

Nature's Field

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Lobelia

By Steven Horne with Mark Montgomery

If plants have personalities (as many herbalists suggest they do) then lobelia is surely one of the greatest “tricksters” of the herbal world. Matthew Wood goes so far as to call it, “the wildest and craziest article in the herbal material medica.” It is certainly one of the most controversial remedies in the plant world. Many consider it a toxic botanical, appropriate only for professional herbalists, while others (myself included) consider it a very safe remedy.



Photo by Steven Foster

The controversy began with herbalist Samuel Thomson, in the first decade of the 1800s. Thompson had drawn attention—and the wrath of the medical establishment—for his cures of asthma and other serious illnesses with lobelia. In 1809, Thompson’s fortunes (and lobelia’s reputation) took a turn for the worse when Thompson was thrown into jail on the charge of murder by the use of lobelia. In Matthew Wood’s words, “After languishing in an unheated, urine-soaked cell with a child molester, the case was brought to court, the charges were shown to be fabricated, and he was released without being allowed to stage a defense.” [*The Book of Herbal Wisdom* by Matthew Wood] Despite these facts, the charge that lobelia is a poison has been repeated by medical authorities ever since.

Given this bad press, it seems lobelia must have some awfully good qualities in order to have survived at all. And, in fact, the followers of Thomson, as well as members of the “eclectic” and “physio-medicalist” schools that followed, felt that lobelia had almost miraculous properties. It was commonly considered a “panacea” or cure-all for its ability to act differently according to the needs of different patients. Where there was depression of a certain organ or system, lobelia would promote stimulation. Where there was tension, it brought relaxation.

It is not uncommon to have disagreement—or even controversy—swirling around herbs. What is most fascinating about lobelia, though, is that even its most ardent supporters recognized its dual personality. Dr. George Hite, one of the eclectic herbalists, wrote in 1890 that lobelia “is a remedy whose excellency is equal to its nastiness.” And its common folk-names also display this sharp dichotomy: on the one hand its ability to open the bronchial airways earned it the name, “Asthma weed.” But its taste (and effect when taken in large doses) also led it to be called “vomit wort”, “pukeweed” and “gagroot.”

Today, lobelia is primarily used for its anti-spasmodic effect. It relaxes all the muscles of the body, helping to relieve spasms, cramps and obstructions. This helps to explain why lobelia has historically been used to help with epileptic seizures, asthma, whooping cough, intestinal “gripping,” laryngitis and muscle cramps. Midwives have also administered lobelia as a muscle relaxant to counteract pelvic rigidity during childbirth. . In addition, the extract can be applied topically to relieve muscle cramps, stiffness and pain.

But the other, more unsettling, characteristic of lobelia is its ability to act as what Matthew Wood calls an “activator,” “to stir up the other herbs in a formula and direct them to the desired tissue or organ needing therapy.” Many other herbalists have said that lobelia has its own “intelligence” and seems to know where to go and what to do to restore balance. The idea of an “activator herb” was known to Native American herbalists, but certainly goes against the grain of modern-day pharmaceutical herbology. In the final analysis, we can play with an herb like lobelia and see what happens, recognizing as Matthew Wood says, that herbs “like to do all sorts of things. They...have a magical level of action and this goes far beyond the artificial constructs of the human mind.”

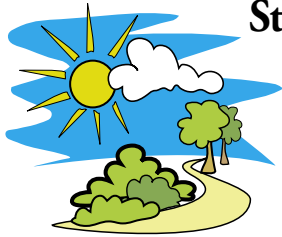
Lobelia is generally not taken on a daily basis, but is reserved for specific ailments. Small, frequently repeated doses work best. If nausea or vomiting occur when taking lobelia, peppermint tea will help to settle the stomach.

