion increases until it triggers a colonic muscle contraction and that is what produces a bowel movement. People who do not eliminate regularly—that is, after each meal—are in need of a little toning, that's all. The expansion of water volume in the colon during a colon hydrotherapy session does exactly that. Better tone in the colon is the best way to improve elimination efficiency.

## Welcome!

Please help us welcome our new office staff member. Theresa has joined Heather at the Armstrong Clinic in assisting our clients in booking appointments and managing the daily operations of the clinic.

### **Office Hours (Simcoe):**

Monday & Thursday 8am-8pm

Tuesday & Wednesday 9am-5pm

Friday 9am-1pm

Paris and Tillsonburg appointments are available on Tuesdays, Wednesdays and Fridays.

## About Us...

Dr. Heidi Kussmann-Armstrong has been practicing for 6 years and Dr. Sean Armstrong has been practicing for 4 years. Both are Registered Naturopathic Doctors, have successful practices in general family medicine, and have helped many people achieve their health goals.

Your extended health insurance benefits most often covers your visit fees with a Registered Naturopathic Doctor. For example, we are covered by Blue Cross, Green Shield, London Life, Great West Life, and many other insurance providers.

### **How are Naturopathic Doctors trained?**

Training encompasses a minimum of 4 years of pre-medical university education, followed by a four-year full-time program at an accredited college of naturopathic medicine. The education includes training in basic medical sciences, naturopathic therapeutics, and 1500 hours of supervised clinical experience. Obtaining licensure requires successful completion of provincial and North American board exams.

If you would like to know more about the profession, please have a look around the following websites: [www.CAND.ca](http://www.CAND.ca), [www.CCNM.edu](http://www.CCNM.edu), [www.OAND.ca](http://www.OAND.ca)

### **Clinic Locations:**

55 Kent St South, Simcoe,

62 Bidwell St.. Tillsonburg

15 Grand River St. North, Paris

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