

A vibrant orange and pink flower in bloom against a clear blue sky. The flower is the central focus, with its petals fully open and showing a gradient of colors from light pink to bright orange. The background is a soft, clear blue sky. The overall mood is bright, positive, and natural.

Epilepsy and

# **Naturopathic Medicine**

Empowering health, optimizing vitality

Dr. Lisa Watson, ND



# Naturopathic Medicine

A philosophy and practice of health care that emphasizes the healing potential of the human body.



# Integrative Medicine

The incorporation of the best forms of *all* medicine with the sole purpose of improving patient outcomes.



# Naturopathic Doctors

Naturopathic Doctors are licensed in Ontario and must complete an undergraduate degree in addition to four years of Naturopathic medical training.



# Naturopathic Doctors

Naturopathic Doctors use natural approaches to nurture and support the body to achieve and maintain health across the lifespan.

# Naturopathic Treatments

Treatments are individualized and may include:

- Nutritional counseling
- Lifestyle counseling
- Laboratory testing
- Nutritional supplements
- Botanical medicine
- Acupuncture
- Mind-body approaches
- IV nutrient therapy



# Naturopathic Treatments

Up to 44% of people with seizure disorders are using some form of complimentary or alternative treatment, including naturopathic medicine



# Naturopathic Treatments

A majority of people using natural medicine are not discussing the use with their neurologist or medical doctor.



# Nutritional Counseling



# Nutritional Counseling

Several restricted diets have been found to benefit epilepsy.

- ketogenic diet
- modified Atkins diet

Your Naturopathic Doctor can help to ensure you are meeting your dietary needs within a restricted diet.



# Nutritional Counseling

Low blood sugar is an important and common precipitating cause of seizures.



# Nutritional Counseling

Studies suggest that between 50-90% of people with seizures have subnormal fasting blood sugar.

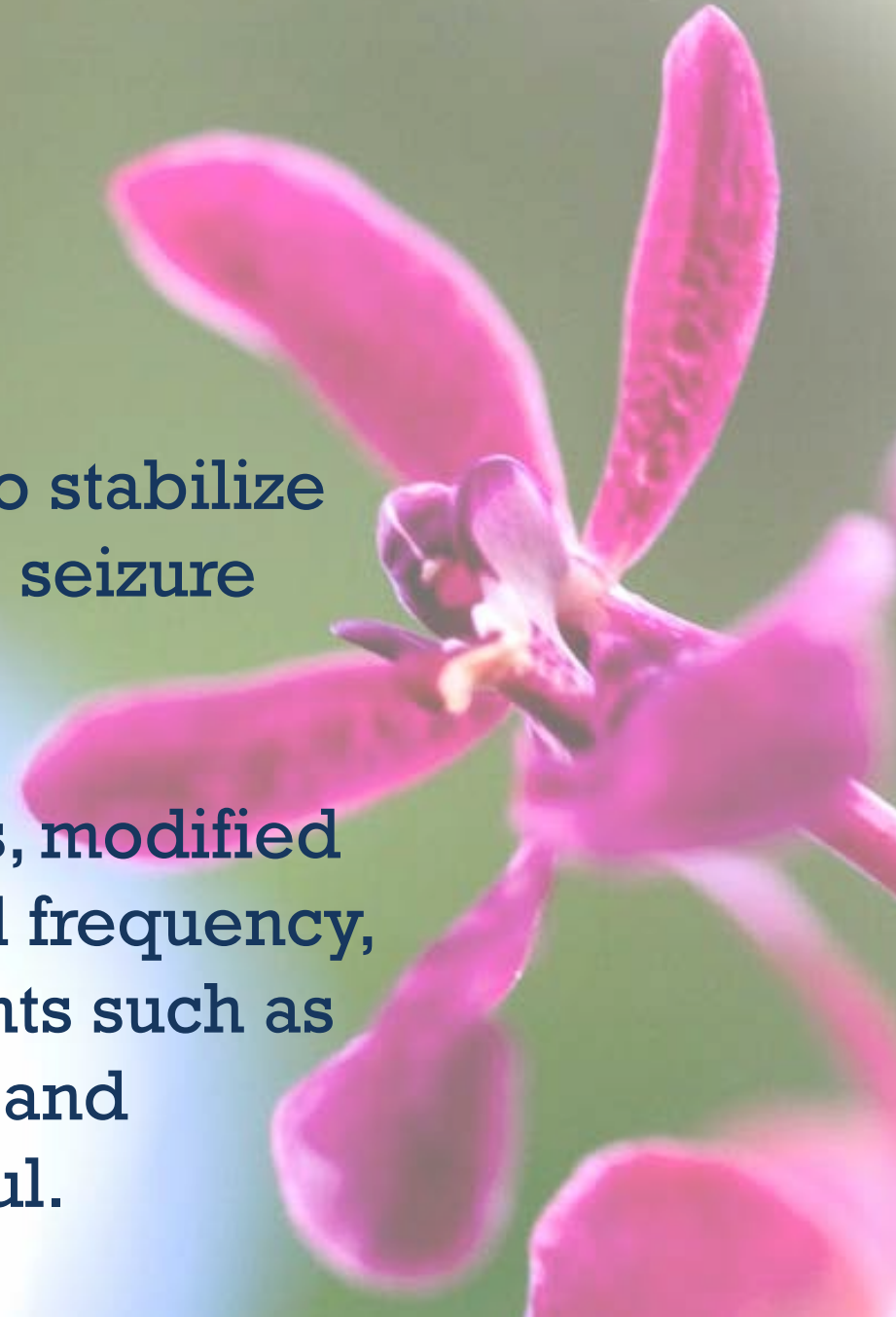
Up to 70% of people with seizures have abnormal glucose tolerance tests.