Sources

The Book of Herbal Wisdom by Matthew Wood
The Comprehensive Guide To Nature's Sunshine Products by Steven Horne
A Modern Herbal by Mrs. M. Grieve
The New Age Herbalist by Richard Mabey

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Steven Horne's Ramblings and Ravings

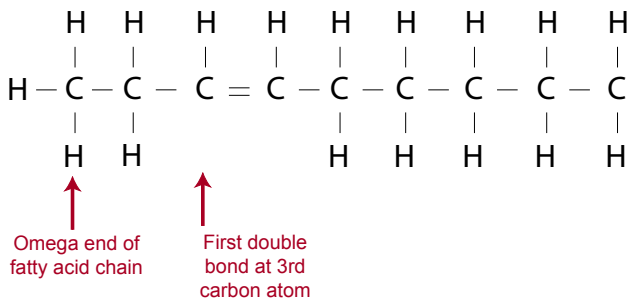
Fat Facts, Part Three

The Omega-3 Essential Fatty Acids

In the last two issues, we've been taking an in depth look at essential fatty acids. Last issue, we focused on the Omega-6 family of essential fatty acids. In this issue, we'll take a closer look at the Omega-3 family of essential fatty acids.

By way of review, remember that all essential fatty acids are polyunsaturated, which means they have more than one pair of double bonds. If you'll recall the shopping bag analogy we've been using, this means that more than two pairs of carbon atom "shoppers" are holding hands with each other instead of holding onto a hydrogen molecule "shopping bag."

These long changes of carbon molecules have two ends—an omega end and a delta end. What determines whether the fatty acid is an Omega-6 or an Omega-3 fatty acid is the location of the first double bond, that is, how many carbon molecules away from the omega end of the fatty acid do we find the first double bond. An example of an Omega-3 fatty acid chain is shown below.



The reason Omega-3 and Omega-6 fatty acids are essential to the body is because the body is capable of adding more double bonds farther down the line, but can't add them closer to the omega end. One of the primary uses for these essential fatty acids is to make eicosonoids, chemical messengers used by every cell of the body. Making these eicosonoids requires lengthening the carbon molecule chains from 18 to 22 carbon molecules long, and desaturating them (i.e., removing more hydrogen atoms).

These eicosonoids are the most primitive of all hormones—autocrine hormones. These autocrine hormones are released into the fluids surrounding the cells and rapidly taken up by neighboring cells. Because they last only a few seconds, they have only recently come to the attention of scientists. These eicosonoids or autocrine hormones include: prostaglandins, leukotrienes, lipoxins, thromboxanes and cyclooxygenases (COX-1 and COX-2).

The chart on the next page shows how the body converts Omega-6 and Omega-3 fatty acids into these messengers. Ideally, there should be a ratio of about 1:1 to 4:1 between Omega-6

and Omega-3. That means for every "dose" of Omega-3 essential fatty acids we should be getting one to four "doses" of Omega-6. Unfortunately, the average person is getting a ratio of between 10:1 and 25:1. That's not good, and here's why.

As shown in the chart, Omega-6 (linoleic acid) is converted to GLA. This is done by an enzyme which removes 2 hydrogen atoms. This creates GLA (gamma linoleic acid). Another enzyme adds 2 more carbon molecules to the chain. Using our analogy, it lets two more carbon molecule "shoppers" butt into the line. This creates DGLA (dihomo-gamma linoleic acid).

Now, here's where Omega-3 becomes important. DGLA normally prefers to be converted into series 1 prostaglandins and thromboxanes. These are good guys, reducing inflammation and keeping us healthy. However, an enzyme called delta-5-desaturase can convert DGLA to arachodonic acid (AA). We don't want that to happen, because then eicosonoids, which will increase inflammation and have other harmful effects, will be produced instead.

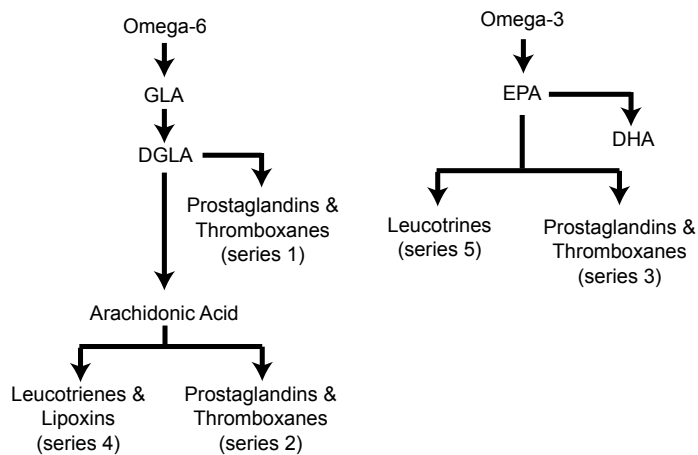
Delta-5-desaturase is the same enzyme that converts Omega-3 to EPA (eicosapentanoic acid), which is a good thing. However, if it doesn't have enough Omega-3, it gets bored with having nothing to do and starts converting DGLA to AA. So, to keep our DGLA on the "strait and narrow" we need to have ample amounts of Omega-3 to keep it busy.

