Herbal Treatment of Epilepsy and Migraine

Karta Purkh Singh Khalsa, DN-C, RH (AHG)

Brain disorders are some of the most confounding conditions seen in clinical practice. They present in many different ways, with a cacophony of often confusing or contradictory symptoms and they commonly defy convenient or consistent diagnosis. Yet persons with these conditions often report dissatisfaction with conventional medical approaches and herbalists would be well served to develop familiarity with these disorders and their treatments. Here we examine two of the most common neurological conditions seen in the clinic. In the United States, migraine and epilepsy are the most common disorders for which people present for neurologic consultation.1

Although epilepsy and migraine are challenging to treat with natural healing methods, such treatments have much lower potential for toxicity and adverse reactions, while promising a substantial degree of success and much improved patient comfort.

Two cold conditions
Traditional herbal systems would definitely draw a parallel between these two groups of patients. Generally, both conditions are concentrated in the segment of the population with cold and dry physiology. People with this category of constitution tend toward nerve and brain disorders in general, and especially those of metabolic instability, lack of homeostasis, movement or motor disorders and pain syndromes. Epilepsy is characterized by dysregulated movement, and migraine manifests with a sudden onset, both typical of conditions experienced by those with cold, dry bodies. These people often have constipation.

Migraine and epilepsy are heterogeneous families of chronic conditions with markedly variable clinical features, natural histories, and treatment response patterns.2 Each is characterized by episodes of neurologic dysfunction, sometimes accompanied by headache, as well as gastrointestinal, autonomic, and psychological features.3 The aura is a potential feature of each condition. Each has an internationally recognized classification system.4

Historically, in the conventional medical paradigm, epilepsy and migraine have not generally been thought to be medically related, and conventional treatments are historically dissimilar. A potential association between the two diagnoses has been long discussed, but was not rigorously studied until the 1990s.5 In the last decade, however, researchers have begun to report a seeming substantial overlap in these two disorders.

Statistically, because migraine is more common than epilepsy, the risk of epilepsy patients developing migraine is much higher than the risk of migraine patients developing epilepsy.
In 1994, Columbia University researchers found that migraine and epilepsy are strongly associated, independent of seizure type, etiology, age at onset, or family history of epilepsy. They evaluated 1,947 patients with epilepsy over the age of 18, as well as 1,423 relatives of the patients, as part of a large study on the relationship between migraine and epilepsy. Findings indicated that more than 20 percent of people with epilepsy have migraines, compared to 11 percent of the general population.

The prevalence of epilepsy in people with migraine ranges from 1% to 17%, depending on study methodology, with a median of 5.9%, which is considerably higher than epilepsy’s population prevalence of 0.5%. Migraine risk was highest in patients with epilepsy due to head trauma.

Using proportional hazards analysis to control for years at risk and gender, the data confirm that rate ratio for migraine in epilepsy patients was 2.4. (Migraine is 2.4 times more common in people with epilepsy than in the general population.) These same researchers posit that the comorbidity of migraine and epilepsy may be the consequence of a state of neuronal hyperexcitability that increases the risk of both disorders. Among the epilepsy patients in the study who were diagnosed as having migraines, 56% had not been diagnosed with migraine by the physician treating their epilepsy. The researchers recommend that clinicians treating patients with either condition should be sensitive to the symptoms and familiar with the diagnostic practices for both disorders. In the case of comorbid migraine and epilepsy, therapy with agents effective for both conditions should be considered. (Of course, the traditional herbal therapeutics perspective is that these conditions have similar cofactors and can treated similarly in a constitutional approach.)

In 1996, Columbia University scientists looked at the possibility of a shared genetic susceptibility between epilepsy and migraine. With the exception of a positive association of increased risk of epilepsy in sons of females with migraine, the pattern of results was inconsistent with the hypothesis of a shared genetic susceptibility to the two conditions. By 199, researchers publishing in Cephalgia had found that fourteen percent of adult patients with seizures were identified with a diagnosis of migraine. They also found a direct relationship between migraine and epilepsy (a migraine-induced epilepsy) in 1.7% of the patients with seizures. Patients were at increased risk for both conditions if they had migraine with aura and catamenial epilepsy.

As the years progressed, evidence for an association accumulated. By 2003, Bigal, Lipton and Silberstein at Columbia were reporting epidemiologic evidence that migraine and epilepsy are associated. Further papers discussed the link and expanded the understanding of the association and the clinical features. One of the most interesting angles has been the increasing use and effectiveness of anticonvulsant drugs in migraine.

In 2006, Ludvigsson et al reported that children with migraine with aura have a substantial increased risk to develop subsequent epilepsy.

The recent view
The contemporary point of view has come around to the same conclusion as traditional practitioners (albeit not based on the same rationale or constitutional perspective)-migraine and epilepsy are highly comorbid. The cutting edge science is quite clear on this association, but physicians in the trenches have been slow to catch on. It is now accepted that patients with one disorder are at least twice as likely to have the other. In conventional medicine, comorbid disease presents challenges in differential diagnosis and concomitant diagnosis. In comorbid cases, the standard of diagnostic parsimony is not applicable. Individuals with one disorder are more likely, not less likely, to have the other. From the traditional herbal point of view, though, the holistic overview is an advantage. The clinician can search for underlying constitutional similarities and treat the whole person.

In 2006, researchers writing in Headache studied one-hundred thirty-seven children and adolescents consecutively diagnosed with idiopathic migraine with and without aura and concluded that there is a clinical continuum between some types of migraine without aura and epileptic syndromes as entities, due to altered neuronal excitability with similar genetic substrates.
More recent work has strengthened the genetic connection. A 2007 study looked at a large family with occipitotemporal lobe epilepsy and migraine and found a conclusive linkage of the traits to a single locus, suggestive of a common monogenic gene defect.30

Epilepsy and atypical migraine may share symptoms and even be difficulty to differentiate on EEG.31,32 Patients with comorbid epilepsy and migraine may not be aware of their headaches because the headaches are being effectively treated with an antiepileptic drug, obscuring a diagnosis of migraine. On the other hand, diagnostic interviews may lead to the over-diagnosing of migraine in some patients who actually have epilepsy.

**Mechanism of an association**

And how might these diseases be connected? Perhaps it is a simple unidirectional causal explanation. Migraine may precipitate epilepsy by inducing brain ischemia and injury. In that case, we would expect the incidence of migraine to be elevated before, but not after, the onset of epilepsy. Then again, epilepsy may initiate migraine by activating the trigeminovascular system. That would lead us to expect an excess risk of migraine after, but not before, the onset of epilepsy. The data, however, show an excess risk of migraine both before and after seizure onset, suggesting a rejection of both unidirectional causal models.33,34,35

Shared environmental risk factors may account for comorbidity. Head injury is a risk in both disorders. Risk is also significantly increased in people with idiopathic or cryptogenic epilepsy, so known environmental risk factors cannot account for the entire association.36 Analyses of genetic factors are equivocal regarding possible genetic links, but so far the data seem to reject the idea that genetic susceptibility accounts for comorbidity.37 Likely the observed comorbidity is multifactorial, but it seems probable that that an altered brain state (increased excitability) might increase the risk of both migraine and epilepsy and mainly account for comorbidity.

**Clinical considerations and comparisons**

Health history is the chief means of differentiating between migraine without aura and epilepsy.38 Migraine and epilepsy share many symptoms. Certain features are useful in distinguishing them.

