RECLAIM YOUR BRAIN



Overcome addiction, fatigue, anxiety, and depression naturally.

HYLA CASS, M.D.

RECLAIM YOUR BRAIN!

Enhance Your Mind, Mood, Energy and Memory



Hyla Cass, M.D.

Nationally acclaimed innovator and expert in the fields of integrative medicine, psychiatry, and addiction recovery, Dr. Cass appears often as a guest on national radio and television, including E- Entertainment, and The View, and in national print media. Dr. Cass is author of several popular books including *Natural Highs: Supplements, Nutrition and Mind-Body Techniques, 8 Weeks to Vibrant Health: A Woman's Take-Charge Program, Supplement Your Prescription: What Your Doctor Doesn't Know About Nutrition, and The Addicted Brain and How to Break Free.*

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Biobalance International, Inc
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The Mind-Body Connection

Brain chemistry is the vital link between your mind and body. In order to Reclaim Your Brain it is important to understand your brain chemistry, the mind-body connection, and the relationship between mental health and physical well-being.

Depression, anxiety, panic, obsessions, addictions and memory loss are too often considered to be a matter of "mind over matter." Friends, family, and sadly, even therapists, will tell you that self-discipline or extensive psychotherapy are the ways to kick these mind states. Or they may urge you to take a prescription medication.

The good news is this: Rather than being crazy, neurotic or hopelessly psychologically damaged, you may simply be low in certain nutrients!

Most mainstream medical doctors overlook the fact that mood, behavior, and mental performance all depend on your balance of neurotransmitters, the chemical messengers of the brain. It's not simply mind over matter, but can also be matter over mind, too!

Neurotransmitters
Keys to Mind and Mood

Neurotransmitters are chemical messengers that act as the keys to how your brain functions. As these chemical messengers travel around your brain and nervous system they affect your mind and mood, and determine how you feel. As you will learn in this ebook, we can influence our brain functions by supplying the right nutrients to make our brain cells and neurotransmitters work at their peak.

There are hundreds of neurotransmitters. These are the main players:

- **GABA (gamma-aminobutyric acid)** is the "cool" neurotransmitter, relaxing you and calming you down during periods of stress.
- **Adrenaline (also called epinephrine)**, made in the adrenal glands, is the "motivator," stimulating you and helping you respond to stress.
- **Dopamine and noradrenaline (also called norepinephrine)** are the "feel-good" neurotransmitters, making you feel energized and in control.
- **Endorphins** promote that blissful feeling, giving you a sense of euphoria
- **Acetylcholine** works on memory and concentration.
- **Serotonin** is the "happy" and calming neurotransmitter, improving your mood, controlling appetite, and helping you to sleep well.
- **Melatonin** helps to keep you in tune with the cycles of nature by responding to seasonal shifts, and regulating your inner clock for day and night. It affects your ability to sleep soundly and to dream.

When these neurotransmitters are out of balance, you may feel depressed, anxious, stressed and unmotivated—or any other mental problem that you can imagine. On the other hand, with balanced neurotransmitters, you are calm and happy, and can think clearly. You are able to handle the challenges that life throws at you and enjoy all the wonders as well.

The Food Connection

"You are what you eat." R. J. CRUMBE

Proteins from the foods we eat are broken down by digestive processes into their component amino acids. For brain function, the most important amino acids are tryptophan, tyrosine, GABA, glutamine and taurine. These are converted into neurotransmitters in the body with the help of cofactors, or chemical helpers. Some of the most important cofactors for healthy neurotransmitter production are vitamins B3, B6, B12, C, and folic acid (folate), and the minerals zinc and magnesium. In addition to these cofactors your body needs a good source of essential fatty acids that make up about 60% of each brain cell.

Another vital food link in the mind-body equation is glucose (blood sugar) that is required for fuel. Amazingly, that little three- pound organ, your brain, can use up to 20% of the body's glucose at any one time. That's why we feel so good when we have a sugar high—it goes right to our brain, where it's burned for fuel! The same is true of processed foods, alcohol, and caffeine. You'll get a quick high, but in a short time, it's used up and your body wants more. Stay on that sugar roller coaster and eventually you'll start suffering from blood sugar dips and increasing mood swings. For more information on blood sugar imbalances see Chapter 13 of **8 Weeks to Vibrant Health**.

In addition to foods, certain medications, including antihistamines, tranquilizers, sleeping pills, narcotics and recreational drugs can affect your brain chemistry.



Depression and Anxiety

We need sufficient amounts of the key neurotransmitters to stay centered, calm, and happy. In depression, there is a lack of mood- stabilizing serotonin and noradrenaline as well as dopamine, the brain chemicals associated with motivation and pleasure. They are made from the amino acid, tyrosine.

To make serotonin, your brain needs enough of the essential amino acid tryptophan, found in protein-containing foods like turkey, chicken, cottage cheese, avocados, bananas, and wheat germ. Supplementation with the amino acid 5-hydroxytryptophan can also help your brain manufacture more serotonin.

Noradrenaline deficiency often results in cravings for stimulation from sugar, coffee, stress, and alcohol. Supplementation with the amino acids tyrosine and phenylalanine can convert to dopamine, which helps your brain manufacture more noradrenaline.

With anxiety, there is a deficiency in the neurotransmitter GABA, the brain's "anti-stimulant." Formed from the amino acids glutamine, GABA, and taurine, low GABA means high anxiety.

They all require sufficient amounts of cofactors as well.

Besides your food intake, there are dozens of reasons why your neurotransmitters may become depleted, among them are diabetes, liver disease, autoimmune disease, heart disease, high blood pressure, cancer, blood pressure–lowering medications, birth control pills, tranquilizers, antidepressants and stimulants.

Depression and anxiety can also be caused by blood sugar imbalances, sex hormone imbalances, food and chemical sensitivities, toxins and candida, so it might be helpful for you to read those sections of **8 Weeks to Vibrant Health** as well.

We all get the blues from time to time in response to life events. Occasional bouts of sadness help us appreciate the good times. Most of us bounce back within a day or two or maybe even a week or two. But sometimes we get "stuck" in that feeling of being unable to cope, and that leads to depression.