So, where do we get Omega-3? It's found primarily in green leaves. That's right, Omega-3 is in those dark green leafy vegetables all of us are *supposed* to be eating (but few of us are). This is why just about everyone needs to supplement their diet with Omega-3 and the best way to do that is with flax seeds and flax seed oil.

Flax seed has an ideal ratio of Omega-6 and Omega-3, so it will ensure that you are getting the fatty acids you need. Because it is polyunsaturated, it isn't very shelf stable and goes rancid very easily. So, you need to keep it refrigerated and take it raw.

Just one tablespoon of flax seed oil will provide the minimum requirement of both Omega-6 and Omega-3 for an adult. Of course, you could swallow this in gel caps (but that's a lot of gel caps). You can also take it straight if you like swallowing spoonfuls of oil (don't knock it—a lot of children do). As for me, I prefer to incorporate the oil into my food.

For instance, I let butter sit in a dish until it reaches room temperature and then I blend it with flax seed oil to make soft spread butter. You can use anywhere from 1/2 to 1 cup of flaxseed oil per cup of butter (depending on how soft you want the spread to be). The flavor of this soft spread butter is great!



You can also use flax seed oil to make salad dressings, or in place of olive oil in hummus or other foods that aren't cooked. Flax seed oil can be mixed half and half with real maple syrup to use over pancakes and waffles (look Ma, no butter!). You can also use it straight on baked potatoes or in place of butter in your oatmeal.

Deficiencies of Omega-3 EFA have been directly linked to decreased mental abilities, loss of memory, learning disabilities like ADHD, PMS problems, tingling sensations in the nerves, poor vision, the increased tendency to form blood clots, reduced immune activity, high blood pressure, an increase in inflammatory disorders like arthritis and cardiovascular disease. On the other hand, daily supplementation with flax seed oil may help prevent the following problems: dry skin, cellulite, constipation, colitis, ulcers, hypoglycemia, diabetes, heart disease, high cholesterol, calcium deficiencies and reproductive and immune system problems.

Wow, what a difference adding a little of the right kind of oil makes in people's health! Maybe we should start promoting flax seed oil as lubrication for the wheels of health. Of course, it wouldn't hurt to eat those green leafy veggies, either.

Now, what about fish oils? Aren't fish supposed to be great sources of Omega-3? Actually, any wild animal or deep ocean fish is going to have a reasonable amount of Omega-3 fatty acids. However, the amount of Omega-3 in any animal food depends on how much Omega-3 is in its diet, since animals can't make Omega-3 any more than we can. That's why farm-raised salmon and non-grazing animals can be deficient in Omega-3, too.

When I raised chickens and gathered my own eggs, I used to marvel at the deep orange color of the yolks. I now know that this is partly due to a higher content of Omega-3 fatty acids in my free ranging chickens (because of the greens they were getting in scratching around the yard). If you buy eggs where the hens are fed flax seeds, the yolks are darker (and the eggs taste better), too.

Omega-3 is also found in hemp seeds, walnuts, pumpkin seeds, Brazil nuts, sesame seeds and avocados. Now, as for the deep ocean fish (and the fish oil supplements like Super Omega-3 EPA) they don't actually contain that much linolenic acid (your basic Omega-3 fatty acid). What they do contain is more of the fatty acids our

body converts Omega-3 into, i.e., EPA and DHA. That's because animals, including fish, make these same conversions.

Just like our ability to convert Omega-6 (linoleic acid) into GLA and DGLA can be inhibited by poor nutrition, so can our ability to convert Omega-3 (linolenic acid) into EPA and DHA. This is because the same enzymes are involved. It works like this.

