Osteoporosis: The Other Silent Killer – A Prescription for Proactivity

The Other Silent Killer
What is Osteoporosis and who is at risk? Osteoporosis is a disease of the skeletal system characterized by low bone mass and deterioration of the bone tissue.

Epidemic Proportions
According to statistics from the National Osteoporosis Foundation, 52 million Americans have low bone density or osteoporosis. 50% of women and 25% of men will break a bone after age 50 due to osteoporosis.

While the symptoms of the disease seldom become debilitating until the latter stages of life, its propagation may begin much earlier.
By 2020, half of Americans over 50 are expected to have low bone density or osteoporosis. A woman’s risk of breaking a hip is equal to her risk of developing breast, uterine and ovarian cancer combined.

**Proactive Prevention of Osteoporosis**

Bone density peaks around age 30 and subsequently declines. Adolescents and young adults should regularly participate in weight bearing activities in order to build up a “bone density reserve.” The American College of Sports Medicine, ACSM, recommends physical activities that generate relatively high-intensity loading forces to augment bone mineral accrual in children and adolescents. Evidence suggests exercise-induced gains in bone mass in children are maintained into adulthood, suggesting that physical activity habits during childhood may have long-lasting benefits on bone health.

**Treatment is Paramount**

While Osteoporosis is preventable, it is not curable. The only option is treatment. Treatment of established osteoporosis is cost-effective irrespective of age (Kanis et al, 2005). Studies have shown that bone mineral density in postmenopausal women can be maintained or increased with therapeutic exercise.

**Basic Bone Anatomy**

Bones are made from collagen, calcium-phosphate complexes, and bone cells. Bone tissue is living, and is constantly being remodeled. The underlying cause of osteoporosis is an imbalance between bone resorption and bone formation. Excessive bone resorption, inadequate formation of new bone during remodeling, and inadequate peak bone mass are all mechanisms by which osteoporosis develops. Aging results in bone being lost more rapidly than it is formed.

**Weight-bearing and Loading Exercise for Bone Health**
Weight bearing activities like walking, jogging, dancing, stair climbing and hiking allow the force of gravity to act through the skeleton. Through this application of force, mechanisms that stimulate bone density are activated in response to the mechanical loading. The training principle of **progressive overload** is fundamental to the effective treatment of osteoporosis.

**Exercise stimulates effective bone modeling/remodeling.**

**Strength Training for Bone Health**

Impact loading exercises are superior to traditional weight-bearing activities for maintaining bone health. Impact loading exercise simply means any exercise that requires you to support your own body weight, including walking, aerobics or weightlifting.

**Resistance training** can be defined as the act of repeated voluntary muscle contractions against a resistance greater than what is normally experienced in daily life. Training of this kind is known to increase strength through changes in both the muscular and nervous systems. In one study, resistance training had more of an effect on bone strength in the hip and lower spine than walking alone (Harvard Men’s Health Watch, 2013). Nine months to a year of regular exercise should be afforded before appreciable increases in bone mass are detected. Proper form and technique are important. Volume, frequency, duration and other training variables should be specific to the condition of the individual.

For individuals with diagnosed osteoporosis, the ACSM’s Resource Manual for Guidelines for Exercise Testing and Prescription (Pescatello, et al, 2014) suggests the following guidelines for physical activity and resistance training aimed to prevent falls:

- One to three sets with five to eight repetitions of four to six weight-bearing, lower-body strength exercises using body weight as resistance
- Activities performed two to three days/week
- Additional resistance may be applied gradually and conservatively

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• Therapy bands & rubber tubing may be used to facilitate range-of-motion exercises
• Avoid impact exercise, spinal flexion against resistance, spinal extension, high compressive forces on the spine, quick trunk rotation

Aerobic Training

Aerobic training is also important to the overall efficiency of the system, and in maintaining bone mass. Aerobic exercises are a system of physical conditioning, such as running, walking, swimming, or calisthenics strenuously performed so as to cause a significant temporary increase in respiration and heart rate. Activities that engage larger muscles like walking, cycling, swimming, and water walking are recommended for overall health, however claims that aerobic exercise can build bone density are false. According to ACSM, “Although aerobic exercises are beneficial and important for overall fitness, they don’t specifically help build bone density”.