Commonly, migraine attacks are of more gradual onset and longer duration than epileptic seizures. The first symptoms of migraine may not even include headache.39 Nausea is more commonly associated with migraine, while prolonged confusion or lethargy after the episode suggests epilepsy.

Tonic or clonic movements are absent from migraine with aura, but differentiating it from epilepsy still can be tricky. The characteristics of the aura may help.40 For example, the aura generally lasts longer than 5 minutes in migraine and less than 1 minute in epilepsy. The aura symptom profiles also differ. Positive motor features, and alteration of consciousness indicate an epileptic aura. A mix of positive and negative features, such as a scintillating scotoma (a spot of flickering light in the center of the visual fields that obscures vision and then expands into shimmering arcs of light), favors migraine.41

Colorless glittering scotomata and black-and-white zigzag patterns are typical of migraine. The regular angular patterns in the photopsias (perceived flashes of light) that accompany migraine correspond to the cortical structures that generate them.42,43,44 In migraine, the sensory disturbances are paresthesias (pins and needles) that typically begin in the hand and move into the face and tongue over a period of 10 to 15 minutes.

In contrast, visual auras in epilepsy are primarily multicolored, with a circular or spherical pattern.45 Epileptic visual auras last for only seconds, limiting the patient's opportunity to scrutinize and describe the hallucinations.46 The aura is often concurrent with head or eye movement and alteration of consciousness.47 The sensory aura in is briefer and often experienced as burning, cramping, stinging, aching, electric, or throbbing.
Clinical Features of Migraine and Epilepsy

<table>
<thead>
<tr>
<th>Clinical Features</th>
<th>Migraine</th>
<th>Epilepsy</th>
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</thead>
<tbody>
<tr>
<td>Family History</td>
<td>Frequently positive</td>
<td>At times positive for epilepsy</td>
</tr>
<tr>
<td>Episode Onset</td>
<td>Gradual</td>
<td>Abrupt</td>
</tr>
<tr>
<td>Episode Duration</td>
<td>Hours</td>
<td>Minutes</td>
</tr>
<tr>
<td>Consciousness</td>
<td>Typically clear</td>
<td>Typically clouded</td>
</tr>
<tr>
<td>Aura</td>
<td>Sensory (typically visual), 20% of cases</td>
<td>Variable</td>
</tr>
<tr>
<td>Visual</td>
<td>Black and white, zig zag</td>
<td>Colored, spherical</td>
</tr>
<tr>
<td>Sensory</td>
<td>Paresthesias</td>
<td>Burning, throbbing</td>
</tr>
<tr>
<td>Nausea</td>
<td>Common</td>
<td>Uncommon</td>
</tr>
<tr>
<td>Diarrhea</td>
<td>Common</td>
<td>Uncommon</td>
</tr>
<tr>
<td>Olfactory</td>
<td>Less common</td>
<td>More common</td>
</tr>
<tr>
<td>Vertigo</td>
<td>More common</td>
<td>Less common</td>
</tr>
<tr>
<td>Memory Loss</td>
<td>Uncommon</td>
<td>Common</td>
</tr>
<tr>
<td>Postevent Lethargy</td>
<td>Common</td>
<td>Common</td>
</tr>
<tr>
<td>Depersonalization</td>
<td>Uncommon</td>
<td>Common</td>
</tr>
<tr>
<td>Aphasia</td>
<td>Uncommon</td>
<td>Common</td>
</tr>
<tr>
<td>(speaking is painful)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tonic or Clonic Movements</td>
<td>Uncommon</td>
<td>Common</td>
</tr>
<tr>
<td>EEG</td>
<td>Nonspecific abnormalities</td>
<td>Spikes and sharp waves</td>
</tr>
</tbody>
</table>

Table 1: Clinical Features of Migraine and Epilepsy

Epilepsy

Epilepsy is a group of related disorders characterized by a tendency for recurrent seizures. By definition, seizures are abnormal movement or behavior and are caused by unusual electrical brain activity. Virtually any type of behavior that happens repetitively may indicate a seizure.

Fundamentally, it is brought on by recurrent, excessive, abnormal discharge of neurons. The disorder is characterized by sudden, brief attacks of altered consciousness, motor activity, sensory phenomena or inappropriate behavior. Seizures are a symptom of epilepsy, but not all persons who experience seizures have epilepsy, and not all persons diagnosed with epilepsy experience recognizable seizures. This nomenclature is a bit slippery, and there is a fair amount of confusion surrounding appropriate diagnosis and the clinical features of epilepsy. It is important to remember that epilepsy is a clinical diagnosis, and is not strictly defined by neurological measurements. Patients with abnormal brain electrical activity may have no symptoms that impair their lives.

Seizure disorder is a general term that describes any condition that involves seizures, but the term is so general as to not useful. “Seizure disorder” is often used as a euphemism for epilepsy.

Seizures are pretty common. Otherwise healthy people may have seizures under certain circumstances. About 9% of Americans will have at least one seizure of some type during their lives, while the lifetime risk of having a non-febrile epileptic seizure at some point in an average lifetime is between 2 and 5%. As a chronic condition, epilepsy is relatively common, affecting 0.5% to 1% of the population. About 2.5 million Americans have epilepsy.

Provoked seizures are single seizures resulting from trauma, hypoglycemia, hyponatremia, high fever or substance abuse. Febrile seizures manifest during infancy, but children usually outgrow them by age six. Individuals who experience a single seizure may not need treatment, although it is imperative that a careful evaluation be undertaken to assess the risk of recurrence.

Non-epileptic seizures (pseudoseizures) are not accompanied by abnormal electrical activity in the brain and may be initiated by psychological stress. Lifestyle counseling or psychological intervention may be the most appropriate treatment.
Type 1, Idiopathic Generalized Epilepsy, often, but not always, includes a family history of epilepsy. It tends to appear during childhood or adolescence. No nervous system abnormalities other than the seizures are identified. The brain is structurally normal on brain MRI scan. Patients have normal intelligence. EEG may show epileptic discharges affecting the entire brain (generalized discharges). The types of seizures may include myoclonic seizures (sudden and very short duration jerking of the extremities), absence seizures and generalized tonic-clonic (grand mal) seizures.

Type 2, Idiopathic Partial Epilepsy (benign focal epilepsy of childhood), begins in childhood and may have a family history. It is almost always outgrown by puberty and is never diagnosed in adults. Seizures tend to occur during sleep. Patients exhibit very specific EEG brain wave patterns.

Type 3, Symptomatic Generalized Epilepsy, is caused by widespread brain damage, usually from injury during birth. In addition to seizures, these patients often have other neurological problems, such as mental retardation or cerebral palsy. Multiple types of seizures are common in these patients and can be difficult to control.

Type 4, Symptomatic Partial Epilepsy (focal epilepsy) is the most common type of epilepsy that begins in adulthood, but it does occur frequently in children. It is caused by a localized abnormality of the brain, which can occur from strokes, tumors, trauma, congenital brain abnormality, scarring or “sclerosis” of brain tissue, cysts or infections.

