



Headache Wellness Center

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Naturopathic Medications

This article will focus on naturopathic and non-medicinal treatments that may be effective for migraine. The highest standard of evidence, the randomized double-blind placebo controlled trial (RDBPCT), is often lacking with these treatments. Many naturopathic medications are already generic and can be purchased at low cost. This is a disincentive for researchers and pharmaceutical sponsors who rely upon a future consumer market when developing medical drug studies. As a result most evidence reported in the literature comes from retrospective chart reviews, anecdotal reports, or unblinded studies without placebo. The few RDBPCTs available within the headache or neurological literature are referenced in the article below. As regards to procedural interventions, such as acupuncture, moxibustion, or physical therapy, RDBPCTs are difficult to design as the patient or study subject is rarely blinded to the treatment and placebo controls are challenging to create. This article will share the results of the most recent 2012 American Headache Society (AHS)-American Academy of Neurology (AAN) Guidelines for Prevention of Episodic Migraine (Headache 2012;52:930-945) as well as research obtained from other sources and personal opinion.

Migraine headache is a common disabling genetic disorder. There is currently no cure for migraine. Colloquially referred to as “sick headaches,” migraine is one of the most common conditions, affecting approximately 12% of all individuals in the United States or nearly 36 million people. Migraine is often characterized by severe one-sided throbbing headaches with nausea or vomiting and associated with sensitivities to lights, sounds, movements, and smells. Migraine is significantly more frequent in women than men (3:1). Many migraineurs will experience their headaches for years or even decades without the correct diagnosis. The most common age range during which individuals experience migraine is from 25 to 55 years old. Migraine in children is not uncommon and may initially present as nausea with recurrent vomiting; abdominal pain; or frequent dizziness or vertigo; with or without headache pain. These subtypes of migraine are called “cyclical vomiting,” “abdominal migraine,” and “benign paroxysmal vertigo of childhood” respectively. These syndromes may not be recognized as migraine variants immediately, especially if a close family member does not suffer from migraine. Many of these children will develop more characteristic features of migraine as they age.

Many patients have been treated for years with antibiotics, sinus surgery, allergy medications, and the like although the true disorder is migraine. Migraine is a disorder of the brain. It is important not to confuse the migraine trigger with the disease. Stress, weather and barometric pressure changes, hormonal fluctuations, and food items are common migraine triggers, but they are not the disease. Thus, individual patients and medical providers who label migraines as “stress headaches,” “sinus headaches,” “weather headaches,” “menstrual headaches,” and “red wine headaches,” are often delaying the diagnosis and the correct utilization of effective and disease-modifying migraine treatments. Effective treatment is available and can reduce the frequency of the disorder and successfully treat the individual migraine attack when it occurs.

Butterbur. Butterbur is the only naturopathic product graded Level A (established as effective) in the 2012 AHS-AAN guidelines. Butterbur, or *petasites hybridus* root, is a shrub in the Asteraceae or daisy family. Butterbur has been used for centuries for its medicinal effects, including wound healing, pain and fever reduction, and headache. The plant parts are highly toxic and contain carcinogenic pyrrolizidine alkaloids which are hazardous if consumed. A study published in 2004 (Neurology 2004;63:2240-2244)

using 75 mg capsules twice per day of Petodolex (manufactured by Weber and Weber GmbH & Co, Germany) demonstrated statistically significant improvement over placebo. Petodolex brand is recommended as the processing has removed the alkaloids and its manufacturing meets the safety requirements of the German Health Authority. Butterbur is generally well-tolerated with the most common side effect being burping. The mechanism of action of butterbur is unknown but may be related to anti-inflammatory, anti-leukotriene, or calcium channel regulation. Butterbur is a preventive medication, dosed twice per day, and may take months for response to occur. In the above study the greatest response with butterbur occurred during the third month of the study.

Magnesium. Magnesium (Mg^{++}) is an essential cation required for the proper functioning of many biochemical reactions in the human brain and body. Certain studies have found low levels of ionized magnesium in patients during acute migraine attacks. Supplementation with intravenous magnesium sulfate in these patients successfully reduced or aborted migraine pain. Magnesium deficiency may be more common in women who experience menstrually-related migraine. Different forms of magnesium have been used in research settings including magnesium sulfate, magnesium oxide, and magnesium citrate. The 2012 AHS/AAN guidelines rate magnesium as Level B (probably effective). The particular formulation recommended is 600 mg trimagnesium dicitrate taken once daily.