Non-Impact Exercises

While non-impact exercises may not directly support bone mass, they still offer immense indirect benefits in the treatment of osteoporosis. Balance exercises (e.g. Tai Chi, aquatic exercises) heighten proprioception and reduce the risk of falling, which is the leading cause of lost independence among the elderly.

Postural exercises improve posture and help support the spine. Functional exercises improve the ability to perform activities of daily living, increasing quality of life and maintaining independence. Individuals who practice Tai Chi have 47% less falls and only 25% of the hip fractures of those who do not (Province et al, 1995). Tai Chi can be beneficial for stunting bone loss in weight-bearing bones in early postmenopausal women (Chan, et al, 2004).
Dietary Approaches to Fighting Osteoporosis

Calcium and Vitamin D - Two of the most important nutrients in fighting osteoporosis are calcium and vitamin D. Calcium is an important component of the bone matrix, while vitamin D assists in its absorption. Supplementation with vitamin D has improved lower extremity muscle performance and reduced risk of falling in several high-quality double blind randomized control trials (Bischoff-Ferrari, et al, 2009). The Food and Nutrition Board of the Institute of Medicine of the National Academies, National Institute of Health, Office of Dietary Supplements recommends the following intake levels for post-menopausal women:

- Calcium: 1200 milligrams/day
- Vitamin D: 10 micrograms/day (400 International Units/day) from ages 51 to 70 (Increase to 15 micrograms/day [600 International Units/day] after age 70)

Protein – Aging may compromise the body’s ability to process protein efficiently. Older adults should be vigilant in their consumption of protein in order to avoid protein malnutrition. In one study with elderly men and women, higher dietary protein intake was associated with a lower rate of age-related bone loss (Hannan, et. al, 2000).

References

American College of Sports Medicine


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National Osteoporosis Foundation.


This article is written by Kevin McMahan, a Health and Wellness Educator for the Monterey Bay Holistic Alliance. Kevin has had a lifelong interest in health and wellness. After graduating from Carmel High School he went on to get an associates degree in social sciences from Monterey Peninsula College, and a bachelors in kinesiology from California State University Monterey Bay. He is a certified personal trainer through the American College of Sports Medicine. “Your health is your wealth”, is something that he always likes to say. The Monterey Bay Holistic Alliance is a registered 501 (c) 3 nonprofit health and wellness education organization. For more information about the Monterey Bay Holistic Alliance contact us or visit our website at www.montereybayholistic.com.

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What are the benefits of yoga? How does the daily discipline of yoga affect the body, mind and spirit?
What is the History of Yoga?

Yoga is a holistic health and wellness activity that both relaxes and energizes the body. Yoga is a Sanskrit word meaning “union with God.” The common belief that Yoga derives from Hinduism is a misconception. Yoga actually predates Hinduism by many centuries. Ancient archeological finds discovered the Indus Valley provided unquestionable evidence that Yoga was practiced earlier than 3,000 B.C.E. and the classical techniques of Yoga may date back to more than 5,000 years. The word Yoga means “to join or yoke together,” and it brings the body and mind together in harmony with one another. The whole system of Yoga is built on three main structures: exercise, breathing, and meditation. One of the earliest texts on Yoga is believed to have been compiled by a scholar named Patanjali. This book contains Yoga theories and practices and is entitled Yoga Sutras (“Yoga Aphorisms”) and is thought to have been written as early as the 1st or 2nd century B.C. or as late as the 5th century A.D. This system is known as “Ashtanga Yoga.” This is the eight limbs of Yoga, and referred to today as Classical Yoga. Most all forms of yoga include a variation of Patanjali’s original ancient yoga system.

What are the Different Types of Yoga?

There are over a hundred different schools of Yoga. There are many Yoga poses or postures within each of the different schools of Yoga.
Some of the most well known schools of Yoga are as follows:

1. **Hatha Yoga** – Hatha Yoga is the most widely practiced form of yoga in the United States. It is the branch of yoga which concentrates on physical health and mental well-being using exercises and breathing control. “Ha” can be translated to mean “sun” and “tha” to mean “moon” meaning to balance the opposite forces.

2. **Raja Yoga** – Raja Yoga means the “King” of Yoga, or the royal path. It is a form of Hindu yoga intended to achieve control over the mind and emotions.