### Generalized Seizure Types and Symptoms

<table>
<thead>
<tr>
<th>Generalized Seizures</th>
<th>Symptoms</th>
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<tbody>
<tr>
<td>Grand Mal (Generalized tonic-clonic)</td>
<td>Convulsions, muscle rigidity, unconsciousness</td>
</tr>
<tr>
<td>Absence</td>
<td>Brief period of unconsciousness</td>
</tr>
<tr>
<td>Myoclonic</td>
<td>Sporadic, jerking movements</td>
</tr>
<tr>
<td>Clonic</td>
<td>Repetitive, jerking movements</td>
</tr>
<tr>
<td>Tonic</td>
<td>Muscle stiffness, rigidity</td>
</tr>
<tr>
<td>Atonic</td>
<td>Loss of muscle tone</td>
</tr>
</tbody>
</table>

Table 2 Generalized Seizure Types and Symptoms

### Epilepsy symptoms

All areas of the brain cortex are involved in a generalized convulsion, or grand mal, seizure. The patient loses consciousness, usually collapses, may cry out, stiffen for several seconds, have rhythmic movements of the arms and legs and often be confused briefly afterward. The generalized body stiffening (“tonic” phase) lasts for 30 to 60 seconds, followed by violent jerking (“clonic” phase) for 30 to 60 seconds, after which a deep sleep occurs (“postictal” phase).

In partial, or focal, seizures, only part of the brain is involved, so only part of the body is affected. Perhaps only the hand may show rhythmic movements or jerking.

In absence, or petit mal, seizures, which are most common in childhood, impairment of consciousness is present with the person often staring blankly. Commonly, these seizures begin and end abruptly, are brief, lasting only seconds, and there may be many, perhaps dozens, of these in a day. Children are usually not aware that they are having a seizure, although they may be aware of “losing time.”

Complex partial seizures include impairment of awareness. Patients seem to be out of touch or “staring into space”. There may also be some automatisms, which consist of involuntary but coordinated, purposeless and repetitive movements, such lip smacking, chewing, fidgeting and walking.

### Epilepsy causes

The etiology of epilepsy is frequently multifactorial, so it is difficult to attribute an exact cause. About 60-70% of all epilepsies have no clear cause and are referred to as cryptogenic epilepsies.49 Seizures with a known cause are referred to as secondary or symptomatic epilepsy. Etiologies are cerebrovascular disease 15%, cerebral tumors 6%, alcohol-related seizures 6% and post-traumatic seizures 2%. Other causes were rare.50,51 For some women, the pattern of epileptic seizures is directly
affected by normal hormonal cycles. *Catamenial epilepsy* refers to seizures that are affected by a woman's menstrual cycle. About 10% to 12% of women with epilepsy have this. When estrogen levels are higher than progesterone, it can make the nervous system “excitable”, bringing greater risk for seizures. In general, women with epilepsy do not ovulate as regularly as women without epilepsy and women with epilepsy have more anovulatory cycles than other women.

**Epilepsy Causes**

- Tumor
- Chemical imbalance (hypoglycemia, hyponatremia, etc.)
- Head injuries
- Certain toxic chemicals or drugs of abuse
- Alcohol withdrawal
- Stroke including hemorrhage
- Birth injuries

Table 3 Epilepsy Causes

**Conventional treatment**

The majority of epileptic seizures are controlled with drugs. Diet may also be used in some cases. In certain refractive cases, surgery may be used. The type of treatment indicated will depend on the frequency and severity of the seizures as well as age, overall health, and medical history.

In patients with migraine, a history of epilepsy should be taken before tricyclic antidepressants, neuroleptic or anti-nausea drugs are used, because these may lower seizure thresholds. Some anticonvulsant drugs, such as gabapentin and topiramate, work as treatments for both migraine and epilepsy, providing a therapeutic two-fer. The anticonvulsant divalproex sodium (Depakote, valproate) is approved by the FDA for migraine prophylaxis. Its efficacy has been supported by open and double-blind placebo-controlled studies. The doses used in migraine are generally lower than those effective in epilepsy.

Most of the time, seizures become easier to control as people get older. Problematically, some types of anticonvulsant medications can cause bone loss when taken over a long period of time.

**Ayurvedic herbs for the mind and brain**

Ayurveda theory and therapy encompasses positive and negative sides of every aspect of living, including behavior and conduct. These principles are designed specifically to achieve and maintain internal and external balance. Given due importance are the body (*sharira*), the senses (*indriya*) and the mind (*manas*).

Medhya is a concept that implies intellect, or wisdom. It is mental development, or mental therapy. Medhya means something that is mighty, vigorous and pure, as well.

There are many ways to bring medhya into play in the mind. Anything that promotes the sattva guna can be applied. The yamas and niyamas of yoga are aimed at this. Ayurvedic herbal medicines play a role, and bhasma preparations containing emeralds, gold and diamonds are important.

Medhya herbs and therapies are typically thought of as those that promote the capabilities of the Western world calls the mind. Medhya herbs engender and summon intelligence, memory and mental perception. They make the mind worthy of sacrifice to the Divine.

For medhya, anything that promotes the sattva guna can be considered. Ayurvedic alchemical bhasma preparations, including panna (emerald), swarn (gold) and heera (diamonds) can be considered.

Herbs are very powerful tools to heal the mind and emotions. More powerful than food, they are safer than drugs. Yogis have classified certain herbs that have a particularly positive effect on the mind. They can improve cognition, learning capability and neurological function.

Ayurveda makes little distinction between remedies for the mind and the body. Holism is the keyword. According to American spiritual teacher Baba Hari Dass, “to fix the head, cure the stomach first.”
“Losing connection with our inner beauty is par for the course in our hectic, day-to-day world,” says Kat James in Better Nutrition. Beauty is in the things we invite into our minds, bodies and lives. True physical and neurological beauty isn’t about doing the right things. It’s a quality-of-life issue.

Beauty director Mikki Taylor, of Essence magazine, says that an Ayurvedic health regime produced fascinating results. Her energy level is at an all-time high, and her aggravating chronic symptoms have disappeared. She says that Ayurveda gives us a deeper understanding of our essential selves. Turning within through this ancient practice helped her reach higher ground. In her opinion, many of us are seeking to understand ourselves better and to truly reach total well-being. Ayurveda helps her make this connection.

Ayurvedic literature is rife with hyperbole. While this is good, in the sense of promoting optimism, it can be somewhat confusing for those less acquainted with the details and daily practical use of herbs. This is especially so when we talk about therapies for the mind. In Ayurveda text, the modern category of epilepsy may be referred to ambiguously as “insanity” — a catchall term for a wide range of mental and neurological disorders. According to Ayurvedic herbalist Prashanti de Jager, we should take it with a grain of salt when the classic texts talk about curing “insanity.” Nonetheless, many of these therapies are very effective, and can help substantially in managing brain illnesses. Perhaps a better way to interpret this translation would be an effort toward “brain balancing.” The author has found many of these remedies that refer vaguely to insanity to be applicable in the vata/kapha derangements of epilepsy (and other conditions, including autism), when applied with proper energetic differential diagnosis.

Bitter taste for example, is said to be composed of air and ether elements, the same elements that predominate in the mind. Herbs with bitter taste generally open the mind, increase the sensitivity of awareness and improve mental function. Bitter tasting herbs are cooling, calming and mind expanding, so they combat mental dullness. Bitter mind herbs are chamomile and gotu kola. Sweet taste, composed of earth and water elements, is grounding and calming. Sweet herbs for the mind include ashwaganda and licorice.

When seeking herbs to balance the brain, four herbs stand out- gotu kola, brahmi, shankpushpi and jatamansi. Most folks would profit from long term use of one or more of these at modest doses, and they are go-to herbs for the first steps in treating neurological conditions, including migraine and epilepsy.

Consider ghee, whose benefits increase with its age. Aged ghee (up to a hundred years) reduces all three doshas and dispels blockages in the srotas. Since it has a special ability to clear the manovaha srota (mental channel), it was used for mental diseases, namely epilepsy and psychosis.

