Your Monthly Update

Dear Colleague

Welcome to the July 2013 newsletter from Pure Bio Ltd.

Did you know:

Honokiol – derived from the bark of the magnolia tree and used in traditional Japanese medicine – has been shown to stop the inflammation in the brain that causes nerve cell damage in Alzheimer's disease, Parkinson's and MS. Honokiol passes easily through the blood-brain barrier so can also treat brain inflammation resulting from infection (*JNeuroinflammation, 2012; 9:57*)

Don't forget our website on www.purebio.co.uk. We always welcome feedback and suggestions.

Migraine

Protocol Summary

Ranking	Nutritional Supplements	Botanical Medicine
Primary	Magnesium Vitamin B2	Butterbur Feverfew
Secondary	5-HTP Coenzyme Q10 Vitamin B12	
Other	Calcium Fish oil (EPA/DHA) Melatonin SAMe Vitamin D	Cayenne Ginger Ginkgo

Primary – Reliable and relatively consistent scientific data showing a substantial health benefit.

Secondary – Contradictory, insufficient, or preliminary studies suggesting a health benefit or

minimal health benefit.

Other – An herb is primarily supported by traditional use, or the herb or supplement has little scientific support and/or minimal health benefit.

Diagnosis

Symptoms of migraine may include:

- Moderate to severe pain on one or both sides of the head
- Pulsating or throbbing pain
- Pain worse with physical activity
- Nausea with or without vomiting
- Sensitivity to light or sound
- Typically begin am, peak within 1 hour, last 4 to 24 hours and occur several times per month
- May last 1 to 3 days

Approximately 20 percent of people with migraines experience an aura prior to the migraine. Symptoms of an aura include flashes of light, zig zags, or blind spots in vision or tingling in one arm or leg

The Facts:

- Affects 15-20% of men & 25-30% of women
- Usually begin in childhood, peak in 20's or menopause
- Familial incidence
- Sequence of events is proposed to be excessive intracranial arterial constriction (causing inadequate blood supply to the brain), followed by rebound dilatation of the extracranial vessels (the headache phase)
- Dilation of extracranial vessels occurs with heavy exercise, hence the exercise-induced migraine
- Evidence suggests migraine sufferers have an inherited abnormality of vascular system control – faint more easily on standing
- The platelets of migraine sufferers aggregate more readily than normal platelets, both normally and when exposed to serotonin and catecholamines, similar to that seen in TIAs
- Migraine accompanied by rise in plasma serotonin levels, released by platelets in response to serotonin stimulation

Classic migraine sufferers have a 2 x increase in incidence of mitral valve prolapse – known to damage platelets and increase aggregation

Dietary Modification

Food restriction will invariably improve symptoms in the majority of migraine sufferers

Mechanisms by which intolerances induce migraine:

- Abnormal response to pharmacologically active substances in food – tyramine, histamine etc.
- Deficiency in the enzyme MAO (mono amine oxidase)
- Platelet abnormality
- Food allergy – allergic reactions to food cause the platelets to release serotonin
- Some migraine sufferers have an abnormality of blood-sugar regulation - reactive hypoglycemia. In these people, improvement in the frequency and/or severity of migraines results from dietary changes designed to control blood sugar levels. Controlling hypoglycaemia involves strict avoidance of refined sugar, caffeine, and alcohol, and eating small, frequent meals (up to 6 times per day). Associated adrenal dysfunction needs to be addressed

In children suffering migraines who also have epilepsy, there is evidence that eliminating offending foods will also reduce the frequency of seizures.

Foods That May Trigger Migraines

Foods and Additives	Responsible Chemical
Beers, wines, certain liquors, cheese and cheese-food products, fresh and processed meat (e.g., hotdogs), seafood products, peas, pickles, olives, and sauerkraut.	**Tyramine and phenylethylamine. (These chemicals tend to become more potent in foods that are stored improperly)**
Banana, red plums, avocado, pineapple, kiwi, strawberries. Deadly nightshade group, spinach, cabbage. Smoked meat, aged cheeses, oily fish. Champagne, black tea. Yeast products, vinegar, peanuts, chocolate	**Histamine – as above**
Apple juice, coffee, red wine, and tea.	**Tannin. Caffeine withdrawal (coffee, tea)**
A common seasoning, most notably found in food prepared by Chinese restaurants but also contained in many commercial products.	**Monosodium glutamate.**
Chocolate, Cheese, Alcohol.	**Vasoactive amines that cause vasoconstriction**
Red wine	**Flavonoids that block the activity of MAO**
Artificial sweeteners.	**Aspartame**
Preservatives in wines, dried fruits, and other products.	**Sulphites**

Lifestyle Modification

Sleep patterns - Improving sleep habits is important for those who suffer with migraine.