Symptoms of Depression

- Profound, persistent sadness
- Profound, persistent irritability
- Unexplained crying
- Loss of self-esteem, and feelings of hopelessness, helplessness, pessimism, worthlessness, guilt, and emptiness
- Dwelling on the past, particularly on errors you think you've made
- Changes in sleeping patterns
- Changes in eating habits
- Unexplained weight gain or loss
- Restlessness
- Fatigue
- A slowdown in physical movements
- Inability to concentrate
- Memory difficulties
- Difficulty making decisions
- Loss of interest in usually pleasurable activities
- Loss of interest in sex
- Social withdrawal
- Unexplained headaches, stomach upset, or other physical problems that are not helped with a standard treatment
- Thoughts of suicide or death

Symptoms of Anxiety

- Abdominal discomfort
- Diarrhea
- Dry mouth
- Rapid heartbeat or palpitations
- Tightness or pain in chest
- Shortness of breath
- Frequent urination
- Difficulty swallowing
- Insomnia
- Irritability or anger
- Inability to concentrate
- Fear you're losing control of your actions



The following are case examples of both types of responses:

My patient Stacey told me she was "a wreck" after her boyfriend of three years announced that he wanted his freedom. However, with the help of some brief counseling and the support of her friends, she soon got through her feelings of loss and began dating again.

Her friend Janet, on the other hand, found herself in similar circumstances, with very different results. When Janet's relationship ended, she was in tears for months. She withdrew from friends and family, was unable to sleep, began to perform poorly at work, and felt like a total failure. Her response seemed somewhat extreme, and she was on a downward spiral, heading toward a severe clinical depression.

Why were their responses so different? First check out the "Symptoms of Depression." If you or anyone you know have more than three of these, please seek professional help. There is no shame in having this condition, and the help you get can be life-saving. And it may simply be a matter of your biochemistry, as you will see!

Severe clinically recognizable depression affects one in five people at some time in their lives. Some of the symptoms of depression applied to Janet. They may occur one at a time or in combination. They generally come upon you gradually, but can be brought on by a crisis as in Janet's case.

She also felt nervous and worried, verging on panic. These are all signs of anxiety, which occurs when your brain begins sending messages to your body to prepare for the "fight-or-flight" response, as you can see on the "Symptoms of Anxiety" list.

Most of us are able to take adversity in stride, yet clearly some people are more resilient than others, depending on genetics, personal history, and lifestyle. Are there ways to handle the difficult times?

In a word, "yes."

Let's look at the ways depression and anxiety can be handled, with the pros and cons of each approach. Most importantly: If you or someone you know is severely depressed, please contact a health professional for help.

We will revisit these women later, where we discuss more natural approaches.

Traditional Medical Treatment

Millions of people are taking prescription drugs for depression and anxiety. If you think they're safe and effective, I have news for you: They're not. These drugs have been shown to be as effective as a sugar pill in most cases! An article in JAMA in 2010 by Fournier and colleagues, **"Antidepressant Drug Effects and Depression Severity"** concluded that while the benefit of antidepressant medication compared with placebo can be significant in severe depression, it may be minimal or nonexistent in patients with mild or moderate symptoms.

In addition, the majority of people taking them suffer a variety of side effects as well, some fairly serious. Here are a few of the most commonly used prescription drugs and their not uncommon side effects, some fairly serious.

- **Selective serotonin reuptake inhibitors**, also called SSRIs (e.g. Prozac, Paxil, Zoloft, Luvox, Celexa): These enormously popular drugs block the reabsorption of "feel- good" serotonin, thereby making more serotonin available and elevating mood. Unfortunately, they also compromise libido and sexual performance in men and women, cause "flat" moods or a lack of emotional highs and lows and can bring on other side effects including nausea, nervousness, insomnia, headache, tremors, anxiety, drowsiness, dry mouth, excessive sweating and diarrhea. Suicidal thoughts and behavior, as well as homicides are not uncommon, either, on SSRIs, and there is currently a warning on some brands, to that effect. Paradoxically, the SSRIs also lead to a net depletion of serotonin, defeating their purpose. SSRIs can also have serious long-term withdrawal effects.

- **Tricyclic antidepressants** (e.g. Elavil, Endep, Tofranil, Pertofane, Norpramin, Sinequan): These popular drugs work in various ways to affect the actions of noradrenaline and serotonin. They can cause dizziness, drowsiness, heart palpitations, dry mouth, blurred vision, confusion, weight gain, sweating, rashes, nausea, constipation or diarrhea, difficulty urinating, sexual dysfunction, nightmares and anxiety.

- **Monoamine oxidase inhibitors,** also called MAOIs (e.g. Nardil, Parnate, Manerix): These work by inhibiting or reducing the levels of monoamine oxidase, or MAO. This in turn increases the levels of "feel-good" brain chemicals such as serotonin, norepinephrine, and dopamine by preventing their breakdown in the brain. They can cause dangerously high blood pressure if taken with decongestants, antihistamines or foods containing tyramine, such as cheese or red wine.

- **Benzodiazepines (e.g. Valium, Xanax, Klonopin, Restoril, Ativan):** These tranquilizers slow down the central nervous system to reduce anxiety. They can cause drowsiness, irregular heartbeat, memory loss, disorientation, low blood pressure and muscle weakness. Benzodiazepines are almost certainly quite addictive when taken for any period of time and cause serious withdrawal symptoms if stopped suddenly. And they are often extremely difficult to get off of altogether.

Selective Serotonin and Norepinephrine Reuptake Inhibitors: This is another category of antidepressant medications including *Wellbutrin, Effexor Cymbalta* and *Pristiq* . They inhibit reuptake of both serotonin and norepinephrine. Besides having similar side effects to the SSRIs, they have even more severe withdrawal effects when the drug is discontinued too quickly, and even when tapering off them.

As bad as the side effects of all these medications might seem, there may be a place for them, particularly in doses lower than are generally prescribed. In his groundbreaking book *Over Dose (*Tarcher, 2004), Dr. Jay Cohen explains how the drug companies recommend far higher doses than are generally necessary. For example, the optimal dose for Prozac was found to be one-half to one-fourth the usual recommended dose.

Moreover, women require lower doses than men do, though that is seldom taken into consideration. In any case, synthetic pharmaceutical medications should be reserved for those times when their benefits clearly outweigh their downsides, and *for short term use only*.

When you want to combine natural products with prescription medication, do so under a doctor's supervision to ensure that there are no negative interactions.