# Nutritional Counseling

Nutritional interventions to stabilize blood sugar can decrease seizure frequency.

Dietary recommendations, modified carbohydrate intake, meal frequency, and nutritional supplements such as chromium, trace minerals and magnesium may be helpful.



# Nutritional Counseling

Food sensitivities have been identified in case studies as possible causes of seizures in children and adults.

Diagnosis and avoidance of food sensitivities can improve outcomes.



# Nutritional Counseling

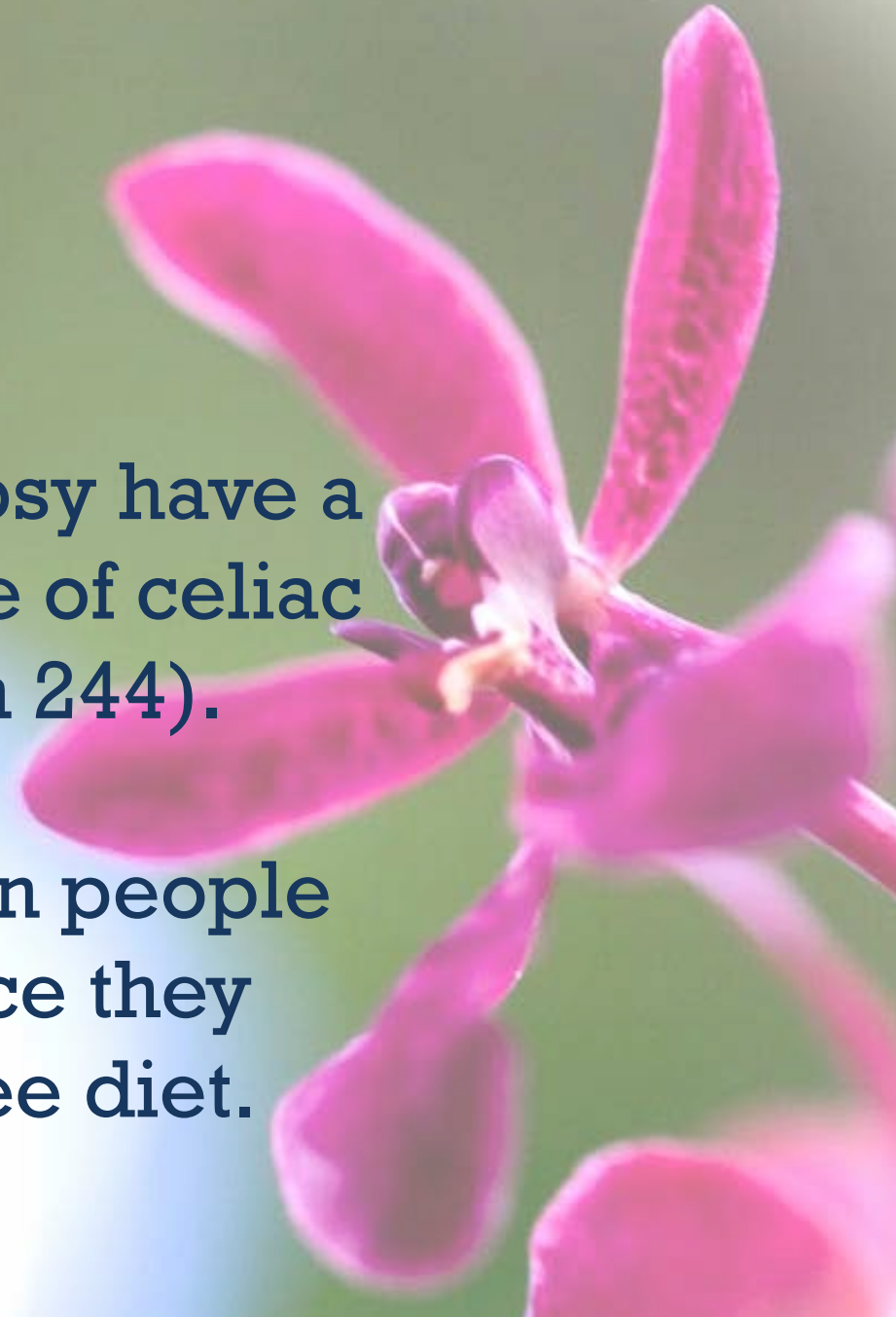
It is suggested that food sensitivities can lead to allergic reactions in the nervous system and brain resulting in inflammation and inappropriate nervous system firing