Aerobic Exercise - Exercise is certainly helpful for relieving stress and an analysis of several studies reported that aerobic exercise might help prevent migraines. It is important, however, to warm up gradually before beginning a session, since sudden, vigorous exercise might actually precipitate or aggravate a migraine attack.

Avoid Oral Contraceptives - Hormonal agents, such as oral contraceptives (OCs) or hormone replacement therapy, have a mixed effect on women with migraines. Oral contraceptives have been associated with worse headaches in 18% to 50% of women and have also been linked to a higher risk for stroke in women with classic migraines (with auras). Young women should avoid or stop oral contraception if they have classic migraines, migraines that worsen or change character after OCs, if they have close relatives with stroke or heart disease, or if they smoke.

Some evidence suggests, however, that OCs may help prevent true menstrual migraines (which do not have auras). Keeping a migraine record for at least three menstrual cycles can help to confirm whether a woman actually has a true menstrual migraine.

Infection with ***Helicobacter pylori*** may predispose people to migraine headaches. In a preliminary trial, 40% of migraine sufferers were found to have ***H. pylori*** infection. Intensity, duration, and frequency of attacks of migraine were significantly reduced in all participants in whom the ***H. pylori*** was eradicated. Controlled clinical trials are needed to confirm these preliminary results.

Integrative Options

Acupuncture - Many reports have shown acupuncture to be useful in the treatment of migraines. In a preliminary trial, 18 of 26 people suffering from migraine headaches demonstrated an improvement in symptoms following therapy with acupuncture; they also had a 50% reduction in the use of pain medication. Previous preliminary trials have demonstrated similar results, which have also been confirmed in placebo-controlled trials. Improvement has been maintained at one and three years of follow-up. In preliminary research, patients suffering from chronic headaches of various types (including migraine, cluster, or tension headaches) have also experienced an improvement in symptoms following acupuncture treatment. In a trial comparing acupuncture to traditional drug therapy, a significantly greater cure rate was achieved in the acupuncture group relative to the drug treatment group (75% vs. 34%).

Dry needling is a form of acupuncture that does not utilize traditional Chinese medicine diagnosis or traditional acupuncture points for treatment. Instead, acupuncture needles are inserted into painful muscle areas (trigger points). A study of 85 patients comparing dry needle acupuncture to conventional drug therapy found a similar reduction in frequency and duration of migraine attacks in both treatment groups.

Percutaneous Electrical Nerve Stimulation (PENS) is an electrical nerve stimulation technique that has become increasingly popular in the alternative management of pain syndromes. PENS involves insertion of needle probes, similar to acupuncture, at specific therapeutic points and then applying low levels of electrical current. In one study, PENS was significantly more effective than needles alone at relieving pain in migraine headaches (tension headaches and post-traumatic headaches were also improved).

Manipulation - Migraine sufferers often have neck pain, tenderness of the spinal joints of the neck, and limited ability to move the neck, all of which suggest the presence of neck problems that could respond to manipulation. Two preliminary trials reported significant benefit to 75–80% of migraine patients treated with manipulation, while a third preliminary trial reported reductions in headache frequency and duration, nausea, and sensitivity to light one year after the completion of a two-month course of treatment. A controlled trial compared three types of manipulation and found all three provided significant improvement in headache frequency, severity, and duration. Another controlled trial compared two months of manipulation to sham (fake) manipulation and to placebo treatment with a non-functioning electrical unit. People in the manipulation group had significantly more improvement of headache frequency and duration, and of ability to function in daily life; they also used less medication. The largest controlled trial to date compared eight weeks of manipulation, drug therapy, or both treatments in combination. Manipulation was as effective as the medication in reducing an overall score of migraine suffering, but had fewer reported side effects.

Nutritional Supplement Treatment Options

Magnesium ***– 360 – 600mg daily.*** Compared with healthy people, people with migraines have been found to have lower blood and brain levels of magnesium. Preliminary research in a group of women (mostly premenopausal) showed that supplementing with magnesium (usually 200 mg per day) reduced the frequency of migraines in 80% of those treated. In a double-blind trial of 81 people with migraines, 600 mg of magnesium per day was significantly more effective than placebo at reducing the frequency of migraines. Another double-blind trial found that taking 360 mg of magnesium per day decreased the number of days on which premenstrual migraines occurred.

I.V. magnesium has been reported to produce marked and sometimes complete symptom relief during acute migraines, usually within 15 minutes or less.

Riboflavin (Vitamin B2) – ***400mg daily.*** One group of researchers treated 49 migraine patients with large amounts of vitamin B2 (400 mg per day). Both the frequency and severity of migraines decreased by more than two-thirds. In a follow-up three-month, double-blind trial, the same researchers reported that 59% of patients assigned to receive vitamin B2 had at least a 50% reduction in the number of headache days, whereas only 15% of those assigned to receive a placebo experienced that degree of improvement. The effects of vitamin B2 were most pronounced during the final month of the trial. In a preliminary study, a much smaller amount of vitamin B2 (25 mg per day for three months) reduced the frequency of migraines by about one-third in chronic migraine sufferers

Cobalamin (Vitamin B12) – ***1mg daily.*** In a preliminary trial, administration of 1 mg of vitamin B12 per day for 3 months reduced the frequency of migraine attacks by at least 50% in 10 of 19 people with recurrent migraines.