Talk Therapy and Energy Medicine

There are various types of psychotherapy or "talk" therapy, moving into a more rapid "energy field" connection, which can be very helpful in dealing with depression, traumatic memory, and more. I prefer to use the more energy therapies such as EMDR (Eye Movement Desensitization and Reprocessing), guided imagery or Voice Dialogue (developed by Drs. Hal and Sidra Stone), and EFT or "tapping" as it is often called. There are also a variety of body-centered therapies such as Somatic Experiencing. They work a lot more quickly than traditional talk therapy, sometimes in a session or two. Helpful as they are, these therapies work better once brain chemistry is balanced.

Changes in Diet

Often, successful treatment of depression and anxiety can be as simple as treating blood sugar imbalances (Chapter 13). Low blood sugar can cause mood swings and anxiety, so I recommend that you eat small, frequent meals to prevent blood sugar swings. In addition: avoid alcohol, which is a depressant. It's the last thing you need when you're feeling low. And ditch the caffeine because it can leave you feeling drained and jittery.

Increase your intake of essential fatty acids in the form of fatty fish like salmon and tuna, or flaxseed oil to give your body the building materials for optimal neurotransmitter production. Eat sufficient protein in the form of fish, poultry, meat or soy (e.g. tofu) to provide the raw materials to make neurotransmitters.



Natural Approaches to Depression and Anxiety

Although prescription drugs may sometimes be useful, over my years of practice, I've learned that natural supplements should be the first line of treatment. They are gentle and safe. *Rather than simply dealing with the symptoms, they actually correct the underlying imbalances.* Here is a list of supplements that I have successfully used in my own practice, all backed by research. Also remember to have a look at the de-stress supplements listed below.

CBD (cannabidiol)
Good for both anxiety and depression,

I will introduce CBD here. Officially called Cannabidiol, CBD is a phytocannabinoid extracted from the hemp or cannabis plant. Though related to marijuana, it contains only minimal (0.3%) to zero THC, the cannabinoid that gets you high. CBD acts on the **endocannabinoid system** (ECS), a master communicator throughout the body, which helps to bring our various systems into balance. Its job is to help us to protect, relax, and restore ourselves, or "rest and digest," the opposite of "fight or flight."

In addition, though it may seem paradoxical, CBD can also be used to elevate mood, as it interacts with 5HT1 receptor, the same one as serotonin acts on.

Cautions: There is an occasional medication interaction if they are both metabolized by the same P450 enzymes, and this is able to be referenced here. In actual fact, any dose under 100 mg of CBD is very unlikely to interact with a medication.

Dosing: CBD comes in many forms and delivery systems. For the liquid or "tincture", which works faster, drip a few drops under your tongue, let it sit for 30 - 60 seconds, then swallow it and watch what happens to your target symptom(s). Work up to ½ - 1 dropper of the tincture and watch for a response over the next 10-15 mins or so. Repeat if needed. Then, you just keep titrating upward. It takes about 10 minutes to kick in, and lasts a few hours. You may find that more than one symptom is relieved at the same time. Repeat as needed. Or take a CBD capsule for a longer effect. There is a lot more detail on dosing **here**.

5-HTP (5-hydroxytryptophan)

A relative of the amino acid l-tryptophan, 5-HTP is converted into the "happy" and calming neurotransmitter, serotonin, causing you to feel relaxed, in a good mood and able to fall and stay asleep. It will suppress appetite and also help in migraine prevention. 5-HTP may be preferable to tryptophan because it enters the brain more easily and it can be taken with food and other supplements, including amino acids, with no competition to reduce its effect.

Cautions: In rare cases at very high doses, 5-HTP can cause nausea, anxiety and agitation. For some sensitive individuals it can cause anxiety at normal levels as well. Use caution when taking 5-HTP if you're already on SSRIs/SNRIs, and do so under medical guidance. I actually find the combination quite safe and tell my patients to take them at least 3 hours apart. There is the rare risk of serotonin syndrome as a result of excessive serotonin—nausea, sweating, headache and a rise in blood pressure. If that occurs, stop the 5-HTP and seek medical help. We generally only see it when two serotonin-enhancing medications are taken together, not a natural amino acid like 5 HTP.

Dosage: Take 50–100 mg two to three times daily. To promote sleep, take 50–200 mg one hour before bedtime. Be sure to take 25 mg of vitamin B6 (or 10-15 mg pyridoxal- 5-phosphate) to help convert the 5-HTP to serotonin. This can be part of your daily multivitamin formula. To prevent migraines, take 100–300 mg 5-HTP daily.

SAM-e (s-adenosyl-methionine) or TMG (trimethylglycine)

Both act as natural mood enhancers by enhancing neurotransmitter activity. TMG, which is much less expensive, provides the raw material from which your body manufactures SAM-e.

Cautions: High doses may lead to irritability, anxiety, insomnia, nausea or vomiting. In people with bipolar disorder, SAM-e (like any antidepressant) may trigger a manic episode, so such individuals should be monitored carefully. Do not take SAM-e and TMG if you are taking prescription antidepressants, unless you're under a doctor's supervision.

Dosage:

- SAM-e: take 200 mg once or twice daily, between meals, increasing gradually to a maximum of 1,600 mg a day, if needed. Generally, 400–800 mg a day will do.
- TMG: take 500– 1,000 mg once or twice daily.

DL-phenylalanine and L-tyrosine

The amino acids, DL-phenylalanine and L-tyrosine (often simply called *phenylalanine* and *tyrosine*) are the supplements to help you get a real energy boost, lift your mood, relieve pain and control appetite. DL-phenylalanine (DLPA) converts to tyrosine, which helps your body make dopamine, noradrenaline and finally, adrenaline. It also is a good pain reliever.

Cautions: You could get too much stimulation, causing anxiety, high blood pressure or insomnia. These shouldn't be taken by people with phenylketonuria or melanoma, or by pregnant or nursing women. Use caution with a history of bipolar illness, since they act as antidepressants and can induce mania.

Dosage: Take 500–1,000 mg of DLPA and 100–1,000 mg of tyrosine twice daily on an empty stomach, no later than 3 PM to avoid interference with sleep. Avoid proteins for an hour or so before or after, if possible, to prevent interference with absorption.

Rhodiola (rhodiola rosea)

Rhodiola is an *adaptogenic herb*, meaning that it helps to regulate your system in response to stress. Russian research shows that rhodiola can enhance your body's production of serotonin, dopamine and norepinephrine, enabling it to both lift your mood and calm your nerves. It helps to increase both energy and mental performance, and even has been shown to encourage weight loss.