Mental difficulties can arise from any dosha, but commonly vata dosha is the culprit. The thrust of many mind therapies is to control vata, the dosha that regulates the nervous system. Dashmula (an Ayurvedic formula containing ten warming roots) is a prime vata pacifying remedy, taken as powder, tea or as an enema. Dashmula decoction, with ghee or meat soup, or with white mustard is useful for the ambiguously termed “insanity”.

Baba Hari Dass talked about consuming pumpkin seeds for craziness. Of course, now that we know that the brain is a tremendous user of essential fatty acids, we can see how right he was.

Jatamansi is an outstanding sattvic rasayana herb that opens and cleanses the srotas and brings in prana. The five parts of the lotus- stem, seed, stalk, stamen, and leaves, especially when taken with gold and milk, promote strength and intelligence.

Amla, one of the three herbs in the widely used triphala combination, is a first rate general herb for the mind. Having the rare profile of having five of the six tastes, it has wide uses, especially for pitta conditions. Many authorities say that amla is the best for preserving youth and preventing senility. Used with sesame, honey and ghee in morning, it is a rasayana that heightens mental balance. One of its names is Dhatri, the nurse, a nod to its broad healing effects.

Another triphala herb, haritaki, brings long life and a healthy brain. Use it with raw sugar, honey, dried ginger, pipali and salt.
Ashwaganda is a paramount herb for the nervous system. Used consistently over years, it brings a calm and grounded quality to thinking and to life. Ashwaganda and shatavari, mixed with manda-kaparni and shankpushpi, represents a classic combination to promote brain function and intellect over the long term.

You can think of bala as a cooling version of ashwaganda. One of the varieties of bala, white bala, is given with milk for “insanity”.

Pepper is used in Ayurveda as an anti-kapha herb that burns up ama. Its warming nature balances cold herbs in formulas. It is ideal for conditions such as kaphaja epilepsy.

Kustha is an herb better known in Chinese medicine. It is closely associated with the treatment of skin diseases. (Kustha is the general term for skin diseases.) It is given to children to develop healthy skin. Kustha is also generally indicated for a wide array of mental disorders.

A few other miscellaneous herbs are worth mentioning. Juniper berry with barley, cooked in milk and water, with added ghee, honey and oil is employed as an enema to enhance digestion, strength and brain function.

Saffron (kesar) is a tridoshic nervine. The author’s mentor, Yogi Bhajan, prepared this as a tincture with camphor, and dispensed it by the drop.

Datura is a low dose herb that contains tropane alkaloids. It is used in Ayurveda for certain mental conditions. However, it must be prepared properly and used very carefully, and the dose is low.

Finally, an Ayurvedic tip: Use shirodara, a slow, relaxing stream of warm herb oil on the forehead. It is relaxing and helps to manage stress. Bring back that beautiful inner glow.

Do not treat epilepsy casually. It is a serious and complicated condition, with many causes, and a collection of associated family and social issues. Herb doses should be carefully titrated to achieve the best clinical effect, and least side effect, as the doses sometimes need to be quite high.

Specific herbs for epilepsy

Calamus root (Acorus calamus), or vacha, is a major herb for the mind and brain in Ayurveda. It is said to stimulate the power of self-expression and to enhance intelligence. Ancient yogis and seers used this herb. Calamus promotes circulation to the brain, sharpens memory, promotes awareness and increases communication and self-expression.

It is a bitter herb that acts as a carminative and mucolytic. Chanchal Cabrera is a close colleague who practices in the British herbal tradition. She says that, in the British herbal tradition, calamus root is thought to be a stomach acid balancer. A dose of up to 5 ml of tincture per day will reduce acid, while higher doses stimulate acid production.

These qualities, taken together, obviously suggest vacha as a superior remedy to pacify vata, which it is.

This herb is often combined with gotu kola, which is cooling and mild. The complementary energetics makes the combination suitable for a wide variety of people.

For attention deficit disorders, it combines well with brahmi, jatamansi, shankpushpi and licorice.

The Charaka Samhita lists vacha medicated ghee for epilepsy involving vata and kapha. It is prepared by decocting one part of vacha in four parts ghee and eight parts water.

The author has had extensive experience with using vacha to treat epilepsy, especially juvenile petit mal (absence) seizures, for which it is dramatically effective. It can often completely replace antiseizure medication. Cross taper the dose of vacha with the medication, with close monitoring. Always consult a qualified professional. Sarpaganda combines well with vacha for epilepsy.

For epilepsy, use the vacha in ghee, along with aragvadha, kaitarya, brahmi, hing, choraka (Angelica glauca) and jatamansi.

Like epilepsy, Ayurveda recommends vacha and sarpganda for a category vaguely called “insanity”.

Vacha is combined with triphala as a general rasayana that bestows intelligence, longevity and good memory.
Calamus is quite emetic in doses not much larger than the suggested dose. Higher doses also may stimulate “weird thoughts” — not quite hallucinations, but unusual mental experiences — that are not necessarily pleasant. Based on these issues, it may not be compatible for coadministration with other psychoactive drugs, although little is known about these concerns.

Calamus contains asarone and beta-asarone, constituents of the essential oil that are known carcinogens, and liver toxins. Use caution with the Asian genetic varieties of Acorus calamus in those with liver dysfunction.71 The European variety does not have this effect, but also does not seem to have the psychoactive characteristics. The North American species has no asarone. Asarone has a sedative effect.72 The Chinese species, used essentially the same, is Acorus gramineus.

The mind activating properties of vacha have been credited to the asarones. They are precursors to 1,2, 4-trimethoxy-5-propenylbenzene, a phenyethylamine that is thought to be ten times as potent as mescaline.73

There has been much hand wringing about the potential problems with calamus, but remember that it has been used for millennia by peoples on several continents, as medicine and food. Prashanti de Jager calls it, “Another case of an uninformed witch hunt, similar to the recent fate of Ephedra and bala.”74 Traditional Ayurveda is silent on this issue.

Past concerns have limited the use of vacha in America. This is a truly useful and valuable herb. Many people could benefit from calamus if they became aware of it. According to Prashanti de Jager, “Don’t be fooled, the calamus from India is safe and endlessly useful.”75

Apply vacha as a medicated ghee in the nostril for general brain and mind benefit, or sniff the milk decoction our infused oil for the same purpose. It is used to restore consciousness in extreme conditions.

The nasya is applied for sinus congestion. Calamus decoction is used in a neti pot as a general remedy for brain conditions.

The “hallucinogenic” dose of calamus is supposedly about 30 grams of the fresh herb. Frankly, you would be vomiting long before you ever ingested that much. People have tried, and were sorry they did.

**Brahmi** (Bacopa monniera), a traditional Ayurvedic herb, has been used in medicine for uncounted centuries for the treatment of nerve diseases, and to improve memory. Brahmi is a nerve tonic, diuretic, and sedative.

In India, gotu kola (Centella asiatica) is often used interchangeably with another similar herb, Bacopa (Bacopa monniera). Both are called “brahmi”. Bacopa can also be called water hyssop. Centella can also be called gotu kola (the Sinhala name) or mandukaparni (“frog leaved”).

These plants are not very well distinguished in the old Ayurvedic texts. There is some discussion about how interchangeable they really are. But a careful look at the texts pretty clearly indicates that two different plants are being discussed.

Centella is a sweeter, slightly heavier plant, with more tonic qualities. Bacopa is a colder, bitterer plant, with slightly more detoxifying qualities. Both target the brain and nerves.