3. **Jnana Yoga** – Jñāna yoga or “path of knowledge” is one of the types of yoga mentioned in Hindu philosophies. Jñāna is a Sanskrit word translated to mean “knowledge”.

4. **Bhakti Yoga** – Bhakti yoga is a spiritual path described in Hindu philosophy as focused on love of, faith in, and surrender to God. It is a means to awaken to God consciousness. It is a selfless devotion of reaching Brahman (God) in loving service.

5. **Karma Yoga** – Karma Yoga is selfless action to reach perfection. “Karma” is a Sanskrit term meaning “action” or deed, either physical or mental. What makes a Karma Yogi is first the experience of union with God, and then selfless action.

6. **Tantra Yoga** – Tantra yoga is a type of yoga designed to awaken the Kundalini energy in the body and addressing relationships and sexuality. In Hinduism, the word Tantra means: 1) weaving and 2) the sacred scriptures of Hinduism, presented as a dialogue between Shiva and Shakti.

7. **Kashmir Shaivism Yoga** – Kashmir Shaivism is a transformative non-dual, yogic philosophy that originated in Kashmir in the ninth century. The goal of Kashmir Shaivism is to merge in Shiva or Universal Consciousness, or realize one’s already existing identity with Shiva, by means of wisdom, yoga and grace.
What Does Research Tell Us About the Effectiveness of Yoga?

Sudarshan Kriya Yoga was concluded to be a potentially effective treatment in reducing or eliminating depression in a study by Janakiramaiah N and others (2000) and a review of clinical studies of the effectiveness of Hatha Yoga on depression by Uebelacker et al (2010).

The practice of yoga has been shown to be therapeutically useful in bronchial asthma. Nagarathna R, Nagendra HR (1985) concluded that “There was a significantly greater improvement in the group who practised yoga in the weekly number of attacks of asthma, scores for drug treatment, and peak flow rate.” However, a 2011 systematic review of clinical studies suggests that there is no sound evidence that yoga improves asthma.

Multiple studies have found yoga to be a helpful treatment in low back pain such as Sherman KJ, Cherkin DC, Wellman RD, et al (2011) and Tilbrook HE, Cox H, Hewitt CE, et al (2011). Other studies have shown yoga to be potentially helpful treatment for cardiovascular disease, such as Raub (2002), type II diabetes mellitus (Innes and Vincent, 2007), stress and hypertension (Kiecolt-Glaser JK, and others, 2010) as well as other conditions. The practice of yoga can also play a role in the rehabilitation of those who have physical and mental challenges (Uma et al, 2008). Many other benefits are inherit in the practice of yoga as described below.

What Are the 30 Benefits of Yoga?

1. Relieves Stress
2. Improves Breathing
3. Eases Pain
4. Improves Circulation
5. Increases Strength
6. Increases Endurance
7. Lowers Heart Rate
8. Develops Inner Peace
9. Lengthens Muscles
10. Increases Flexibility
11. Reduces Cortisol Level
12. Improves Concentration
13. Increases Range of Motion
14. Dissolves Ego
15. Develops Compassion
16. Enhances Energy
17. Heals Ailments
18. Fosters Joy
19. Lowers Weight
20. Lubricates Joints
21. Detoxes the Body
22. Strengthens Abdomen
23. Improves Memory
24. Delays Wrinkles and Aging
25. Burns Fat
26. Improves Posture
27. Improves Metabolism
28. Builds Immune System
29. Improves Balance
30. Brings Harmony

Have you tried yoga? If so, how has it helped YOU? Best wishes for a yoga-riffic day!!

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Janakiramaiah N., Gangadhar B.N., Naga Venkatesha Murthy P.J., Harish M.G., Subbakrishna, D.K., Vedamurthachar A. Antidepressant efficacy of Sudarshan Kriya Yoga (SKY) in melancholia: a randomized comparison with electroconvulsive therapy (ECT) and imipramine Volume 57, Issue 1 , Pages 259-259, January 2000


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What is epilepsy and how is it treated? Are there alternative or natural approaches to treating epilepsy? When it comes to the subject of epilepsy, many people find it difficult to fully understand the disorder and all of its characteristics. Even though signs of epilepsy in people were present centuries ago, epilepsy is a relatively new discovery in the world of health. Before the advancement of medical technology, those with epilepsy might have been looked upon by others with
The Center of Disease Control & Prevention states that “2.3 million adults and 467,711 children (0-17 years of age) in the United States have epilepsy”. The incidence of the diagnosis of epilepsy has increased in the last few decades. There is a higher incidence of seizures among infants and elderly citizens over the age of 70.