Cautions: There are no known side effects.

Dosage: Use 100–300 mg of a standardized product.

To enhance your resilience to stress, check out **Adrenotone** containing rhodiola, ashwaganda and other excellent adaptogens.

St. John's wort (hypericum perforatum)

Dozens of studies have proven St. John's wort's ability to relieve, and even eliminate, mild to moderate depression. It is shown to be effective in 60 to 80% of people who take it. It compares well with prescription antidepressants, but without their side effects. It may even boost sex drive, while the medications often suppress it. There are more advantages to taking St. John's wort: it's not addictive, it doesn't interact negatively with alcohol, it doesn't cause withdrawal symptoms if you stop taking it, it doesn't make you sleepy in the daytime, but it does help you sleep at night. While I've had several patients that needed 2–3 weeks to have it work fully, St. John's wort often begins working within days, unlike the SSRIs and SNRIs that take weeks to be fully effective.

Animal studies show that St. John's wort, like the pharmaceutical antidepressants, enhances serotonin, and likely, dopamine and noradrenaline as well.

Cautions: May cause allergic reactions, rashes, gastrointestinal upset or sun sensitivity in some people. Can cause anxiety or insomnia if taken too close to bedtime. It can reduce the potency of protease inhibitors (taken as a treatment for AIDS) or cyclosporine (an immunosuppressant taken by organ transplant patients), digoxin (heart medication) or even birth control pills. If combined with an SSRI/SNRI or 5-HTP, there's a very slight possibility of *serotonin syndrome* consisting of nausea, sweating, headache and a rise in temperature and blood pressure. If that occurs, stop the St. John's wort and seek medical help.

Dosage: Start with one or two 300 mg capsules of a 0.3% hypericin extract, three times daily, for a total of 900 mg a day. You can also take your entire dose in the morning, since the herb is quite long-acting.

Natural Approaches to Anxiety and Stress

For the anxiety that often accompanies depression, here are remedies for anxiety and stress:

CBD (cannabidiol)

As mentioned above, CBD can also be used to elevate mood, as it interacts with 5HT1 receptor, the same one as serotonin. There is more on its use and dosing elsewhere in this booklet, and much more on my two websites: www.drcass.com & www.cassmd.com.

Theanine (L-theanine)

This amino acid is sometimes called "Zen in a bottle" for its unique ability to chill you out in a hurry, giving you that sense of alert calmness. Theanine, (also referred to as L-theanine) is a major ingredient in green tea, taken for centuries by Asian monks to keep them calm but awake during their meditations. Theanine increases the relaxed, yet focused "alpha" state of the brain, measurable by an electroencephalograph (EEG). Theanine works by increasing your body's levels of the calming neurotransmitter GABA (gamma amino butyric acid).

Cautions: None at the recommended dosage

Dosage: Take 100–200 mg twice daily. Can be taken with GABA for enhanced effect.

GABA (gamma-aminobutyric acid)

Known as the "cool" neurotransmitter, GABA has a dampening effect on the central nervous system and controls the release of the stimulating dopamine in the reward center of the brain. Anxiety, tension and insomnia, are associated with low GABA levels, while adequate levels help you to feel tranquil. Valium is a GABA- enhancing drug, but you can take GABA in supplement form without the side effects (and high cost!) of the prescription drug.

Cautions: Can cause nausea at high doses.

Dosage: 100–500 mg one to three times daily between meals.

Magnesium

The mineral, magnesium, is involved in more than 300 body processes, including helping your body assimilate calcium and vitamin D, essential for healthy bones and a variety of other critical body processes. Often deficient in diabetics, magnesium also improves insulin's ability to transport glucose into cells. Magnesium has a direct effect on serotonin balance and helps keep us calm and relaxed. It provides relief for both migraine and tension headaches.

Cautions: Excessive magnesium acts as a laxative and may cause diarrhea at high doses. Use chelated forms such as magnesium aspartate, glycinate or citrate, which are absorbed and utilized more efficiently than the more common (and less expensive) magnesium oxide. Magnesium has (rarely) been associated with drops in blood sugar.

Dosage: Take 200–400 mg up to three times daily. Take the last dose at bedtime. To increase absorption, be sure to get 30–50 mg of Vitamin B6. For migraines, take 500–800 mg daily as prevention.

Glutamine (L-glutamine)

As a precursor to GABA, this amino acid has a calming effect in the brain. It's absorbed quickly and will give you an almost instant pick- me-up similar to a longed-for stimulant, including food or alcohol. **A capful under your tongue will stop cravings for sugar and alcohol, as well as other substances.** The most common amino acid found in muscle tissues, glutamine improves mental energy and relaxation, reduces addiction, stabilizes blood sugar and promotes memory. Glutamine naturally elevates levels of growth hormone in your body, making your cells multiply faster and slowing aging. Additional amounts of growth hormone help mobilize fat from storage and make it available for energy.

Cautions: Do not use it if you have serious kidney or liver disease.

Dosage: Take up to four 500 mg capsules daily with your regular supplements or add glutamine powder to a protein drink (without added sugar). It's best taken about 30 minutes before a meal for fat management or at bedtime to enhance growth hormone production.

Taurine

A non-essential amino acid, taurine enhances the activity of GABA and reduces irritability, insomnia, migraines and depression. Taurine helps move potassium, sodium, calcium and magnesium in and out of cells, helping generate nerve impulses, stabilize nerve cell membranes and prevent erratic firing of nerve cells. Taurine is concentrated in the brain. It has been used to control epilepsy and other excitable brain states, including stress and anxiety, since it functions as a mild sedative. I have also prescribed it for bipolar patients to help prevent manic episodes.

Cautions: May lower blood pressure.

Dosage: Take 250–500 mg twice daily, between meals.

Valerian

Sometimes referred to as "Nature's Valium," valerian is very effective for treating stress. It's a natural relaxant that combats nervousness, insomnia, restlessness and depression. Valerian acts on the GABA receptors to produce a calming effect similar to that of valium without the side effects.

Be forewarned: The smell of valerian has been likened to old socks or worse, so you'll probably prefer taking it in capsule or tablet form.

Cautions: Valerian increases the effects of other sedative drugs, including muscle relaxants and antihistamines. It can interact negatively with alcohol, narcotics and other psychotropic drugs.