# Nutritional Counseling

Individuals with epilepsy have a much higher incidence of celiac disease (1 in 44 vs. 1 in 244).

Seizures can improve in people with celiac disease once they embark on a gluten-free diet.





# Nutritional Counseling

Testing for celiac disease and non-celiac gluten intolerance is available.



# Nutritional Counseling

Testing, or a gluten-free diet should be considered for anyone with seizures and symptoms suggestive of a food sensitivity:

- Headaches
- Digestive discomfort
- Diarrhea/ constipation
- Difficulty concentrating
- Anxiety/ depression
- Skin conditions





# **Nutrient Deficiencies**

**Can result from a lack of a  
nutrient in the diet, poor  
absorption or the influence of  
medication.**

# Nutrient Deficiencies

**Common nutrient deficiencies associated with anticonvulsants:**

- Calcium
- Biotin
- Folic acid
- Niacin (B3)
- Vitamin B12
- Thiamine (B1)
- Vitamin D
- Vitamin E
- Zinc



# **Nutrient Dependencies**

**Can result from an increased need for specific nutrients to meet the needs of the body.**

# Nutrient Dependencies

Common nutrient dependencies associated with epilepsy:

- Magnesium
- Amino acids
- Manganese



# **Specific Nutrients in Epilepsy**

## **Vitamin B6 (Pyridoxine)**

**An important cofactor in the production of GABA, an inhibitory neurotransmitter.**

# Specific Nutrients in Epilepsy

## Vitamin B6 (Pyridoxine)

Vitamin B6 deficiency can lead to seizures in adults and children.

Vitamin B6 deficiency has been found in a high proportion of people with epilepsy (40-60%). This may be associated with use of Phenytoin which reduces B6 status.



# **Specific Nutrients in Epilepsy**

## **Vitamin B6 (Pyridoxine)**

**Vitamin B6 should be used in all cases of vitamin B6-dependent seizures.**

**Some improvement has been noted in other forms of epilepsy as well.**

# Specific Nutrients in Epilepsy

## Vitamin B6 (Pyridoxine)

Vitamin B6 at moderate doses can be used in well-controlled epilepsy to prevent possible drug-induced deficiencies.

# Specific Nutrients in Epilepsy

## Vitamin B6 (Pyridoxine)

Vitamin B6 at moderate doses can be used in well-controlled epilepsy to prevent possible drug-induced deficiencies.