What is Epilepsy?

Epilepsy is a term used to express an array of brain disorders caused by seizures. Depending on the type of epilepsy, the disorder may be short-term or long-term. Epilepsy is characterized by a tendency for recurrent seizures. A seizure occurs when nerve cells in the brain signal abnormally causing temporary disruption in brain function. Neurons are overly stimulated which can lead to involuntary muscle spasms or convulsions, changes in behavior and/or changes in awareness or sensation. There are three main types of seizures: generalized seizures, partial or focal seizures and absence or petit mal seizures. Generalized seizures involve all parts of the brain. The Epilepsy Foundation provides the sub-types of generalized seizures in the following:

- Grand Mal Seizures - unconsciousness and convulsions
- Myoclonic Seizures - isolated jerking movements
- Clonic Seizures - repetitive jerking movements
- Tonic Seizures - muscle stiffness
- Atonic Seizures - loss of muscle tone

Symptoms Specific to Types of Seizures
Generalized or tonic clonic seizures affect the entire brain. The person falls to the floor and shakes or twitches uncontrollably, and is unable to speak.

**Generalized or Tonic-Clonic Seizures** – With a generalized or tonic-clonic seizure, the person experiences muscle stiffness, loss of consciousness and/or flailing arms and legs. They may lose control of bowel or bladder, may have trouble breathing and turn blue or be foaming at the mouth.

The generalized seizure may last seconds or minutes. After the seizure, the person may feel very confused and it may take up to an hour for him/her to fully regain awareness of the situation.

**Partial or Focal Seizures** – During partial or focal seizures, part of the brain is affected. The part of the brain that is affected will determine which kind of symptoms arise. For example, if the occipital lobe is affected, the person may experience temporary blurry vision or is extremely sensitive to light. Within this category of seizures, there are also simple and complex partial seizures. Refer to diagrams A and B below.

A. Simple Partial Seizures
Simple partial seizure symptoms include arm twitching, tingling of face or one side of the body, seeing flashes of light, hearing ringing or hissing, sweating or flushing, facial grimacing or turning of head to one side.

B. Complex Partial Seizures

Complex partial seizure symptoms include chewing movements, wetting lips, and picking at clothing, dysphasia or trouble speaking, and auditory, visual or olfactory hallucinations.

Absence seizures can occur many times in a day. People who have these seizures may exhibit moments of confusion, staring, blanking and excessive blinking. Often absence or petit mal seizures go undetected because episodes can be brief but happen multiple times during the day or multiple times every hour. For more detailed information on each of the seizure types and symptoms, the Epilepsy Foundation is a very good resource.

Types of Epilepsy

The type(s) of seizure(s) a person has dictates which type of epilepsy is present. Epilepsy is characterized by the types of seizures a person exhibits. The major types of epilepsy include but are not limited to the following:
Idiopathic Generalized Epilepsy

Since there are so many different types of epilepsy, we will focus on idiopathic generalized epilepsy (IGE) or primary generalized epilepsy. According to an article written by Selim Benbadis & Leanne Heriaud from Tampa General Hospital, entitled “Idiopathic Generalized Epilepsy,” patients with IGE experience the following type of seizures:

- Patients with IGE have one or more of 3 types of (primary generalized) seizures: myoclonic, absence and generalized tonic-clonic seizures.
- One type may be the only or main type in a given patient.
- Generalized tonic-clonic seizures are convulsions of the whole body lasting 1-2 minutes, and are the most common and most dramatic type of seizures.
- Absence seizures are brief staring spells with arrest of activity, often with eye fluttering, which last just a few seconds.
- Myoclonic seizures are very brief isolated body jerks that tend to occur in the morning.