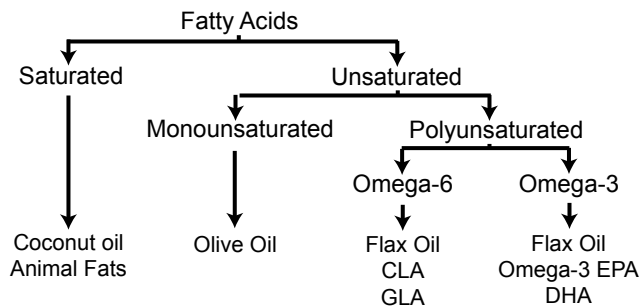
Both linoleic and linolenic acid are 18 carbon molecules long. In each case, the body starts by using the delta-6-desaturase (a desaturating enzyme) to remove 2 hydrogen molecules from the fatty acid making the fat less saturated. In other words, it takes two shopping bags away from the shoppers.

Next, elongase adds two more carbon molecules to the chain, so that the chains are now 20 instead of 18 molecules long. (E-elongase, get it? See chemistry doesn't have to be that mystical.) Using our analogy, it helps two more shoppers butt into the line.


Alcohol, diabetes, deficiencies of B6, magnesium, zinc and excess saturated fats and transfatty acids will all inhibit these enzymes. Delta-5-desaturase, which is involved in creating EPA, is inhibited by deficiencies of vitamin C, niacin and zinc.

By the way, eicosonoids are 22 carbon molecules long, so the final conversion of essential fatty acids to these chemical messengers requires two more shoppers to butt into line. (So, if these carbon molecules were really shoppers, they'd be really ticked at this point. Fortunately, it's only an analogy.)

I hope these articles have helped you better understand the nature of fatty acids. As a final bit of information, here's a chart showing where different fatty acid supplements and oils fit in the "family tree" of fatty acids.



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Kimberly Balas' Clinician's Corner

Reaction to Water, BTA Reveals, Thermography and more...

Reaction to Water?

Help! I'm desperate to find a cause and remedy for an 11-year-old boy, whose hands clench up in pain and stay in that position for a while with pain when they are exposed to water. His feet are also slightly affected, but the rest of the body is not. This happens whether he swims, showers or just washes his hands. It is an ordeal to wash his hair. Swimming for ten minutes can cause pain for hours.

The pain does go away until his next exposure. His mother says he has been this way all his life and has spent much time at the Children's Hospital in Chicago. The doctors have never given his condition a name and they do not know what causes it. Their only suggestion through the years has been to apply Desitin ointment to the hands to act as a barrier.

He is also ADD. I appreciate any help you can give with this.

Victoria

This sounds like a toxic reaction to chlorine, not the water, which would mean there isn't enough iodine in the body. ADD children are often deficient in iodine. Get him some iodine supplementation. Also get fluoride out of his toothpaste and avoid breads with bromides as dough conditioners, as these substances displace iodine.

BTA Reveals Congestion

In a situation where a BTA/QFA test reveals congestion, would a cleanse like a Tiao He work well? If not, why not?

Michele

Since the adrenals control so much of how the body handles lymphatic congestion, I would start by focusing on building up the adrenals instead of a cleanse that focuses on the adrenals. If you stir up the liver and the lymph isn't moving, it will only make the situation worse.

I would use Lymphatic Drainage and Cellular Energy along with enzymes taken between meals. That's all I would do to start. You really can't add any other supplements until you clear the congestion.

Thermography

I have a client who has water filled cysts that move to different places throughout the breast. She had a mammogram, then had to go back for another. She finally ended up with an ultrasound. This is expensive and she doesn't like the idea of getting all those x-rays anyway. For the next appointment, she tried to schedule for the ultrasound and skip the x-ray (since she was told the cysts would always be in a different place and the same thing would happen every time she went. No one in a 50 mile radius would do that without the x-ray first. Any idea why?

She even tried to check into something called a thermogram and was told that it was worthless. What is it? What could she do for a periodic checkup besides having the mammogram? She only "needs" to have the check up every 2-3 years.

Teri

I would only recommend having her use thermography. Did you know that the people that contribute the most to breast cancer by manufacturing cancer causing chemicals are the same people who started breast cancer awareness month and the phrase "early detection is the key?" Well that's only natural, because if they really focused on prevention they would be out of business. Oh yes, they also own the manufacturing facility for all the films made for mammogram machines. Could there be conflict of interest here?