### **However...**

*High dose* vitamin B6 can interfere with anti-convulsant actions and should be avoided.

# **Specific Nutrients in Epilepsy**

## **Vitamin E**

**Blood levels of vitamin E are often low in people on anticonvulsant medications. Levels are lower if more than one medication is used.**

# **Specific Nutrients in Epilepsy**

## **Vitamin E**

**Vitamin E deficiency is known to produce seizures.**

**Vitamin E supplementation may reduce seizure frequency in adults and children on anti-epileptic medications.**

# **Specific Nutrients in Epilepsy**

## **Vitamin E**

**Vitamin E is most commonly prescribed in combination with other antioxidants such as selenium to enhance its activity.**

# Specific Nutrients in Epilepsy

## Folic Acid

Folate deficiency is common in people with seizure disorders, typically as a consequence of anticonvulsant medications.

Phenytoin, carbamazepine and barbiturates all decrease the absorption of folic acid in the digestive tract.

# Specific Nutrients in Epilepsy

## Folic Acid

Low and moderate doses of folic acid can be used in people with seizures. This can help to decrease homocysteine levels, a risk factor for cardiovascular disease.

High dose folic acid is not to be used in epilepsy as it can interfere with seizure control from medications.



# Specific Nutrients in Epilepsy

## Taurine

Taurine is a non-essential amino acid. It is one of the most abundant amino acids in the human brain.

It is involved in neuron function and can mimic the effects of GABA.

# Specific Nutrients in Epilepsy

## Taurine

Taurine is integral to stabilizing cell membranes in electrically active tissues, such as the brain.

Some studies have shown that people with epilepsy may have significantly lower levels of taurine than control groups.

# Specific Nutrients in Epilepsy

## Taurine

Animal studies suggest that taurine may have anti-epileptic actions and several clinical studies in humans have supported this.

# Specific Nutrients in Epilepsy

## Vitamin D

Initial research has suggested that vitamin D supplementation may reduce seizure frequency.

This is important in Canada where vitamin D deficiency is epidemic during the winter months when we can not produce vitamin D from sun exposure.

# **Specific Nutrients in Epilepsy**

## **Vitamin D**

**Vitamin D levels can be tested to assess the need for supplementation.**

**Most Canadians will require a supplement seasonally during the winter months.**

# **Specific Nutrients in Epilepsy**

## **Omega 3 Fatty Acids**

**Omega 3s are essential fatty acids that are a component of the membrane of nerve cells.**

**They play an important role in nerve cell firing as well as having significant anti-inflammatory properties.**

# Specific Nutrients in Epilepsy

## Omega 3 Fatty Acids

Results of research studies for decreasing seizure frequency are mixed, but omega 3s are generally found to be safe.

# Specific Nutrients in Epilepsy

## Omega 3 Fatty Acids

Some researchers are suggesting the cardioprotective effects of omega 3s could potentially reduce the incidence of sudden unexpected death in epilepsy (SUDEP).



# **Specific Nutrients in Epilepsy**

## **Omega 3 Fatty Acids**

**Flax seeds, walnuts, cold water fish and supplements are the best sources of omega 3s.**

# Specific Nutrients in Epilepsy

## Omega 3 Fatty Acids

People with seizures are not recommended to take GLA (an omega 6) containing supplements, such as evening primrose oil, as it has been found to lower seizure thresholds

# Botanical Medicine and Epilepsy



# Botanical Medicine and Epilepsy

It is estimated that 25% of patients with epilepsy have taken botanical medicines.

Two-thirds of this group did not discuss the herbs with their neurologist.

# Botanical Medicine and Epilepsy

No herb has been found to be effective for seizures.

*Bacopa monnieri* is showing potential in reducing seizure frequency, but more study is needed.

# Botanical Medicine and Epilepsy

Botanical medicines can be safely used by people with seizure disorders, provided there are no interactions with their anticonvulsant medications.