Cause(s) of Idiopathic Generalized Epilepsy

Idiopathic generalized epilepsy is presumed to have a genetic cause however in many cases of epilepsy, a family history of the disorder may not be present. Patients with IGE who have a family history of the disorder may find it difficult to determine which family member will be born with IGE. The symptoms or seizures associated with IGE often start during childhood or adolescence.

- Seizures that occur during childhood and associated with high fevers are termed “febrile seizures,” and are not uncommon. Children and adults can have seizures and not be diagnosed with epilepsy. The diagnosis of epilepsy is not made after only one incidence of seizure, but instead it is made after recurrent episodes of seizures. The Center of Disease Control & Prevention offers some possible theories of events that may lead to epilepsy:
  - Oxygen deprivation during childhood
  - Brain infections such as meningitis, encephalitis, or brain abscess
  - Traumatic brain injury or head injury
  - Stroke resulting from a block or rupture of a vessel in the brain
  - Other neurologic brain diseases such as Alzheimer Disease
  - Brain Tumors
  - Certain Genetic Disorders

Diagnosis of Idiopathic Generalized Epilepsy

For physicians, it’s challenging to exactly pinpoint the type of epilepsy a patient may have. Patients with IGE have normal intelligence and score in the normal range on neurological exams. One method to most accurately diagnose a patient with IGE is to perform electroencephalogram (EEG) tests.
Flat metal discs are attached to the patient’s scalp to track electrical activity in the brain. When the patient is having a seizure, the device documents the spikes. Other tests to assist physicians in diagnosing epilepsy include: Magnetic Resonance Testing (MRI), Positron Emissions Tomography (PET) Scan and Magnetic Resonance Spectroscopy (MRS). A good resource for more information about diagnostic tests for epilepsy is the John Hopkins Hospital School of Medicine, Neurology and Neurosurgery, “Diagnosing Seizures and Epilepsy.”

Orthodox Treatments for Idiopathic Generalized Epilepsy

No cure for Idiopathic Generalized Epilepsy (IGE) currently exists so finding the proper treatment is very important to maintain a healthy lifestyle. People with IGE can live a normal life span.

**Prescription Drugs** — Most patients diagnosed with idiopathic generalized epilepsy take medication to control their seizures. All prescription drugs have side effects. Some have potentially severe side effects. The medications to help control the incidence of seizures in patients with IGE include but are not limited to the following:

- Valproate
- Lamotrigine
- Topiramate
- Levetiracetam
- Ethosuximide
- Zonisamide

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<td><strong>Drug</strong></td>
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<td>Carbamazepine</td>
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A list of antiepileptic drugs, their FDA-approved indications, side effects, and potential severe reactions. FDA = Food and Drug Administration; GTC = general tonic-clonic; IGS = Idiopathic generalized seizures; LGS = Lennox–Gastaut syndrome.

Alternative treatments for epilepsy include:

- **Ketogenic Diet** – A ketogenic diet may be considered to control IGE seizures. The diet is high in fat and low in carbohydrates. Ketones are formed when fat is used for the body’s source of energy. High ketone levels have been indicated to increase seizure control. Vining concludes, in a research review entitled “Tonic and atonic seizures: medical therapy and ketogenic diet.” Epilepsia, 2009, that “Although these seizures are often very difficult to control, some of our medications/therapies have been shown to be effective.

  Recommendations concerning the efficacy of these therapies and a review on the newer therapies are provided. In addition, the ketogenic diet has been particularly successful in treating these seizures; this is discussed in some detail.”

Ketogenic diets have been successful with pediatric epilepsy in young children. Almost half of children and young people with epilepsy who have tried some form of this diet reduced seizures by at least 50% and maintained this decrease even after discontinuing the diet. Constipation, was the most common negative effect, affecting about 30% of patients, due to fluid restriction. This led to increased risk of kidney stones.

- **Biofeedback** – Biofeedback has been found to be an effective treatment for epilepsy. Relaxation techniques are used to control the body’s functions such as heart beat and blood pressure. Biofeedback may help control seizures that are triggered by stressful life events. In 10 research studies by Tan et al., (2009), Meta-analysis of EEG biofeedback in treating epilepsy, studied 87 patients whose seizures were not controlled by drug therapy. Those with contingent EEG biofeedback all the studies showed fewer weekly seizures and a significant reduction \( P < 0.05 \) in the frequency of seizures. The researchers concluded that neurofeedback training is a possible treatment in patient whose seizures do not respond to medical therapies.

