

HERBS, VITAMINS, MINERALS AND AROMATHERAPY FOR HEADACHE

HERBS

There are several herbs that may be useful for headache patients. There is now a *Physicians' Desk Reference* (PDR) for herbs available in the United States, as well as several excellent books, including *Herbs of Choice* by Varro E. Tyler, Ph.D., Sc.D. (Pharmaceutical Products Press). Quality control is a continuing problem with herbs. Because of the differences in species soil, weather conditions, and adulterants placed into the herbs, different preparations (with the same milligram strength) may have widely varying strength and purities. For instance, a recent study of 10 different preparations of St. John's Wort and feverfew revealed extreme differences among the different farms in strength of the active ingredient in each capsule. Despite these drawbacks, herbs have a wide appeal because of general safety and decreased side effects. However, virtually everything has possible side effects and many of these herbs interact with other drugs and various medical conditions. Patients must tell their doctor exactly what herbs they are taking, as there can be significant interactions.

The primary herb that has been utilized for migraine prevention is feverfew. Ginger has been an effective anti-nausea herb for the nausea associated with migraine. Valerian is utilized as a natural tranquilizer and sleep aid, which is occasionally helpful for headache patients. In addition chamomile may be useful as a mild sedative as well. Kava may also function as a mild sedative and sleep aid. These and other herbs are discussed in the following sections.

FEVERFEW

Feverfew (*Tenacetum parthenium*) has been utilized as a fever reducer since 78 A.D. Its use in headache dates back to the early 1600s. Feverfew is a wildflower (chrysanthemum family) that is very easy to grow in the backyard. This herb has been demonstrated to be mildly effective in reducing the frequency and/or severity of migraine headaches in a number of reasonably controlled studies. The active ingredient appears to be parthenolide, which is a sesquiterpene lactone. This compound inhibits or decreases the clumping up of platelets in the bloodstream, and it may affect prostaglandins. The result of parthenolide activity in the blood may be that we have decreased release of serotonin in the bloodstream. Serotonin is a key in headache. While many people chew the leaves of feverfew, it is easier (but possibly no more effective) to obtain the standardized capsules or tablets. The usual dose is 125 mg of the dried feverfew, containing at least 0.2% parthenolide, once per day. The standardized extract is also available in 200-mg doses, containing up to 0.7% parthenolide. Liquid extract and whole-herb capsules are also available. Patients usually have to take two capsules or tablets per day, because one may not have the potency that is necessary. An adequate daily dose of parthenolide is 250 mcg. While this amount should be contained in the 125-mg capsule or tablet, taking two would usually ensure that we have at least the minimum necessary to help headaches.

Feverfew may take as long as 6 or 8 weeks to become effective. Occasionally we utilize capsules of feverfew with caffeine, or feverfew with guarana (which is essentially caffeine), either as prevention or to treat a headache in progress. These are available from Eclectic Farms (1-800-332-4372). Although feverfew has primarily been utilized to prevent headaches, it will occasionally help to ease a headache in progress. The usual dose would be two or three capsules or tablets, and taking caffeine with the feverfew may increase the effectiveness.

Feverfew should not be used during pregnancy or by women who are nursing. Side effects include minor mouth ulcerations in 10% to 12% of people, irritation of the tongue or the mouth in 7% to 12%, stomach upset, and possibly an increased tendency toward bleeding. Patients on a blood thinner such as Coumadin should not take it. If patients take aspirin, it is theoretically

possible that feverfew could increase their bleeding time. People occasionally demonstrate an allergy to the feverfew. This may be more likely if they are allergic to plants of the ragweed family.

GINGER

Ginger, in capsule form, has been used to offset nausea. The usual dose is one or two capsules every 4 hours, as needed, four per day at most. The whole herb capsules are usually 500 mg, and the standardized dried extract is often available in 150-mg doses. An increased tendency toward bleeding, or prolongation of bleeding, is one possible side effect. Ginger may also be effective in preventing the symptoms of motion sickness.

VALERIAN

Valerian is probably the most effective herbal tranquilizer and sleep aid. Valerian has been a relatively safe herb, with few interactions or side effects. The usual dose is one or two capsules every day as needed, or one teaspoon in one cup of water (prepared as tea). At high doses, headache may ensue. It has been recommended that valerian not be used daily for long periods of time, but long-term toxicity is unlikely.

CHAMOMILE

Chamomile is a mild sedative or relaxant that may help with nausea of migraine. Chamomile may also be useful for other digestive problems, since it is a mild antispasmodic (smooth muscle of the digestive tract relaxant). There are a number of forms of Chamomile, primarily the German versus the English (Roman) variations. In the United States, German Chamomile is most commonly available. As with most herbs, there may be differences in effectiveness among the various species. Chamomile is felt to be a very safe herb. Since Chamomile is relatively expensive and easy to adulterate, quality control has been a problem. Previous studies on commercial Chamomile oil have indicted a high rate of adulteration. The whole-herb capsules are often available in 355-mg doses, and liquid extract or tea bags are also available.

GINGKO BILOBA

Gingko has not demonstrated any clear efficacy in headache. It is most likely better utilized for memory disturbances, circulation problems, or possibly to counteract the sexual side effects of antidepressants.