Dosage: To promote relaxation, 50–100 mg two or three times a day. To help you sleep, take 150–400 mg 45 minutes before bedtime. Look for a standardized product with 0.8% valeric acid.

B-Vitamins

Stress, exhaustion and anxiety actually deplete your supply of B- vitamins, since they are used in making the stress hormones and neurotransmitters. B-vitamins play a critical role in helping energy levels on an even keel and replenishing energy when it is depleted. These essential vitamins work in close combination to influence a wide variety of body processes. They are vital for delivering oxygen to the brain and protecting it from harmful oxidants. They also help turn glucose into energy within brain cells and help to keep neurotransmitters in circulation. They also support correct nerve function and stop the over-reactive neuron firing that results from emotional stress. There are 17 B vitamins, and you need them all, every day. While there is no one food that contains all 17, fish, nuts, dairy products, soy, enriched whole grains and pork are good sources of B vitamins.

Cautions: None at the recommended dosages. It's best to take a complete B-complex for the optimal balance. If you take extra B6, make sure you also take equivalent doses of the other B vitamins to prevent (reversible) neurological problems.

Dosage: Look for B-complex than contains at least 20 mg of niacin (vitamin B3), 20 mg of vitamin B6, 100 mcg. of folic acid, 100 mcg. of vitamin B12 and 50 mg of pantothenic acid (vitamin B5). For best absorption, you'll also need at least 50 mg of magnesium, which is often deficient in our diets and helps to keep you calm.



Now, remember Janet who had been so depressed after a break-up? She had turned around after being prescribed B vitamins and 3 grams daily of essential fatty acids, plus a high-potency multivitamin and a "beat-the-blues" cocktail of 5-HTP and tyrosine. Three months later, she bounced into my office, eager to share confidences about the new love in her life—and her renewed interest in sex and romance!

Once her equilibrium was established, over the next three months she gradually decreased the tyrosine and B vitamins, then the 5-HTP. She remained on the multivitamin and fish oil. She had also discovered marathon running which did a lot to boost her mood, as research confirms. Of course, having a new boyfriend was also a great mood lifter!

Coming Off Prescription Medications

If you are taking anti-anxiety drugs or antidepressants, you have a lot of company. There are certainly withdrawal effects from benzodiazepines and there can be similar effects from SSRIs. If you choose to stop taking these medications, you must do so under medical supervision. Abrupt withdrawal from benzodiazepines can cause seizures or even death.

It takes months to get off these drugs successfully. The program should be tailored to the individual's needs and carefully monitored by a medical professional who is well versed in this. Natural remedies such as GABA, theanine and CBD can shorten the gradual withdrawal program from benzodiazepines.

If you want to end dependency on these drugs, read the chapter on addiction in my book, ***Natural Highs***, and my e-books, The ***Addicted Brain and How to Break Free*** and The ***Itty Bitty Book of Cannabis***. Share it with your doctor. In most situations, you can combine natural products with medication. Do so under a doctor's supervision to ensure that there are no negative interactions.

Memory Loss and Poor Concentration

It's happened to all of us: fuzzy thinking, daydreaming, inability to concentrate, a slow mind and the struggle to connect names with faces or recall schedules and phone numbers. We often will turn to stimulants like sugar and coffee in a vain effort to jump-start our minds.

Declining mental function, which often starts when we reach our forties, is not inevitable. We've got good news for you: You can get your mind in gear again and make it work better than ever as you will see.

Let's start with a baseline.

Test Your Memory: Fill out the questionnaire at the end of this report and see if your memory could use a boost.

Mental decline can be due to disease of the blood vessels (vascular disease; hypertension) or to neurotoxins. Circulatory problems are addressed with a multi-pronged approach, beginning with the Vibrant Health Plan. They will likely respond to chelation therapy, given intravenously or orally, which uses a chelating or "grabbing" agent to clear the calcium deposits from the arterial walls. You can find details on chelation therapy at www.acam.org. For dealing with toxins, see Chapter 15 of ***8 Weeks to Vibrant Health***.

Here's what you can do for prevention. First of all, it's a "use it or lose it" situation. The more you "exercise" your brain, the better it will work. Whether you're 20 or 60, the time to act is now. You must maintain a proper diet, exercise, reduce stress levels, get rid of toxins in the brain, and take nutrients that boost mental function.

One quick way to get a handle on memory loss is to reduce stress. Researchers at Stanford University have found that the communication system among brain cells begins to shrivel up after just two weeks of exposure to stress-induced high cortisol levels. (See Chapter 9 of ***8 Weeks to Vibrant Health***) on stress imbalances.) The great news is that managing stress can reverse the effect.

Be sure you're getting plenty of antioxidants in your diet, including foods containing large amounts of vitamins A, C, and E, selenium and zinc. These are needed to neutralize free radicals, which are toxic molecules formed by our normal metabolism as well as toxins we take into our bodies from our environment.

Our trillions of brain cells are made of 60 to 70% fats or lipids, and we need essential fatty acids (EFAs) to provide the appropriate raw materials. So include plenty of "brain food" in the form of fatty fish (salmon, mackerel, tuna), flaxseeds and oils made from seeds and nuts. Avoid trans-fatty acids as are used in baked goods.

Standard Medical Treatment

Aricept (donepezil) has been shown to slow the progression of Alzheimer's disease only minimally if at all. Side effects include loss of appetite, vomiting, muscle cramps, fatigue and diarrhea.

Natural Approaches

Natural treatments provide the materials needed to make brain cells and enhance neurotransmitter production and activity. Find more details, including recommended doses and cautions, in the Appendix.

Acetyl-L-Carnitine

This amino acid improves mood and mental performance. It is fuel for the brain and helps make the memory neurotransmitter acetylcholine. It also acts as an antioxidant for the brain and nervous system.

Dosage: Take 250–1,500 mg daily, between meals.

Choline

This is part of the structure of neuronal membranes and one of the building blocks of acetylcholine, a neurotransmitter that is key to improving memory and mental alertness and declines with age. Choline and its derivatives help you feel more alert, clear-headed and improves memory and concentration. It's even recommended to help improve the brain development of your baby while you're pregnant.

Cautions: No cautions, except choline can make you smell fishy (sorry). However, there are variations that don't do that, as mentioned below.

Dosage: (Daily) 5–10 grams (approximately 1 tablespoon) of lecithin, or 2.5–5 grams (a heaping tablespoon) of high-phos- phatidylcholine lecithin, or 1–2 grams of phosphatidyl choline, 500–1,000 mg of citicoline and 500–1,500 mg of alpha-GPC (my preference).