Thermography measures heat and cold in the tissues. It is a very accurate way to assess breast health and is completely safe. Information on this subject can be found in the Sept 2001 issue of *Alternative Medicine Magazine*.

Try these web sites for more information on thermography: <http://www.breastthermography.com/> and <http://www.mercola.com/2000/oct/29/thermography.htm>

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Kidney Failure Diet

I am looking for a specific diet for kidney failure. I am working with a young lady, age 25, who has just been diagnosed. The problem was presumably caused by high cholesterol (her diet was really bad), but all that I read suggests the kidney problem is causing the cholesterol to rise. Regardless, the mom got a diet plan from the doctor which was awful (it had margarine and lots of animal protein listed on it, in addition to sugar and dairy).

I would really like to help her with specific foods. Obviously fresh fruits and veggies are indicated here with certain exceptions like avocado, kale, etc.

Lisa

Instead of the cholesterol, I would say that this situation was probably caused by the colloidal proteins not being broken down in the body. This put stress on the kidneys.

This would be regulated more by adrenals. All the sugar and processed foods would put further stress on the adrenals and aggregate the body's inability to handle protein transport. This would further stress the kidneys. You should also be aware that long term or heavy use of acetaminophen would cause this problem, too.

The toxins and the adrenals having problems with the corticosteroids, glucocorticoids and mineralcorticoids would elevate cholesterol in an effort to pick up the slack for hormone transport and inflammatory control. So you are right on track about the kidneys controlling the cholesterol and not vice versa.

I would put her on lots of Adrenal Support and nettle seed to help with kidney function.

Avoid foods with purine content and trans fats....I know you already know about this, but they may not. I would consider having her take an amino acid supplement, like Free Amino Acids, and some kind of a protein drink, like Everybody's Formula, so that the body has bioavailable proteins. This would take stress off the adrenals. I would also recommend taking enzymes, like Proactazyme, between meals.

The big factor diet-wise will be to eliminate high glycemic foods, especially grains, for now. Any animal protein consumed is okay if it is rare (like sushi), otherwise it will cause a strain on the kidneys. Watch the sugars in the juices, too (like carrots). pH Green Zone would be a good nutrient source and help alkalize her body.

I hope this helps.

Confusing Thyroid Readings

I have some questions about some blood tests. They are on a six year old boy, who weighs 30 pounds and is being fed by a gastrostomy tube, so giving products is easy. This is probably my one

and only chance to earn the trust of our doctor concerning natural health interventions, so I want to get it right.

The TSH reading was 18, which suggests an underactive or low thyroid function. Yet, looking at the thyroid function (based on tissue levels and calcium/potassium ratio) suggests an 85% or more overstressed or overactive thyroid.

The adrenals were only slightly overstressed (10%) based on tissue sodium/magnesium ratios. I am a little confused by this data. Can you help explain what it means?

Jason

Just remember that TSH is a fluctuating number directly related to liver as well as thyroid function. While it is one of the best determinants of thyroid function, it still has its limitations. The cells accept the T4 and remove one iodine molecule to make T3. Then, once the T3 is used as a spark that converts to energy, a signal is sent to the hypothalamus to let that section of the brain know what the energy requirements are in the body.

When the cells become congested or the interstitial fluids are stagnant, then the tissues would hold onto the calcium and potassium. This would present as a stressed condition because the minerals aren't being released in the serum. The adrenals move these minerals along, and if the sodium and magnesium ratio is only slightly overstressed, it is because of the congestion in the tissues.

When heat energy is low (a function of T3) the hypothalamus produces TRH (thyroid releasing hormone) which then signals the anterior pituitary portion of the brain to release TSH. The TSH then tells the thyroid whether to release more T4 and some T3. When congestion is present, the TSH numbers will elevate. This would relate to the conversion process from T4 to T3 in the liver as well.

So, what's the bottom line here? These readings suggest a need to work on congestion in the liver, get the adrenals communicating with the hypothalamus for better energy recognition and support anterior pituitary. In this case, I would specifically recommend MasterGland and Red Clover Blend.