- **Herbal remedies** – Since ancient times, herbal remedies have been utilized in Traditional Chinese medicine for epilepsy.
In the US, herbal medicines are regulated by the 1994 Dietary Supplement and Health Education Act. Herbal remedies might be helpful in reducing the incidence of seizures, however, a study by Saper et al., 2004, "Heavy metal content of Ayurvedic herbal medicine products." conducted in Boston with 70 herbal medicines found that 20% of these products contain potentially harmful levels of neurotoxic materials such as lead, mercury or arsenic that may cause seizures. 80% of the preparations did not contain harmful products, however. Some of the herbs that have been known to be effective in treating epileptic seizure side effects (nausea, headache, fatigue, etc.) are listed below:

- Ailanthus altissima (Tree of Heaven)
- Artemisia vulgaris (mugwort)
- Calotropis procera (calotropis)
- Cannabis sativa (marijuana)
- Centella asiatica (hydrocotyle)
- Convallaria majalis (lily of the valley)
- Dictamnus albus (burning bush)
- Paeonia officinalis (peony)
- Scutellaria lateriflora (scullcap)
- Senecio vulgaris (groundsel)
- Taxus baccata (yew)
- Valeriana officinalis (valerian)
- Viscum album (mistletoe)

Gingko biloba, ephedra, eucalyptus, pennyroyal, shankhpushpi, star fruit, star anise & sage are some of the herbal medicines containing neurotoxic components which can induce seizures (Samuels et al., 2008), and should not be used by epileptic patients. More research is needed regarding the effectiveness of herbal remedies.

- **Essential Oils** – Essential oils can be effective in calming the epileptic patient and preventing the symptoms of epilepsy. Such calming oils include: jasmine, ylang ylang, chamomile, and lavender (not spike lavender which is not recommended). Research was carried out at the University of Birmingham’s seizure clinic which involved using essential oils with individuals who had epilepsy.

The studies used **aromatherapy massage** to allow individuals to associate the
smell of an essential oil with a state of relaxation. Researchers concluded that the aroma triggers relaxation and can help to reduce seizures. According to the University of Maryland Medical Center, the following essential oils should be avoided: Eucalyptus (Eucalyptus globulus), Fennel (Foeniculum vulgare), Hyssop (Hyssopus officinalis), Pennyroyal (Mentha pulegium), Rosemary (Rosmarinus officinalis), Sage (Salvia officinalis), Tansy (Tanacetum vulgare), Thuja (Thuja occidentalis), and Wormwood (Artemesia absinthium). For more information about aromatherapy contact the Aromatherapy Council.

- **Acupuncture** - The effectiveness of acupuncture in treating epilepsy has not been statistically significant. A review of acupuncture in epilepsy, “Acupuncture for epilepsy” by Cheuk et al., (2009) included eleven randomized controlled trials. The authors suggested that studies using a larger sample size with appropriate standardized control groups are necessary to assess the effectiveness of acupuncture on treating epilepsy. They concluded that more studies are needed.

- **Yoga** - Yoga has been shown to be an effective treatment for epilepsy patients. In a research study conducted by Sathyaprabha et al., 2008, “Modulation of cardiac autonomic balance with adjuvant yoga therapy in patients with refractory epilepsy,” 18 members performed yoga (breathing exercise, meditation & yoga postures) and 16 members performed non-yoga exercise (quiet sitting & simple physical exercise) for one hour daily for 10 weeks. The researchers determined that the yoga group showed significant reduction in seizures ($P<0.05$) with improved parasympathetic parameters compared to no changes in the non-yoga exercise group. Thus it was concluded that yoga might be used effectively as an alternative therapy in management of autonomic dysfunction in patients with refractory epilepsy.

- **Homeopathic Remedies** - A few studies examined the effects of homeopathic remedies but were inconclusive. More research is needed. The following homeopathic remedies may be effective with eliminating associated epileptic symptoms (such as nausea, dizziness, and fever) and have no harmful side effects.