# Botanical Medicine and Epilepsy

Botanical medicines can interfere with seizure control by:

- Decreasing the seizure threshold
- Having pro-convulsant effects
- Interfering with the absorption or metabolism of anticonvulsant medications

# Botanical Medicine and Epilepsy

## Botanicals That May Decrease the Seizure Threshold

- Borage (*Borago officinalis*)
- Damiana (*Turnera diffusa*)
- Evening primrose oil (*Oenothera biennis*)
- Ginkgo (*Ginkgo biloba*)
- Ginseng (*Panax ginseng*)
- Goldenseal (*Hydrastis Canadensis*)
- Green tea (*Camellia sinensis*)
- Guarana (*Paullinia cupana*)
- Wormwood (*Artemesia absinthium*)
- Yohimbe (*Pausinystalia yohimbe*)



# Botanical Medicine and Epilepsy

## Botanicals That May Have Pro-Convulsant Effects

- Bearberry (*Arctostaphylos uva ursi*)
- Clove (*Syzygium aromaticum*)
- Coffee (*Coffea spp.*)
- Ephedra/ Ma Huang (*Ephedra sinica*)
- Ergot (*Claviceps spp.*)
- Eucalyptus (*Myrtacea spp.*)
- Juniper (*Juniperus communis*)
- Kava (*Piper methysticum*)
- Monkshood (*Aconitum napellus*)
- Oleander (*Nerium oleander*)
- Pennyroyal (*Mentha pelugium*)
- Sage (*Salvia officinalis*)
- St. John's Wort (*Hypericum perforatum*)
- Thuja (*Thuja occidentalis*)
- Yohimbe (*Pausinystalia yohimbe*)

# Botanical Medicine and Epilepsy

## Botanicals That Alter the Absorption or Metabolism of Antiseizure Medications

- Garlic (*Allium sativum*)
- Echinacea (*Echinacea spp.*)
- Pycnogenol (*Pinus pinaster*)
- Milk thistle (*Silybum marianum*)
- American hellebore (*Veratrum viride*)
- Mugwort (*Artemisia vulgaris*)
- Pipsissewa (*Chimaphila umbellata*)

# Botanical Medicine and Epilepsy

Botanical medicines can be used to support the immune system, heal the digestive tract, support hormone balance, improve sleep, mood and energy levels.

# Botanical Medicine and Epilepsy

It is not advisable to take any botanical medicine without supervision from a Naturopathic Doctor knowledgeable on potential side effects and possible interactions with medications.

# Botanical Medicine and Epilepsy

## Medicinal Marijuana

Marijuana (*Cannabis spp.*) is listed as a Schedule II drug under the Canada Controlled Drugs and Substances Act.

Epilepsy is approved in Canada for use under the Marihuana for Medical Purposes Regulations

# Botanical Medicine and Epilepsy

## Medicinal Marijuana

Only Medical Doctors (and some nurse practitioners) are able to provide medical documents for medicinal marijuana use.



# Lifestyle Counseling



# Lifestyle Counseling

**Empowering your  
health is the primary  
goal of Naturopathic  
Medicine.**





# Lifestyle Counseling

**Empowerment is the knowledge to recognize your health needs, and the confidence to take steps to get there.**



# Lifestyle Counseling

**An ND can help you  
identify your  
obstacles to health,  
and help you  
overcome them.**

# Stress Reduction

People with chronic  
illness often report  
high levels of stress  
in their lives



# Stress Reduction

Yoga and mediation  
have been found in  
studies to improve  
seizure control



# Stress Reduction

Meditative practices  
have a multifaceted  
effect on our  
psychology, biology  
and physiology



# Stress Reduction

Functional changes in the immune system, the psychoneuroendocrine system and nervous system have all been found with regular meditation practice



# Acupuncture



# Acupuncture



Acupuncture has been used as a primary treatment option for a variety of conditions for over 3000 years.



# Acupuncture



Animal models suggest that acupuncture can help in decreasing seizures by influencing the release of neurotransmitters – specifically serotonin and GABA.

# Acupuncture



Ear acupuncture may be of greater benefit to people with epilepsy.

Ear point stimulation in studies led to endocrine and neurotransmitter changes consistent with anticonvulsant effects.

# Acupuncture



There are minimal negative side effects from acupuncture and increases in well-being, sleep quality and overall quality of life are often noted.



Questions?

[www.drlisawatson.com](http://www.drlisawatson.com)

[www.integrativehealthinstitute.ca](http://www.integrativehealthinstitute.ca)