I have some clients who have had high TSH numbers like this and didn't use any products for their thyroid. Instead, they focused on these issues and their numbers shifted to normal within two to three months. And all this happened without Synthroid...can you imagine that?

Ganglion Cysts

What is a good protocol for ganglion cysts?

Tonja

I use the All Cell Detox and Protease between meals.



Seizures and Epilepsy

Exploring natural options and alternative remedies

A seizure is an episode of abnormal electrical activity in the brain. It can involve loss or reduction of consciousness, involuntary movements and overwhelming sensations. Seizures are generally thought to result from an electrical overload of the brain's nerve cells. It's estimated that serious seizure disorders affect one and a half million Americans and that up to five percent of the population (15 million people) will suffer from a seizure during their lifetime. But it's important to note that anyone can suffer a seizure if exposed to sufficiently high levels of heat, drugs, or other types of stress on the brain.

Sometimes seizures are related to a temporary condition, resulting from the use of recreational or pharmaceutical drugs, withdrawal from certain drugs, or abnormal levels of sodium or glucose in the blood. In these cases, they don't usually recur once the underlying problem is corrected.

In other cases, an injury to the brain causes it to be abnormally excitable on a regular basis. This can be the result of problems like a stroke, a blow to the head, a tumor in the brain, or a serious infection such as meningitis or encephalitis. In some people, this over-excitability can result from an inherited abnormality in the brain.

Seizures are generally classified as either "simple," in which there is no change in a person's level of consciousness, or "complex," in which a person loses consciousness completely or has a change in level of consciousness. They're also classified as generalized (where the whole body is affected) or focal (only one part or side of the body is affected). Within their broad categories, there are several different types of seizures.

Grand mal seizures are the most common type. They are characterized by symptoms such as stiffness or violent contractions of the body, loss of consciousness, temporary cessation of breathing and biting of the tongue or cheek.

Petit mal seizures occur most commonly in people under age 20, usually in children ages 6 to 12. Typically, they last only a few seconds, with full recovery occurring rapidly and no lingering confusion, though the person often doesn't remember having them. They usually are characterized by episodes of staring or "spacing out" during which the child's activity or speech ceases.

Epilepsy is a chronic disorder with recurrent seizures of any type. Scientists don't know much about what causes it, but some types of epilepsy have been shown to be hereditary.

These are not the only types of seizures and because the causes and types of seizures vary greatly, always consult a medical doctor when working with seizures to get appropriate diagnosis and help. But regardless of the particular type of seizure, the bot-

tom line is abnormal electrical activity in the brain. So, anything we do to boost the health of the electrical system in the brain may be helpful. So, in conjunction with medical treatment, here are some options to consider.

Seizures have been associated with malnutrition, hidden food allergies and hypoglycemia, as well as with the consumption of aspartame. Anyone experiencing seizures should replace aspartame with natural sweeteners like stevia, honey or evaporated sugar cane juice. It is also thought that seizures can result from years of ingesting small amounts of toxic metals and other poisons in refined and processed food. Avoiding all flavoring and commercially-processed and chemically refined food helps keep the body free of these dangerous toxins. And abstaining from sweets, coffee and alcoholic beverages (as well as eating regularly) will help avoid hypoglycemic seizures caused by a sudden drop in blood-sugar.

When it comes to supplements, a broad spectrum vitamin and mineral supplement, like Super Supplemental, should be considered. In particular, Vitamins A, C, E and the B-Complex should be taken, along with the minerals magnesium, calcium, chromium, zinc, manganese, and selenium. A cleansing program which includes Heavy Metal Detox may be helpful in reducing toxins in the body.

Herbalists have had some success in using nervine herbs to reduce the incidence and severity of seizures. Lobelia is probably one of the most powerful remedies and the first that should be considered, but Valerian, Passion Flower, skullcap and St. John's Wort may also be helpful.

Chickweed has been used for children's convulsions. It is made into a tea steeping 1 tablespoon of the dried herb in one cup of boiling water for ten minutes. Drinking this tea three times a day for a week has been reported to help convulsions disappear in some cases.