Dimethylaminoethanol (DMAE)

DMAE increases alertness, improves concentration, reduces anxiety, improves learning and attention span and normalizes brain-wave patterns. DMAE is the building block for acetylcholine that crosses easily into the brain.

Cautions: Too much DMAE can be overstimulating, so if you experience insomnia, lower the dose.

Dosage: Take 100–300 mg daily in the morning or at midday. Do not take in the evening.

Ginkgo Biloba

This herbal extract from the leaf of the ancient ginkgo tree increases circulation to the brain and has been shown to increase serotonin levels in the elderly. Research shows that it not only prevents the progression of Alzheimer's disease, but can enhance mood, memory, concentration, mental performance and energy in younger people as well.

Cautions: Because ginkgo has a mild blood-thinning effect, do not combine it with anticoagulant drugs like Coumadin, heparin or aspirin.

Dosage: 120 mg a day of extract standardized to 24 to 28% ginkgo flavonglycosides.

Huperzine A

This is a natural compound extracted from the Chinese club moss *Huperzia serrata*, and has been shown to support learning and memory by preventing the breakdown of acetylcholine, a neurotrans- mitter that is key to improving memory and mental alertness, and declines with age Huperzine A may be used for both short-term "brain boost" needs, such as preparing for a test, as well as more long-term needs, such as reducing the mild memory loss associated with normal aging.

Dosage: 50-200 mcg daily

Vinpocetine

Vinpocetine, from the periwinkle plant, supports memory through its action on brain-cell ATP production to increase the cell's energy. It also enhances blood circulation in the brain. It's good not only for aging brains, but for athletes who want peak brain performance.

Dosage: 10-20 mg daily

Some simple interventions can go a long way. Mira brought her 75- year-old mother, Dora, to see me. Her memory had become so bad that Mira was afraid to leave her alone in her nearby apartment. Dora was forgetful, getting lost in the neighborhood and appeared depressed. Her doctor wanted to prescribe antidepressants, but Mira wasn't convinced. She knew how much help she herself had found through natural means.

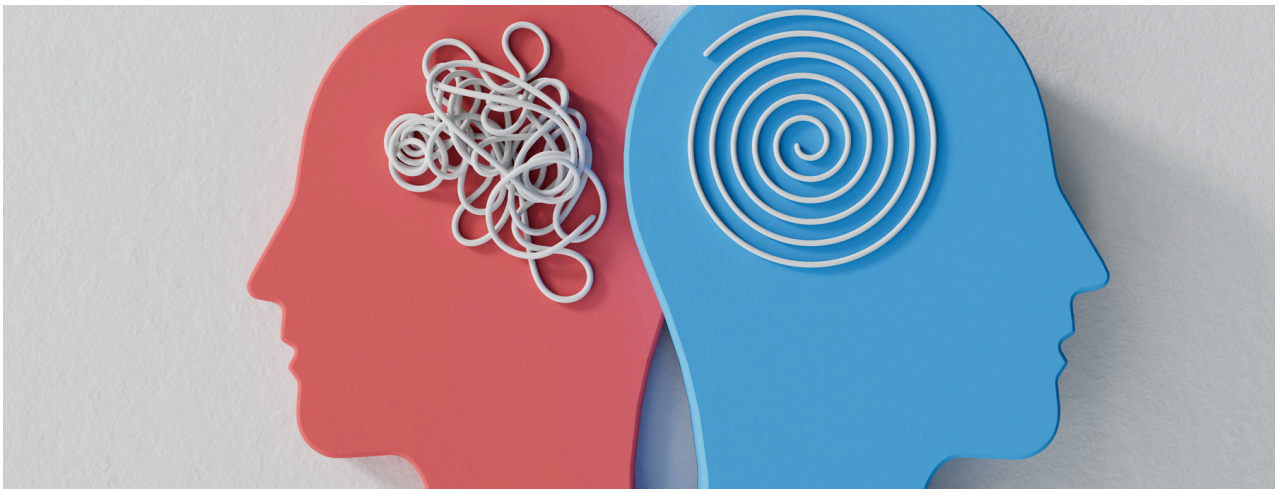
Experiment with various combinations of these remedies, adding in one at a time and seeing how you respond. They can be safely combined as I do in my practice, and in my own product, ***Brain Cell Support***.

Dora sat listless and withdrawn next to her daughter Mira. With Dora's permission, I gave her an injection of B vitamins, predominantly B12 and folic acid. This had an almost immediate effect on her demeanor and energy. She perked up and began recounting times in the past when her family doctor had given her "energy shots" of B12.

After giving her a prescription for some lab work, I drew up a list of supplements for her to take in addition to the usual program of good diet, multi, and fish oil: vitamin B12 to take under her tongue daily (for better absorption), ginkgo, phosphatidylcholine and phosphatidylserine and a few other supplements in a combined formula for ease of use, Brain Cell Support, 2 capsules twice daily.

Within eight weeks, Dora had regained many of her faculties. A miracle? Yes and no. Her vitamin B12 deficiency, common in the elderly who often absorb it poorly, had interfered with her neurotransmitter production. The ginkgo helped restore brain blood flow, getting more oxygen to her brain. And the other ingredients in Brain Cell Support enhanced the memory molecule, acetylcholine. Her newfound alertness and energy inspired her to take daily walks in the park which helped even further. Fresh air, sunlight, exercise, and nature all have healing effects on the brain and body.

Brain chemistry imbalances can be devastating, but the recovery can be quick and sustained.



Your Personal Brain Questionnaire

The following questionnaires will help you assess your own current needs, habits, and patterns and to develop your personal strategy for rebalancing your brain.

There are separate sections that deal with the most common issues and substances in use:

1. **How Stressed Are You?**
2. **Energy Check**
3. **Mood Check**
4. **Memory Check**

You are a unique combination of your genetic inheritance and your life experience. You may have inherited a tendency toward depression, for example, or anxiety, or having a non-stop need for stimulation, or a seemingly built-in inability to relax.

The good news is that none of this is set in stone. You *can* change.

Your **Personal Brain Questionnaire** will help you to figure out what your particular imbalance is and then you'll find out how to manage it.

Mark "yes" if the question applies more than half of the time. Score one point for each "yes" answer.