  - **Belladonna** — for seizures with a high fever
  - **Causticum** — for individuals with seizures triggered by feelings of sadness, grief, hopelessness and fear
  - **Cicuta** — for individuals with seizures after a head injury
  - **Cuprum metallicum** — for individuals with mental dullness; may be triggered by menstruation or vomiting

- **Vitamin Supplements** - Eating a well-balanced diet rich in vitamins and minerals may help maintain adequate mental function. People with epilepsy taking seizure medications do appear to have an increased need for **calcium** and **vitamin D** to help keep their bones healthy. Large doses of vitamin
supplements, unsupervised, do not improve epilepsy and may even be harmful. Some epileptic medications can result in depletion of nutrients and vitamins. Folic acid supplements can be helpful in replenishing vitamin loss caused by medication. According to A.R. Gaby (2007), in a review entitled, “Natural Approaches to Epilepsy,” clinical observations and laboratory findings support the benefits of Vitamin E, magnesium, Manganese, thiamine (to improve cognitive function), folic acid, biotin, vitamin D, and L-Carnitine (to prevent valproate toxicity with epilepsy patients.

Vitamin E was found to be effective in reducing seizures in children according to a 1989 study conducted by Ogunmekan AO, MD. Twenty-four children aged 6-17 were randomly assigned to 400 IU/day vitamin E or placebo for three months. Of the 12 patients given vitamin E, 10 had a greater than 60% reduction in seizures. None of the placebo group had greater than 60% reduction. 6 out of the 12 children in the vitamin E group had 90-100% reduction in seizures. The study was statistically significant (p<0.05). People who not take take blood thinners should not take Vitamin E.

Other supplements such as Vitamin B6, taurine, vitamin K, melatonin and progesterone, were either uncontrolled trials or case reports, and may be effective with epilepsy symptoms, but more controlled studies and double blind studies are needed. There has been some research on the effects of omega-3 fatty acids on the reduction of epileptic seizures. Fish oil is mainly composed of omega-3 fatty acids (FAs), eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA). Pischo et al. (2003) concluded that increasing the intake of omega-3 FAs can reduce the plasma inflammatory markers and Schlanger (2002) concluded in a study entitled, “Diet enriched with omega-3 fatty acids alleviates convulsion symptoms in epilepsy patients,” that EPA could reduce seizures by decreasing these markers.

Always consult with your trusted health practitioner when making decisions regarding treatment. Alternative and complementary holistic health practices can be used in conjunction with orthodox or western medicine. Trust your own body wisdom and seek out professional advice.

**Resources:**
- Center of Disease Control & Prevention
- Epilepsy Foundation
- Johns Hopkins Medicine
- Epilepsy Society – Complimentary Therapies
- NYU Langone Medical Center Comprehensive Epilepsy Center – Alternative Therapies
- Epilepsy Health Center – Alternative Treatments to Epilepsy – WebMD
- University of Maryland Medical Center -Seizure Disorders
- National Center of Complementary and Alternative Medicine

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This article is written by Hang Pham and Jean Voice Dart. Hang Pham is a Monterey Bay Holistic Alliance Health and Wellness Educator. Hang Pham was born in Hoc Mon, Vietnam. She came to America in 1994, becoming a U.S. citizen in 2011. Hang graduated from Seaside High School with diploma and received her AA in General Studies from Monterey Peninsula College in 2011. She received her BA in Collaborative Health and Human Services from California State University Monterey Bay (CSUMB) in 2012. In addition to working as a volunteer staff with the Monterey Bay Holistic Alliance, she currently works as a Clerical Aid in the Human Resources Department of Salinas City Hall.

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On April 25, a traditional Arabic Language Party was held at the Faculty of Asian and African Studies in St. Petersburg State University. The program included a stage performances, quizzes, poetry readings, Arabic songs and dances. At this event second year students showed the second episode of the film “Hamlet” in Arabic, which was directed by Olga Bernikova.

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**Shakespeare (sonnet 130)**

10 Thursday Apr 2014. Posted by gevorgsayadyan in Homeworkes. ≈ Leave a comment.

My mistress' eyes are nothing like the sun; Coral is far more red than her lips' red; If snow be white, why then her breasts are dun; If hairs be wires, black wires grow on her head. I have seen roses damasked, red and white, But no such roses see I in her cheeks; And in some perfumes is there more delight Than in the breath that from my mistress reeks.