WILLOW BARK

Willow Bark (white willow bark is commonly used) has salicin, an aspirin-like compound that inhibits prostaglandins. While safe in recommended doses, this compound is probably not effective because it is too difficult to achieve the sufficient doses that are necessary.

GUARANA

Guarana contains caffeine in the seeds. It is usually used in the form of crushed (powdered) seeds. It is effective for headache primarily because of the high caffeine content. There are no major advantages in utilizing guarana over caffeine.

PEPPERMINT

Peppermint has occasionally been utilized to help certain digestive problems. Peppermint may be useful for the upset stomach associated with migraine. Peppermint is available as the leaf, in capsules, liquid extract, or as the oil extract.

VITAMINS AND MINERALS

Several vitamins and minerals have been found to be useful for the prevention of headache. The most successful mineral or vitamin in studies has been magnesium. Others that may help include vitamin B₂ (riboflavin), vitamin B₆ (pyridoxine), calcium, and certain long-chain fatty acids that are contained in compounds such as fish oil or flaxseed oil.

MAGNESIUM

A number of studies have indicated that magnesium is deficient in the brain of migraine sufferers. Magnesium is important for arteries and serotonin function. The arteries tend to constrict or become smaller when magnesium levels are too low. Magnesium infusions have been helpful for severe acute migraine. However, the primary use of magnesium is as a daily supplement to prevent or decrease headaches. Magnesium is present in higher amounts in the following foods: dark green leafy vegetables, whole-grain breads or cereals, seafood, legumes, and nuts. However, certain legumes and nuts can also increase headache. As a supplement, magnesium has been utilized in 250-, 400-, 500-mg doses once or twice per day. We utilize magnesium oxide, not magnesium sulfate. Some of the supplements can cause diarrhea, but magnesium oxide usually does not. It is possible that the slow release or chelated form of magnesium has advantages over the regular magnesium supplements, primarily because of improved absorption. With kidney problems, people should not be on magnesium supplements. However, in the usual doses (500 mg per day or so) magnesium has been safe. We do not usually continue the magnesium for more than a number of months at a time, as long-term side effects have not been firmly established. Because of safety, we usually recommend the lower dose magnesium oxide, 250 or 500 mg once per day. Magnesium may be particularly helpful in preventing menstrual migraine.

VITAMIN B₂ (RIBOFLAVIN)

Large doses of this B vitamin (400 mg per day) have been utilized to prevent migraine headache. Several studies have indicated that this works more effectively than placebo. We do not usually utilize this treatment for more than 6 months, as long-term toxic side effects of large doses of vitamin B₂ have not been established. However, in general, the B vitamins are safe.

CALCIUM

Calcium has been reported in at least one study to decrease PMS symptoms and menstrual headache. If patients take calcium and magnesium, they should take them at different times of the day, as the calcium may inhibit the absorption of magnesium. Food sources of calcium include dark green leafy vegetables, dairy products, seafood, and certain fish. Supplements are usually necessary, 750 to 1,000mg per day.

VITAMIN B₆ (Pyridoxine)

Vitamin B₆ has been utilized as a preventive for migraine, particularly menstrual migraine. It is usually dosed at 50 or 100 mg per day. Vitamin B₆ is very safe in these doses. Many people have found that taking a B complex (B-100) helps their headaches. There have been no scientific studies on most of the other B vitamins other than B₂ and B₆ in regard to headache. However, it is known that the B vitamins, particularly folate and B₁₂, can help prevent heart disease and possibly stroke.

LONG-CHAIN FATTY ACIDS (PRIMARILY OMEGA-3 AND OMEGA-6 FATTY ACIDS)

Certain types of fatty acids that are present in fish oil concentrate and flaxseed oil may help headache. These have also been demonstrated to be useful in certain types of anxiety or mood disorders. Because of the problems with fish oil, we usually recommend flaxseed oil, 1,000 mg

capsules, one or two per day. This is a fairly low dose; much higher doses have been used. These may be beneficial for prevention of heart disease as well.

AROMATHERAPY

Aromatherapy may work both because of absorption of the small molecules of essential oils into the skin or respiratory tract, and direct stimulation of the small sense nerve (olfactory nerve). This nerve is widely distributed with connections throughout the brain. Aromatherapy may be useful for milder headaches, such as the usual tension headaches. In some people, less medication is utilized because of the use of aromatherapy. The oils should be in dark glass bottles and have the words *distilled* and *pure* on them. It is necessary to keep these oils out of sunlight and intense heat. These essential oils should not be used orally, but rather inhaled or applied to the temples, neck, or shoulder muscles. Since the essential oils are very potent, very small amounts are all that is necessary. For instance, one drop of the oil is usually diluted in a teaspoon of almond oil (or another carrier oil). This is then rubbed into the skin. Alternatively, four to seven drops of the oil may be put into warm water for a bath. The most commonly utilized oils for headache are peppermint, lavender, and chamomile. The Roman chamomile (English chamomile) has been utilized more than the German chamomile in aromatherapy. Lavender and peppermint may be the most useful in this group. In addition to these, tiger balm is a powerful herb that has been utilized extensively in China. Eucalyptus has been a popular aromatherapy for sinus-type headaches. If aromatherapy is being used for migraine, the intense smell may actually increase nausea.