1. How Stressed Are You?

This section will help you recognize some of the signs and see where you fit on the stress continuum.

- Do you have difficulty relaxing?
- Do you often feel irritable?
- Do you worry about the little events of the day, and find that you are unable to shut off your mind?
- Do you smoke or drink excessively (at least by other people's standards)?
- Are you competitive and aggressive?
- Do you find yourself impatient with others?
- Do you eat quickly?
- Do you take on too much?
- Do you have difficulty delegating?
- Do you have aching limbs, tense muscles, or recurrent headaches?
- Do you have a dry mouth and sweaty palms?
- Do you feel a lack of interest in sex?
- Do you have problems sleeping?

Scoring "How Stressed Are You?"

Below 3: Like most of us, you could use some practical ideas on how to calm down when challenges arise. Or you want to reach states of even deeper peace. If so, read on for some inspiring ideas.

3 to 5: You are quite stressed. Pay attention to these warning signs. This is the only body you have: treat it well. You'll see how to do this in the following pages.

Over 5: You are very stressed: clean up your act before there are serious consequences.

Suggested Formulas: 5 HTP, GABA, theanine, Adrenotone, and if you're experiencing sleep issues, valerian before bed

2. Energy Check

To get an idea of how depleted your energy might be and how dependent you are on stimulants, check yourself out in the following questionnaire.

- Do you have trouble getting up in the morning?
- Do you rely on a cup of coffee to get going in the morning?
- Do you feel tired all the time?
- Do you often feel foggy, fuzzy, or dull?
- Do you have trouble concentrating?
- Do you use sugar, caffeine (tea, coffee, caffeinated soft drinks), or cigarettes as a pick-me-up throughout the day?
- Do your moods seem to go up and down for no apparent reason?
- Are your mood swings often relieved by food, especially sweets?
- Do you have trouble falling or staying asleep?
- Do you have headaches or shaky feelings that are relieved by sugar, caffeine, or cigarettes?
- Do you suspect you're addicted to coffee, caffeinated soft drinks, or cigarettes?
- Do you find yourself constantly in crisis?
- Are you drawn to thrills, danger, and drama in your life?

Scoring "Energy Check"

Below 3: We all have our moments – bad moods, feeling tired or foggy, and in need of a pick-me-up, but there may be some warning signs for you here.

3 to 5: You are showing signs of depleted energy and may even be overly dependent on stimulants to keep you going. Chapter 5 will explain what is happening in your body, and how to make healthier choices.

More than 5: You are quite depleted and at risk for being seriously hooked on stimulants. It is affecting your mental and physical health. Fortunately, you can get off them with the right diet, supplements and lifestyle.

Suggested Formulas: Adrenotone, L-tyrosine, DL-phenylalanine, multi vitamin, fish oil. You'll find these in Fullscript.

3. Mood Check

See where you fit on the continuum from happy and content to blue, all the way down to clinically depressed. (No one but you will be looking at the answers, so be honest!)

- Do you feel downhearted, blue, and sad?
- Do you feel worse in the morning?
- Do you have crying spells or often feel like crying?
- Do you have trouble falling asleep or sleeping through the night?
- Is your appetite poor, or are you losing weight without trying?
- Are you overeating and/or gaining weight?
- Do you feel unattractive and unlovable?
- Do you prefer to be alone?
- Do you feel fearful?
- Are you often tired and irritable?
- Is it an effort to do the things you used to do with ease?
- Do you feel hopeless about the future?
- Do you find it difficult to make decisions?
- Do activities that were once enjoyable feel less pleasurable?

Scoring "Mood Check"

Below 2: You are normal, usually able to roll with the punches. This chapter will give you clues on how to handle those occasions when things aren't going so well for you.

3 to 5: You have a mild-to-moderate case of the blues. Read on to see how this can happen, and then, to the solutions.

More than 5: You are moderate to markedly depressed. Besides reading this chapter, you should seek outside help.

If you are in the depressed range, you should start by consulting your physician or natural health practitioner to make sure there is no physical cause for your problems. A psychotherapist will deal with psychological issues, while a natural health practitioner will help find any underlying chemical imbalance that might be causing the problem. If you are tapering off an antidepressant, you can take supplements to help ease the transition quite a bit.

Suggested Formulas: Start with 5 HTP, 100 mg once or twice daily. You can go up to 100 mg in AM, 200 mg at bedtime. Omega 3 fatty acid 2 grams twice daily. If insufficient, you can add in the equivalent components of Brain Recovery AM & PM which has been replaced at Fullscript once you sign in and see my recommendations.

4. Memory Check

Some of us have a gradual decline in memory and don't even realize it. This questionnaire will help you to determine where you stand on the memory scale.

- Is your memory deteriorating?
- Do you find it hard to concentrate and often get confused?
- Do you sometimes forget the name of someone you know well?
- Do you often find you can remember things from the past but forget what you did yesterday?
- Do you ever forget what day of the week it is?
- Do you ever go looking for something and forget what you are looking for?
- Do your friends and family think you're more forgetful than you used to be?
- Do you find it hard to add numbers without writing them down?
- Do you often experience mental tiredness?
- Do you find it hard to concentrate for more than one hour?
- Do you often misplace your keys?
- Do you frequently repeat yourself?
- Do you sometimes forget the point you're trying to make?
- Does it take you longer to learn things than it used to?

Scoring "Memory Check"

Below 3: You don't have a major problem with your memory – but you'll find that supplementing natural mind and memory boosters will sharpen you up even more.

3 to 5: Your memory definitely needs a boost – you are starting to suffer from brain drain. Follow all the diet and supplement recommendations in Chapter 3 and check your stress levels.

More than 5: You are experiencing significant memory decline and need to do something about it. As well as following all the diet and supplement recommendations Chapter 3 and supplements in Chapter 7, see a nutritionist who can identify other causes of memory decline such as stress hormone imbalances.

Suggested Formulas: ***Brain Cell Support***, and fish oil

The Brain Recovery Prescription

Now you know the relationship between brain chemistry and addiction and have learned more about your own brain chemistry. Let's see what to add to your program to first help stop the process if addiction is an issue, and then, how to bring your brain chemistry to an even better balance.

Eating for Peak Health and Recovery

It is essential to eat properly in order to restore and maintain your brain function and remain substance abuse free. Here's a summary of good eating habits, what I call The **7 Basic Rules for Healthy Eating**. *You don't have to be addicted to eat this way: it's the way we were meant to eat*. It supports your brain function, energy, immunity, weight balance, and overall good health.