Baba Hari Dass differentiates Centella as the “weaker brahmi” and Bacopa as the “stronger brahmi”. Charaka recognizes both as being supporters of mental faculties, but maintains that brahmi has a more specific role in treating mental diseases (insanity, anxiety, depression, epilepsy), while mandukaparni advances mental function through a more general rasayana effect. Charaka classified Centella as an intellect promoting or nervine tonic and as a “divine great drug”.

Bacopa is a nervine tonic, diuretic, and sedative. The sedative and cardiotonic effects are due to the presence of hersaponin, one of four saponins isolated from the plant. Other active principles of brahmi, contained in the leaves, are steroidal saponins, including bacosides. These compounds provide the capability to enhance nerve impulse transmission and thereby strengthen memory and general cognition.76
Baba Hari Dass mentioned brahmi often. Again, for the rather vague “craziness,” he used it with calamus and shankpushpi. Brahmi and gotu kola are often used interchangeably, and are, taken together or separately, considered to be the foremost general herbal medicine for the mind. Old ghee, processed with brahmi juice, vacha, kustha and shankpushpi, assuages “insanity”, epilepsy and tough karma in life. Let’s say that brahmi eases the mental tendency to create problems in our lives.

Bacopa is a traditional treatment for epilepsy and similar convulsive disorders. Preliminary scientific information finds that perhaps 50% of patients will have lowered occurrence of seizures.

Many people with epilepsy suffer from cognitive impairments. The disease itself, and the drugs taken for the pathology, can cause such problems. A 2000 mouse experiment used Bacopa along with a powerful anticonvulsant drug known to cause cognitive problems. It demonstrated that Bacopa reduced the cognitive decline caused by a drug. Acquisition and retention of memory both showed improvement without affecting the benefits of the drug.

The typical dose is two grams of the whole herb twice a day with warm water, but the effective dose in active epilepsy could be many times higher, as the herb is essentially nontoxic.

Mandukaparni leaf (Centella asiatica), or gotu kola, is a mainstay of herbal medicine in Ayurveda, although this herb has been around the fringes of European herbalism for many years. In fact, it was used in France in the 1880’s. Widely considered a superior herb for the nervous system, gotu kola has a host of benefits.

Gotu kola balances all three doshas. It is a bitter/cold/sweet herb, and an excellent nerve nutrient. As the main herb in Ayurveda for the nervous system, it is used to increase general brain function, memory, concentration, and mental acuity.

Gotu kola strengthens memory, concentration and intelligence. This medicine is used to treat diseases as diverse as epilepsy, senility, hair loss and psoriasis.

The active substances in gotu kola are thought to be triterpenes (steroid-like compounds), which have a balancing effect on connective tissues. These triterpenes improve the function and integrity of the collagen matrix and support the “ground substance,” the basic “glue” that holds the cells together.

Since gotu kola is basically a mild salad vegetable, the dose can be very high. Try one to four teaspoonfuls of fresh juice every morning. For acute disease, use one to two ounces of dry herb, by weight, as a tea, per day. Many people use a modest dose of 1 gram per day in capsules for daily rejuvenation. It is often taken with ghee.

Gotu kola also makes a tasty cooked green vegetable. Carefully clean the dried herb, removing the stems. Rehydrate the herb. Cook it much like spinach. It’s a little bitter, but quite palatable. It goes well, mixed half and half with spinach. Use the mix to prepare saag or korma. Gotu kola and spinach saag has become a favorite dish for students to share in the author’s clinical herb classes.

Use gotu kola ghee as nasya for nervous disorders. Take 2 drops in to each nostril up to several times per day.

Gotu kola oil is used for abhyanga to treat the nervous system. As a body wrap, it enhances blood circulation, clears the skin, improves memory; and increases jatharagni.

Shankpushpi herb (Evolvulus alsinoides) is an outstanding rejuvenative tonic for the mind and nerve tissue. The plant is said to have profound mystical properties, with an affinity for the heart, throat, third eye and crown chakras.

The herb is especially effective for mental disorders of anxiety and fear. Often taken with or prepared in ghee, it promotes tranquility without dulling the mind. For attention deficit disorders, it combines well with brahmi, jatamansi, calamus and licorice.

According to the Astanga Hridayam, ghee, cooked three times with shankpushpi juice and milk, makes even the dullest mind sharp.
White Peony root (*Paeonia lactiflora* (“Bai Shao”)) is a standout in the author’s toolkit for epilepsy. It is a blood nourisher that supports the liver, which is so important in hormone balance and seizure prevention. Peony is a very sour, bitter, cool yin and blood tonic that is sedative and anti-spasmodic.

Guduchi herb (*Tinospora cordifolia*) is a viney plant from the Moonseed (Menispermaceae) family. It is often found climbing neem trees throughout tropical India and Southeast Asia.

It is said by some to be the best herb for clearing the srotas. It is a potent, yet well tolerated, detoxifier that is found in many Ayurvedic formulas. Because of this ability, it is included in formulas to assist the delivery of herbs to the tissues. Guduchi aids all aspects of healthy metabolism (the 13 agnis). It particularly clears the srotas in the brain, facilitating mental activity (medhya rasayana). It supports proper function of shleshaka kapha, so it also aids proper communication and coordination between all the various cells and their many related functions, promoting better overall health.

Guduchi is tridoshic, and therefore a widely useful herb. As it is a cleansing and building herb, it can be given in almost every case. It has a prabhava as ‘nectar’ to the body and mind. The juice of the whole guduchi, along with gotu kola, the paste of shankpushpi, and powdered licorice promotes brain function. Researchers have confirmed the antipyretic activity of guduchi. Bitter herbs with hot temperature are rare. This combination of energetics is specific for detoxification while still promoting circulation of the body’s fluids.

Use powder- at 3-10 grams per day.

Castor oil (*Ricinus communis*) as a wonderful panacea for a large number of health concerns. Castor oil is pungent and sweet with heating energy. Applied externally, it is analgesic and nervine, so it is the main treatment for nerve conditions.

Castor oil is the main treatment for vata dosha. Castor oil is a standout for conditions of the head and neck, a main site of vata. It is a warming, heavy, sweet oil, so it is ideal to reverse high vata in that area. It is a classic remedy for epilepsy.

Tierra uses it for all vata derangements, including pains, constipation and arthritis. Following the vata idea, this very special oil is used in the treatment of epilepsy, paralysis, insanity and many other nervous system disorders. Castor oil supports joint, muscle, connective tissue and skin health. It is used for wounds, trauma and minor pain. Apply castor oil to large areas of nerve involvement.

Apply castor oil as a head massage, in shirodara, or use very small does internally to bowel tolerance.

Rauwolfia root (*Rauwolfia serpentina*), or Sarpaganda, is indicated in mental disorders. It is said to remove evil spirits.

The author has been very successful in using it for epilepsy, especially in autistic children with a profile of anxiety and insomnia, which is common.

Use 1-2 grams per day.

Lobelia herb (*Lobelia inflata*) is a classic herb for preventing and treating seizures. The author has had exceptional success with it. Use it at therapeutic dose in tea, tincture or capsules for prevention (be aware of the nausea). Often, this herb alone, with daily preventive doses, will be curative over a few months.

Use the tincture sublingually and massage it into the base of the skull during a seizure.