The neurotransmitter GABA has been helpful in some cases of seizures and epilepsy. GABA keeps the brain from over firing. It is manufactured from the amino acid glutamine with the help of vitamin B6. L-tyrosine is another amino acid which has been helpful for calming brain function in epilepsy and seizures. All three of these amino acids are found in the GABA Plus formula along with spirulina and passion flower.

For additional help with natural remedies for seizures, consult your local herb specialist, or some of the resources below.

Selected References

- The Comprehensive Guide To Nature's Sunshine Products* by Tree of Light Publishing
- The New Age Herbalist* by Richard Mabey
- The Wild Rose Scientific Herbal* by Terry Willard

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Seek appropriate professional assistance for all serious health problems. Handout prepared by Tree of Light Publishing
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GABA Plus

Natural supplement to help calm over activity in the brain

GABA (Gamma Amino Butyric Acid) is an amino acid that also serves as a calming neurotransmitter in the brain. In fact, it may be the most abundant neurotransmitter in the brain. Put simply, its primary function in the brain is to keep the nerve cells from being “trigger happy” and over firing. Low levels of GABA are associated with epilepsy, seizures, schizophrenia, Parkinson’s disease, hyperactivity and tics.

Manufactured from the amino acid glutamine with the help of vitamin B6, proper levels of GABA in the brain prevent anxiety and increase mental clarity. Like the drugs of the benzodiazepine family (Valium, Xanax) GABA has a calming effect, but unlike these drugs it is not addictive. Research suggests that GABA can also improve sleep cycles and promote more restful sleep and vivid dreaming. GABA also helps to increase output of Human Growth Hormone (HGH), which reduces fat storage, helps to build muscle mass and tends to provide increased energy and vigor.

GABA Plus is a formula containing GABA in combination with herbs and other amino acids. It may be helpful in cases of chronic anxiety and panic attacks, nervousness due to drug withdrawal, attention deficient disorder, epilepsy and seizures. It might be helpful in cases of Parkinson’s disease and schizophrenia.

In addition to GABA, the GABA Plus formula contains the following ingredients:

Glutamine

Glutamine is an amino acid that is converted in the brain into glutamic acid and then further into GABA. Glutamic acid has a calming effect on the central nervous system by reducing the number of neurons firing. This can be helpful for those who are overstimulated or find it difficult to focus. Glutamic acid is also used as a fuel by the brain. Glutamine also helps regulate glucose in the brain.

Taurine

Another amino acid, taurine has a protective effect on the brain. It is involved in neurological development. Supplementation with taurine be helpful for anxiety, epilepsy, hyperactivity, poor brain function and seizures.

Taurine has proven helpful as a supplement for children with Down’s syndrome and muscular dystrophy. It has also helped people with epilepsy in controlling seizures and is vitally important to heart function.

Spirulina

This algae is rich in many nutrients. It contains 65 to 71 percent complete protein (including all eight essential amino acids), high amounts of vitamin A, carotenoids, including 17 different beta carotenoids, vitamins B1, B2, B3, B5, B6, and B12, folic acid, biotin, inositol, chelated minerals, including phosphorus, calcium, zinc, potassium, magnesium, vitamin E, omega 3 and omega 6 fatty acids, over 200 enzymes and other trace nutrients. Various amino acids are absolutely necessary for the production of neurotransmitters. The significant amounts of amino acids in Spirulina have been used to improve alertness, energy and pituitary function.

Passion Flower

A nervine herb, passion flower has historically been used as a nervous system calmativ and “trophorestorative,” that is a substance which restores through nourishing. While its short-term effect is sedative, it also works long-term to rebuild and replenish.

It is said to combine the sedative action of valerian with the heart-health flavonoids of hawthorn and the antispasmodic benefits of butterbur. It has long been used as a remedy for young children’s convulsions and recent animal tests confirm that it protects against the effects of convulsant drugs.

Dosage

1-2 capsules two times daily, with meals. Do not exceed directed amount; do not combine with prescription drugs or use during pregnancy or nursing.

Selected References

- The Comprehensive Guide To Nature’s Sunshine Products* by Tree of Light Publishing
- Activating the Healing Response* by Steven Horne
- PDR for Nutritional Supplements* by Medical Economics Press
- The New Age Herbalist* by Richard Mabey
- The Wild Rose Scientific Herbal* by Terry Willard

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