5-HTP - ***200 to 600 mg daily for adults, 20 mg for every 10 pounds of body weight for children.*** The cause of migraine headache is believed to be related to abnormal serotonin function in blood vessels, and 5-hydroxytryptophan may affect this

abnormality. In one study, 40 people with recurrent migraines received either 5-HTP (200 mg per day) or methysergide (a drug used to prevent migraines) for 40 days. Both compounds reduced the frequency of migraines by about 50%. Larger amounts of 5-HTP (600 mg per day) were also found to be as effective as medications for reducing migraine headache attacks in adults in two double-blind trials. Migraine attacks were reduced in frequency, severity and duration in 90% of those taking 400 mg per day of 5-HTP in a double-blind placebo-controlled trial. Children who suffered from migraines and had problems sleeping responded well to a daily amount of 5-HTP equal to 20 mg for every 10 pounds of body weight in a controlled trial.

EPA/DHA - Fish oil containing EPA and DHA has been reported to reduce the symptoms of migraine headache in a double-blind trial using 1 gram of fish oil per 10 pounds of body weight. Fish oil may help because of its effects in modifying prostaglandins.

Calcium with Vitamin D3 - Taking large amounts of the combination of calcium (1,000 to 2,000 mg per day) and vitamin D has been reported to produce a marked reduction in the incidence of migraines in several women. However, the amount of vitamin D given to these women (usually 50,000 IU once a week), can cause adverse reactions, particularly when used in combination with calcium***. This amount of vitamin D should be used only under medical supervision.*** Average recommended dosage is 800 to 1,200 mg of calcium and 400 IU of vitamin D per day

CoQ10 – ***100 – 150mg daily.*** In a preliminary trial, supplementation of migraine sufferers with 150 mg per day of coenzyme Q10 for three months reduced the average number of days with migraine headaches by 60%. The beneficial effect of coenzyme Q10 was confirmed in a four-month double-blind study. By the fourth month of treatment, a reduction in migraine frequency of 50% or greater occurred in 47.6% of people receiving 100 mg of coenzyme Q10 TID, but in only 14.4% of those receiving a placebo (a statistically significant difference).

SAMe - Preliminary research also suggests that oral supplements of SAMe (S-adenosyl-L-methionine) may reduce symptoms for some migraine sufferers.

Melatonin – ***5mg daily.*** The function of the pineal gland and its cyclic secretion of melatonin may be disturbed in people with migraine headaches. Preliminary evidence suggests that 5 mg per day of melatonin may reduce symptoms of migraine headache.

Botanical Treatment Options

Butterbur - Double-blind trials have demonstrated that butterbur extract can reduce the frequency of migraine attacks significantly better than placebo. In a double-blind trial, supplementing with an extract of butterbur *(Petasites hybridus)* for four months was significantly more effective than a placebo at reducing the frequency of migraine attacks. The amount of butterbur found to be effective was 75 mg BID of an extract standardized to contain at least 15% petasins. A smaller amount (50 mg BID) was ineffective.

Side effects of butterbur may include indigestion, headache, fatigue, nausea, vomiting, diarrhoea, or constipation. Pregnant or nursing women, children, or people

with kidney or liver disease should not take butterbur.

Butterbur is in the ragweed plant family, so people who are allergic to ragweed, marigold, daisy, or chrysanthemum should not use butterbur.

Feverfew - The most frequently used herb for the long-term prevention of migraines is feverfew. Four double-blind trials have reported that continuous use of feverfew leads to a reduction in the severity, duration, and frequency of migraine headaches –

Studies suggest that taking standardized feverfew leaf extracts that supply a minimum of 250 mcg of parthenolide per day is most effective. Results may not be evident for at least four to six weeks. Although there has been recent debate about the relevance of parthenolide as an active constituent, it is best to use standardized extracts of feverfew until research proves otherwise.

Ginger - A double-blind study found that a combination of feverfew and ginger may be effective for acute treatment of migraines. In the study, 63% of patients taking the herbal preparation experienced analgesia within 2 hours, whereas only 39% taking placebo experienced relief, a statistically significant difference.

Ginkgo biloba extract may also help because it inhibits the action of a substance known as platelet-activating factor, which may contribute to migraines.

Cayenne - There is preliminary evidence that capsaicin, the active constituent of cayenne, can be applied inside the nose as a treatment for acute migraine. However, as intranasal application of capsaicin produces a burning sensation, it should be used only under the supervision of a healthcare practitioner familiar with its use.

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