The pure acidified seed tincture may be stronger than the acidified fresh herb tincture, which, in turn, is stronger than the dry herb. Vinegar extract is also a possibility. Any preparation is likely to work, however.
Camphor \((Cinnamomum camphora)\) is a large, handsome evergreen camphor tree that is the natural (as opposed to synthetic) source of camphor gum (crystallized distilled oil). It is a slightly warming, pungent and bitter remedy that is used internally as a very powerful detoxifier. It is a powerful stimulant for digestive, circulatory and nervous systems. It is a tissue decongestant, energizer and nervine.

Yogi Bhajan recommended camphor gum as a first rate blood cleanser. He concocted a tincture of saffron and camphor which he called “blood of Christ”, and recommended it for extreme cases in need of detoxification, taken internally.

Ghee and camphor drops are administered through the nose for brain disorders.

Burning camphor purifies the atmosphere. It is somewhat germicidal in this form, and is widely used in India as a ritual practice.

As powder, use 1 to 2.5 grams daily.

Asafoetida gum \((Ferula asafoetida)\) is a warming, detoxifying carminative that balances vata dosha, and has a general clearing effect on brain and mind function. Use half a gram daily in combinations. From the Ayurvedic perspective, warming the body and increasing digestion reduces vata dosha, the main root cause of epilepsy.

Sarsaparilla root \((Smilax officinalis)\) kindles agni and reduces intestinal vata, so it finds use in nervous system conditions. Though native to tropical America, it has a history of use in Europe as a blood purifier dating back to the 16th century. Sarsaparilla is a well-known herb in many areas of the world, and used extensively in global herbalism.\(^92\) Smilax species also grow in Asia and have similar properties.

Sarsaparilla binds endotoxins, cell wall constituents of bacteria that are absorbed from the digestive tract. If these endotoxins are allowed to bypass the liver and circulate in the blood, they contribute to gout, arthritis, psoriasis, and fever — just the conditions sarsaparilla has historically treated. The saponins in sarsaparilla act as phytohormones.

Take 3-12 grams of sarsaparilla root per day as a tasty tea, or the equivalent in capsules.

Skullcap leaf \((Scutellaria lateriflora)\) serves as a nerve tonic and tissue rejuvenator — a neurotrophorestorative.\(^93\) In addition, it seems to have a protective effect on the liver. These qualities suggest skullcap for seizure and movement (chorea) disorders, including a variety if twitches, ticks and tremors, for which it has been used for centuries.

A 2004 study, published in \textit{Phytotherapy Research}, found that rodents prone to seizures that drank water containing skullcap extract were seizure free, while the control group continued to have seizures.\(^94\)

Few studies have been done on American skullcap, but it looks like its calming action is mainly due to the antispasmodic constituent scutellarin, a flavonoid glycoside. Another constituent, baicalin, a flavonoid, and its active metabolite, baicalein, are known to bind to the benzodiazepine site (like Valium, a noted pharmaceutical anticonvulsant) of the GABAA receptor, a sedating neural receptor, and may, based on more recent preliminary information, be more active.

Skullcap is available in dried form as teas, capsules, tablets, and tinctures.

For a tea, start with 10 grams of the dry herb. Infuse the chopped leaves, strain and drink. Use in several small doses through the day to avoid excess sedation. In tincture form, the equivalent dose is 8 tsp. Fresh herb tinctures are strongly preferred.\(^96\)

Abhrak Bhasma is a mineral medicine containing mica and the juices of several indigenous Indian herbs. It has a history of use in epilepsy at a daily dose of 250 mg.
Saraswat Churna is a brain building Ayurvedic combination. Vacha is one of the main brain herbs, with warming temperature. Shankpushpi is a standout as a brain and nerve rejuvenative, with a cooling temperature. The ingredients are ashwaganda, vacha, shankpushpi, ajwain, cumin, trikatu and rock salt. Use 1 to 3 grams twice a day with honey and ghee for epilepsy.

A few additional remedies are worth considering. Black cohosh (Actaea racemosa) has noted antiseizure activity. Ginkgo biloba is always worth considering for brain disorders. On the Chinese side, amber, Poria fungus and Gou Teng (Chinese Uncaria) have potential benefit.

Lithium
Most of us know lithium as a drug for bipolar disorder. But it is a simple mineral. Lithium has been used in many conditions, and there is an extensive scientific literature supporting its use. Cutting edge practitioners have shown substantial benefit in brain diseases. A much less toxic form (orotate) is used. (Incidentally, the author has had very good success with the nontoxic lithium in treating simple mild depression and autism.)

Diet
A widely-reported study from 1989, performed at the Hospital for Sick Children, in London, by Egger, looked at the diet for epilepsy and migraine in children. Foods initiating symptoms were identified by systematic reintroduction of foods, one by one. The symptoms recurred with 42 foods, seizures recurred with 31, and most children reacted to several foods. In double-blind, placebo-controlled provocation studies, 15 of 16 children had a recurrence of symptoms, including seizures, and none recurred when placebo was given.97

Migraine
Living with even occasional migraines can make life almost unbearable. An estimated 23 million Americans suffer from chronic migraine and about 11 percent of these have moderate to severe disabling migraine headaches, accounting for over $11 billion annually in lost workdays. Recurrent, pulsating pain on one or both sides of the head characterizes migraine headache, which usually is accompanied by one or more associated symptoms such as nausea, vomiting and an increased sensitivity to noise and/or bright light.

Migraine is a comparatively common disorder. Population-based studies yield 1-year period prevalence estimates of 6% in men and 15-18% in women. Migraine is approximately three times more common in women than in men.98,99

The word migraine comes from the Greek hemicranios, meaning half a head.

Migraine symptoms
Migraine symptoms center on, of course, a terribly painful, vascular (throbbing) headache. Along with pain, sensitivity to the environment and nausea are very common.

The episode lasts four hours to three days, occasionally longer.100

Migraine Symptoms
• A pounding or throbbing headache — often begins as a dull ache and develops into throbbing pain
• Pain usually aggravated by physical activity.
• Pain can shift from one side of the head to the other, or it can affect the front of the head or whole head. (One sided is classic)
• Sensitivity to light, noise, and odors
• Nausea and vomiting, stomach upset, abdominal pain
• Loss of appetite
• Sensations of being very warm or cold
• Paleness
• Fatigue
• Dizziness
Blurred vision
• Diarrhea
• Fever (rare)

Table 4 Migraine Symptoms

**Etiology and pathophysiology**

Although the mechanism of migraine remains incompletely understood, evidence is accumulating that migraine is a neurovascular disorder. The aura that precedes some migraines is a slow expansion of other neurologic symptoms, often visual, associated with neuronal changes that result in spreading neural depression from the occipital cortex. Excitatory changes bring about increased blood flow, later followed by lowered blood flow caused by neuronal inhibition.

The trigeminal nerve and the blood vessels it innervates probably represent the anatomic substrate for migraine pain. Pain-sensitive cranial nerves and dura pass input through the ophthalmic division of the trigeminal ganglion to the trigeminocervical complex (the trigeminal nucleus caudalis and dorsal horns of C1 and C2), producing referred pain in the head and upper posterior neck. When the peripheral branches of the trigeminal nerve are activated during migraine, pain results from neurogenic inflammation produced by the trigeminal nerve endings and associated with the release of other pain substances from plasma, platelets, and mast cells (histamine, prostaglandin, serotonin). These substances induce vasodilatation and the sensitization of trigeminal nociceptive nerve endings. Throbbing pain and exacerbation by activities such as bending over, head movement and walking may be indicative of mechanical hypersensitivity of meningeal cells. Nitric oxide released from blood vessels, nerve endings, or brain tissue can be a trigger for migraine pain.