Riboflavin (Vitamin B2). Riboflavin is a water-soluble B vitamin. Riboflavin is an essential component of the cofactors flavin adenine dinucleotide (FAD) and flavin mononucleotide (FMN). These flavins are involved in energy and anti-oxidant reactions in the body. Deficiencies of riboflavin or its cofactors may lead to dysfunction of energy metabolism in the mitochondria and cellular membrane stability. A RDBPCT of riboflavin 400 mg capsules daily versus placebo demonstrated superiority of riboflavin in the reduction of migraine frequency. The effect of riboflavin was seen maximally after three months of daily use (Neurology 1998;50:466-470). The 2012 AHS/AAN guidelines rate riboflavin (vitamin B2) as Level B (probably effective) at a dose of 400 mg per day.

Feverfew. Feverfew (*Tanacetum parthenium*) is a member of Asteraceae or daisy family. It is another naturopathic product that has been used for centuries, treating such ailments as fever, infertility, arthritis, and headaches. Its mechanism of action in migraine may be related to its active biochemical parthenolide. Inconsistent results for migraine prevention have been observed with feverfew. Despite these inconsistent reports the 2012 AHS/AAN guidelines rate feverfew as Level B (probably effective). Because of these inconsistencies, no single dose is recommended, but rather a range of 50 mg to 300 mg taken twice per day, or 18.75 mg three times per day of a specially formulated feverfew preparation MIG-99.

Coenzyme Q10. A single study of coenzyme Q10 (Neurology 2005;64:713-715) demonstrated effectiveness in migraine prevention. A dose of 100 mg taken three times per day was superior to placebo by the third month of treatment for frequency reduction. Coenzyme Q10 did not show reductions in migraine pain severity or duration of individual migraine attacks (i.e. the subjects experienced fewer migraines overall, but the migraines were still as severe and lasted as long compared to before treatment). The authors hypothesize that coenzyme Q10 may reduce impaired oxygen metabolism due to mitochondrial dysfunction that may play a role in migraine pathophysiology. The 2012 AHS/AAN guidelines rate coenzyme Q10 as Level C (possibly effective).

Acupuncture. Acupuncture is another non-medicinal option for the treatment of migraine headaches. Acupuncture has been used in various forms for over two thousand years. Acupuncture is part of traditional Chinese medicine. The World Health Organization endorses acupuncture as effective for a variety of conditions, including headache, depression, hypertension, neck and lower back pain, nausea, facial pain, rheumatoid arthritis, and stroke. Rigorously controlled randomized double-blinded placebo controlled trials for acupuncture in the treatment of migraine headache are lacking. Mock treatment with sham needles have been used in recent trials, but the placebo effect is often high. Most clinical trials on acupuncture do not use consistent study designs, thus it is difficult to compare endpoints between studies.

Generally acupuncture is considered safe with few significant risks. In my own headache specialty practice those patients treated with acupuncture report a well-tolerated treatment with mild to moderate benefit. Acupuncture is typically used as a preventive therapy in migraine, and is incorporated as long-term treatment. Some therapists may want to administer acupuncture to patients multiple times per month. Acupuncture may not be covered by insurance.

The practice of acupuncture is regulated in the State of North Carolina by the North Carolina Acupuncture Licensing Board (NCALB). It is unlawful to practice acupuncture in North Carolina without a license. Qualified practitioners have graduated from a three-year postgraduate acupuncture college or training program. License renewal is every two years. Exceptions to the requirement of licensure include chiropractors and physicians, who may not have had comparable training as certified acupuncturists. Licensed acupuncturists can be found on the NCALB website at www.ncalb.com.

Wellness Approach. Perhaps the most important aspect of migraine care is wellness. Although the health care system in the United States is currently the most sophisticated technologically, science alone is insufficient to satisfactorily treat incurable chronic genetic disorders such as migraine. A Wellness Approach is the conscious effort by an individual to be healthy. A Wellness Approach represents a healthy lifestyle. Most of my patients benefit significantly from a change in their habits which may currently include eating processed foods, consuming processed beverages, consuming caffeine, smoking, sleeping irregularly, failing to exercise consistently, being overweight or obese, and managing stress poorly. When an individual patient becomes willing to commit to physical and mental health, the nervous system as it relates to migraine improves. While even the most health-conscious and fit migraine patient will still experience migraine headaches, it is the unhealthiest of migraineurs who seem to suffer the greatest.

Finally, a few cautionary words. Although certain products may be available as over-the-counter medications without a prescription it does not necessarily make the products any safer or less likely to cause side effects when compared to prescription medications. Any individual who chooses to use over-the-counter products should do so in consultation with their medical provider so that proper dosing and education can be performed. The medical providers at Headache Wellness Center are well-informed regarding most naturopathic remedies effective for migraine and can counsel an individual in the benefits and risks of these products.