There is central processing of pain signals in the trigeminocervical complex. A continuous discharge in this pain control system might occur from stimulation from the cortex or hypothalamus caused by stress or by excessive input from cerebral or extracranial vessels. The migraine prodrome likely has its origin in the hypothalamus.

Exact causes are unknown, but are related to changes in the brain and genetic causes. There is an inherited tendency to be affected by certain migraine triggers. Four out of 5 migraine sufferers have a family history of migraines. If one parent has a history of migraines, the child has a 50% chance of developing migraines, and if both parents have a history of migraines, the risk jumps to 75%. For many years, scientists believed that migraines were linked to expanding and constricting blood vessels on the brain’s surface. It is now believed that migraines are caused by inherited abnormalities in certain areas of the brain.

**Triggers**

Migraines are often triggered by environmental factors, with 85% of migraineurs reporting triggers. Patients typically have multiple triggers, with a mean of three. A change of weather is a trigger for up to 50% of migraineurs. Other environmental triggers are heat, high humidity, and high altitude. There are numerous additional triggers, including stress (50% of patients), letdown after stress, vacations, and crying. Missing a meal (40%), lack of sleep, oversleeping, and fatigue are also common triggers. Sensory triggers include bright lights, glare, flickering lights, loud noise, and strong smells (perfume, cigarette smoke). Up to 50% of patients report alcohol as a trigger; which can be all forms of alcohol or only one type, such as red wine or beer. Up to 45% report food triggers such as chocolate, dairy products (particularly cheese), citrus fruit, fried foods, and nitrates and nitrites in cured meats or fish. Other triggers include minor head trauma, exertion, and nitroglycerin.

Tyramine is formed from the breakdown of protein as foods age. Tyramine containing foods (aged cheese, red wine, alcoholic beverages, and some processed meats) are common triggers. Food triggers may be responsible for triggering up to 30% of migraines.

“Flight or fight” chemicals can provoke vascular changes that can cause a migraine. Stress emotions, such as anxiety, worry, excitement, and fatigue can increase muscle tension and dilated blood vessels can intensify the severity of the migraine.
Types of migraines

Migraine with aura (20%-30% of migraines) is known as “classic” migraine. Migraine without aura is known as “common” migraine. An “aura” is a physiological warning sign that a migraine is about to begin. An aura can occur one hour before the attack of pain and last from 15 to 60 minutes. It always lasts less than one hour.

Visual auras include:
• Bright flashing dots or lights
• Blind spots
• Distorted vision
• Temporary vision loss
• Wavy or jagged lines

An aura can affect the other senses — simply as having a “funny feeling,” or not be able to describe the sensation — ringing in the ears, or having changes in smell (such as strange odors), taste or touch. Migraines without auras are more common, making up 80%-85% of migraines. Several hours before onset, migraneurs experience vague symptoms, including:
• Anxiety
• Depression
• Fatigue or tiredness

Transformed migraines are chronic, daily headaches with vascular quality (throbbing). They are less severe but more frequent than classic migraines. Most patients have a history of migraines, usually beginning in childhood. The onset of daily transformed migraine headaches is generally during the 20s and 30s. They are probably caused by daily use of pain relievers, which can lead to rebound headache.

Who gets migraine?

Approximately 45 million Americans suffer from chronic headaches, and of them, 28 million suffer from migraines. More women than men have them. About 70% of migraneurs are female. The lifetime prevalence is 25% for women and 8% for men. Migraine begins before the age of 20 in 50% of cases and after age of 50 in only 2%. The highest prevalence is from 25 to 50 years of age. Of female migraneurs, 60%-70% report a menstrual relationship. A quarter of all women with migraines suffer four or more attacks a month, with 35% experiencing 1-4 severe attacks a month and 40% experiencing one or less than one severe attack a month.

From the traditional natural healing perspective, the migraneur, usually female, has a cold, dry, unstable, variable physiology, is emotionally sensitive (applies to men, too), constipated and experiences insomnia and often liver stagnation.

**Migraine Overall Physiology (Typical Patient)**

<table>
<thead>
<tr>
<th>Main problem area</th>
<th>Large intestine</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Nature</td>
<td>Variable, weak, frail</td>
</tr>
<tr>
<td>Temperature</td>
<td>Cold</td>
</tr>
<tr>
<td>Moisture</td>
<td>Dry</td>
</tr>
<tr>
<td>Frame</td>
<td>Slender, disproportionate</td>
</tr>
<tr>
<td>Weight</td>
<td>Low</td>
</tr>
<tr>
<td>Skin</td>
<td>Rough, dry, cool</td>
</tr>
<tr>
<td>Hair</td>
<td>Dry, kinky</td>
</tr>
<tr>
<td>Appetite</td>
<td>Variable, low, Needs frequent</td>
</tr>
<tr>
<td>Digestion</td>
<td>Irregular, gas</td>
</tr>
<tr>
<td>Feces</td>
<td>Constipation, dry, hard</td>
</tr>
<tr>
<td>Mental</td>
<td>Fluctuating, moody, curious</td>
</tr>
<tr>
<td>Memory</td>
<td>Generally poor</td>
</tr>
</tbody>
</table>
Co-existing conditions (Comorbidity)

Migraine is a disorder closely associated with a particular physiology. This constitutional pattern also manifests as many other conditions, so migraine presents as comorbid with a long list of other chronic condition characterized by cold, dryness and constipation.

Comorbidity commonly associated with migraines:
- Asthma
- Chronic fatigue syndrome
- Hypertension
- Raynaud’s phenomenon
- Stroke
- Sleep Disorders
- Epilepsy
- Lupus (SLE)
- Multiple Sclerosis
- Essential tremor
- Psychiatric: bipolar disease, major depression, generalized anxiety disorder, panic disorder, simple and social phobia
- Possibly associated with hypertension, mitral valve prolapse, and patent foramen ovale

Conventional treatment

Medical treatment involves analgesics (ibuprofen, aspirin, acetaminophen), antinausea medications. Abortive medications include the triptans, which produce vasoconstriction by binding serotonin, reducing neurogenic inflammation, and ergot, and older vasoconstrictor.

Prophylactic medications include beta blockers, calcium channel blockers, NSAIDS, tricyclic antidepressants, SSRI antidepressants and anticonvulsants.

Sometimes biofeedback, food diary and food trigger avoidance, stress management, a regular eating schedule and adequate rest are recommended.

When selecting drugs for migraine prophylaxis, it is sometimes desirable to treat comorbid conditions with a single agent. For example, when migraine and hypertension occur concomitantly, a beta blocker or calcium channel blocker may be the treatment of choice.

Herbs for migraine

Our strategy for initial management must begin with astute differential diagnosis to eliminate other severe headaches (cluster, sinus). Then we move on to abort pain, if at all possible. (Sometimes chewing aspirin will be abortive.) Then there is the need to normalize cranial circulation quickly.

As preventive strategy, normalize cranial circulation long term, including whole body circulation. Warm and moisten the body, treat constipation and balance hormones.

Therapeutic Settings for preventive and restorative therapy should be warm, with a blanket and hot water bottle. The environment should be cozy, homey and relaxing, with soft light and quiet sound and music.

Table 5 Typical Migraine Patient
Let’s start with the star performers.

**Butterbur root and leaf** (*Petasites hybridus*) has been used in European traditional herbalism to treat pain. Modern research is confirming this use, most especially for the treatment of migraine. In scientific studies, consistent use of butterbur produced significantly fewer migraine attacks, fewer migraine days and a reduction in migraine pain. Two clinical studies demonstrated its effectiveness as a preventive treatment for migraines. The studies, both double-blind, placebo controlled, involved a total of 128 patients. Butterbur significantly reduced (as much as 60%) the frequency of migraine attacks, compared to placebo. In scientific studies, butterbur produced significantly fewer migraine attacks, fewer migraine days and a reduction in migraine pain. Standardized extracts of butterbur are now available in the United States. These are usually standardized for at least 7.5 mg of Petasin and Isopetasin.

You must use pyrrollizidine alkaloid free versions. Petadolex *Petasites hybridus* Extract (Butterbur Root) (28-44:1) is one such. At 50 mg per tablet, use 2 per day.

**Bai zhi root** (*Angelica anomala*) is the classic Chinese remedy for migraine. According to Chinese medical philosophy, it balances energy flow in the head, relieving pain.

**Ginger root** (*Zingiber officinale*) is a standout for aborting an episode before the pain starts. When the first awareness of an impending attack begins (the "prodrome"), stir 2 heaping Tbs. of dry ginger powder into a glass of water. Drink it down immediately. The attack will usually recede. If it begins again a few hours later, repeat the dose.

**Feverfew leaf** (*Tanacetum parthenium*), a decorative relative of the daisy, sometimes called “the aspirin of the eighteenth century,” has been rediscovered. Traditionally used in European herbalism for all types of pain, such as menstrual cramps, headache and arthritis, this remedy has gotten serious attention recently as a migraine preventive. Taken daily, it significantly reduces the incidence of migraine attacks, according to several studies.

Some herbalists are now reviving the historical use, recommending feverfew for acute headache. Often it is taken in doses of 300 mg every 15 minutes for an hour when the headache starts. Feverfew can produce a little queasiness, so work the dose up cautiously. Taking it with food might help.

For migraine prevention, begin with 125 mg per day, and work up to the dose that gives the best prevention. Larger doses may control other chronic pain disorders.

**Herbal analgesics**

Typical analgesics usually do not have much effect to abort a migraine episode. Nevertheless, during the prodrome, there might be some benefit.

**Willow bark** (*Salix alba*) is a traditional pain reliever. Willow contains salicin and other related salicylates, which are the herbal forerunners of aspirin. Salicylates, such as those in willow, relieve pain, lower fever and diminish inflammation.

Willow is widely used in Europe for the treatment pain. In an Israeli study from 2000, the extract was considerably more effective than a placebo in this blinded trial. A higher dose was quite a bit more effective. Aspirin thins the blood, but willow bark does not, so it won’t cause the bleeding problems common with aspirin. Patients don’t experience the typical digestive disturbances of aspirin when using willow.

There are no special warnings for using willow. Use a tea brewed from up to 1 oz., dry weight, of the raw herb, per day, or an extract containing 240 mg total salicin. For migraine, it might be worth having the tea made in advance and frozen in dose units for fast action when needed.
Speaking of salicylates, rosemary has one of the highest known contents of salicylates. This herb has long been associated with the head, brain and mind. Folklore says that rosemary helps headaches, including migraines. It probably does have an affinity for the head, and it does increase circulation, so it might help. Its association with the head lends it to improving mental clarity, memory and vision. It has historically been regarded as lifting the mood.

**California Poppy aerial parts** (*Eschscholtzia californica*) is powerful medicine. Originally used by Native Americans, it is distantly related to opium poppies, and contains isoquinoline alkaloids, which are known to have pain-relieving properties. This American herb has become a popular pain medicine in Europe. The German Commission E lists it as an antispasmodic and sedative.

As tea, a typical dose is 3-5 tsp. of chopped dry herb, brewed, taken when necessary. As a tincture, start with 5 ml when necessary, and adjust for pain. Migraine likely will require higher doses.

**Corydalis tuber** (*Corydalis yanhusuo*) (“yan hu suo”) is the main herb used in Traditional Chinese Medicine for treating pain. It is another relative of the poppy, containing isoquinoline alkaloids, mainly tetrahydropalmatine. The raw herb is about 1% the strength of opium. Like morphine, it promotes relaxation and relieves pain. While morphine is addictive and creates tolerance, tetrahydropalmatine doesn’t have these problems.

Several studies in animals have confirmed the benefits. A 1999 animal study performed at The University of Maryland Dental School demonstrated that yan hu suo significantly reduced pain and inflammation.

**Baical scullcap root** (*Scutellaria baicalensis*) is a Chinese anti-inflammatory that is preventive at 4 grams per day and possibly abortive at 4-10 grams per day. Use it as tea, tincture, powder or capsule. As a tea, start with ½ ounce, dry weight, of chopped herb, brewed, per day.

**Cayenne** (*Capsicum annuum*), or any spicy Capsicum, may prevent migraine. The capsaicin depletes Substance P and acts as a vasodilator. Use modest daily oral doses with titrated gradual dose increase to the digestive tolerance dose. Chiles may be drying long term.

**Deer antler velvet** is a yang tonic that strongly counteracts the constitutional tendencies of the typical migraneur. It has been used in Chinese medicine as a long term migraine cure. Traditionally, velvet antler is sliced very thinly or ground to powder, of which a common dose is 3-9 grams per day. It works well as a tea, but boil it by itself, as the gelatin tends to stick to the dregs of other ingredients. It may also come as liquid in glass vials or pills.

**Miscellaneous tools**

- Caffeine is an effective vasoconstrictor that treats an acute episode, especially if the migraneur is not a caffeine drinker. Use several cups of coffee or the equivalent during the prodrome.
- Niacin may be preventive if used at a daily dose that stimulates a flush, presumably by facilitating regular vasodilation.
- Vitamin C has some history as a preventive at bowel tolerance dose (about 12 grams for most people).
- Vitamin B2 is a possible preventive at 1 gram per day.
- Breathing pure oxygen at the onset of the prodrome may abort the migraine.
- As an emergency management technique, place an ice pack on head and put the patient in a warm shower or bath to normalize cranial circulation.
- Yoga maintains that inverted posture (shoulder stand, etc.) can have significant long term curative benefits. The author has seen this work very well in multiple cases. Although counterintuitive, assuming an inverted posture may also abort an attack, if the patient can be persuaded to engage in acrobatics while her head feels like it’s about to explode.
Diet

In a double-blind controlled trial of the oligoantigenic diet, Egger reported the recovery of 93% of 88 children with severe frequent migraine. The diet consisted of one meat (lamb or chicken), one carbohydrate (rice or potato), one fruit (banana or apple), one vegetable (brassica), water and vitamin supplements. After 3 or 4 weeks, patients who had only one, or no, headaches during the last 2 weeks of the diet were reintroduced to excluded foods one at a time (double-blind) to verify that the foods were causing the migraine. Seventy percent of patients experienced migraine challenges to the reintroduction of provocative foods. Fascinatingly, in most of the patients in whom migraine was provoked by other triggers (flashing lights, etc.), the migraine phenomenon no longer occurred while they were on the diet. Also, associated symptoms (abdominal pain, behavior disorder, asthma, eczema) improved in most patients.128

Mansfield and others found that over 70% of migraine patients exhibited at least one reaction triggered by food. Many found relief from their symptoms on an allergy free diet. The researchers advised that food allergy testing be used to determine those patients most likely to benefit from diet therapy.129

Magnesium

This is not an herb, but perhaps we saved the best for last. Magnesium is a major preventive remedy. Use bowel tolerance oral doses (for most people, about 1200 mg daily). Consider intravenous magnesium to abort a migraine.

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