- Make sure most of your diet is made up of whole foods and fresh foods.
- Eat three servings a day of top-quality protein foods—fish, poultry, lean meat (free range), egg, soy, or combinations of beans, lentils, and grains.
- Avoid hydrogenated fats and reduce your intake of saturated fats from meat, dairy produce, and junk food.
- Combine protein with carbohydrates for slower carb absorption
- Choose low-GI carbohydrates such as whole grains, vegetables, and most fruits, and avoid sugar and refined foods.
- Eat fish three times a week, or take fish-oil supplements.
- Use cold-pressed seed oils on salad dressings.
- Drink at least a quart of water, if not two, a day, either pure or in diluted juices and herbal or fruit teas. A good formula is drink half your weight in pounds, in ounces of water.
- Minimize your intake of tea, coffee, and alcohol.
- Eat lots of antioxidant-rich fruits and vegetables—at least five servings a day.
- Take these supplements:
  - A high-potency multivitamin and mineral formula with antioxidants.
  - 1–3 g of vitamin C.
  - Essential fatty acids

Lifestyle

- Eliminate smoking, sugar and caffeine
- Exercise daily
- Restorative sleep: get 7-9 hours of quality sleep per night
- Address psychological and spiritual aspects
- Do one or more of a wide range of available lifestyle techniques, including meditation, visualization, biofeedback, music, massage, yoga, movement and dance



In addition to a multivitamin, multimineral formula, I suggest the following, twice daily, based on the results of your personal brain questionnaire:

- **Chromium** (200 mcg) and **Glutamine** (500 mg twice daily and also as needed for cravings), to regulate blood sugar and reduce brain fog and cravings for sugar, alcohol, or drugs.

- **5-hydroxytryptophan** (**5-HTP**) 100-400 mg at bedtime both for depression and sleep problems, to boost serotonin levels

- **Calming Amino Acids: Theanine** 200 mg, **Taurine** 500-1000 mg, or glycine 200 mg to boost GABA when anxious or irritable.

- **Calming Herbs: Valerian 100 mg (or 100-200 at bedtime), Lemon Balm, Passion Flower:**

- **Tyrosine** (500-1000 mg) **or Phenylalanine** (500-1000 mg) to boost dopamine for enhanced mood and concentration.

- **Specific Brain Cell Nutrients** such as Phosphatidylserine (100 mg) and acetyl choline precursors, such as Phosphatidyl Choline or CDP-choline (500 mg), Acetyl-l-Carnitine (500 mg), and Ginkgo (120 mg) to enhance acetylcholine, brain blood flow and brain cell health, as found in ***Brain Cell Support***, plus fish oil.

- **"Adaptogenic" Herbs**: Rhodiola, Ashwagandha, Eleutheroccus Senticosis and other adaptogens to restore adrenal glands burned out by long-term stress as found in Adrenotone.

- **Omega 3 Fatty Acids**, in the form of fish oil 1000 mg twice daily to help restore the cell wall in which neurotransmitters are made. There are algae based vegan equivalents.

- **Extra B Vitamins** (50-100 mg) and Magnesium 200 mg to handle the depletion due to addiction and stress. They are essential in producing the neurotransmitters:

- **Hemp Oil Extract/CBD** – master regulator, helps balance your neurotransmitters to allow a feeling of peace and calm. See my ***website*** for more information.



Hemp Oil Extract/CBD

CBD is a phytocannabinoid extracted from the hemp or cannabis plant. Though related to marijuana, it contains only minimal THC, the cannabinoid that gets you high. CBD acts on the ***endocannabinoid system*** (ECS), a master communicator throughout the body, which helps to bring our various systems into balance.

In the brain, the ECS modulates our feel-good neurotransmitters like *dopamine*, which regulates reward, *serotonin*, which creates calm and good mood, GABA, which also creates calm, and *acetylcholine*, which boosts memory and mental acuity. Endocannabinoids actually prevent the breakdown of the feel-good neurotransmitters, allowing them to hang around in the brain for longer and so exert a longer lasting effect.

Because it is tuned into these essential pathways, the ECS can play a role in mood regulation and addiction, two areas I have covered for years in my integrative psychiatry practice.

Of note, individuals with a low ECS may experience anxiety, depression, or a poor memory, all of which may improve when you fortify the ECS with the phytocannabinoid, CBD.

Neuron Growth. We previously thought of the brain as unable to grow new neurons or change much once we reach adulthood. Though researchers haven't figured out exactly how, we know the ECS plays an important role in *neurogenesis*, the generation and integration of new neurons, and neuroplasticity, the alteration of connections between neurons and the structures those neurons create.

CBD is more properly termed hemp oil extract since the plant contains other cannabinoids as well as terpenes which give plants their medicinal effects and distinctive aroma. They work together to produce the "entourage effect" making the whole much more than just the sum of the parts.

You can read more about it on my websites ***cassmd.com*** and ***drcass.com*** and find out how to choose the right product and dose for you.

Why Omega-6:3 Balance Is the Foundation of Your Health

Omega-3 essential fatty acids are a non-negotiable for your body. They support brain and heart function, maintain healthy vision, regulate blood pressure, and keep your cells performing at their best. Because your body can't make them on its own, you have to get them from food or supplements. Omega-6 oils are pro-inflammatory and are running high in most people's bodies due to too many processed foods and seed oils in our diets.

Above all, Omega-3s are powerfully anti-inflammatory. Chronic inflammation is the common thread running through virtually every major illness, and even the normal aging process has been dubbed "inflammaging" for this reason. Keeping your Omega-6:Omega-3 ratio in balance is one of the most effective things you can do for long-term health. The problem? Even people who eat fish regularly usually fall short of what their bodies actually need. That's where Zinzino BalanceOil+ comes in.

What Makes BalanceOil+ Different

Manufactured by a 20-year-old Norwegian company that is publicly traded on the stock exchange. BalanceOil+ isn't just another fish oil. It's a patented Polyphenol Omega Balance supplement combining small wild-caught fish oil with extra virgin olive oil from specially grown young olives — enriched with olive polyphenols and Vitamin D3.

That combination is key. The polyphenols essentially "escort" the omega oils directly to the cell membrane, where they're needed most. This makes BalanceOil+ far more bioavailable than standard fish oil. It's non-GMO, clean-sourced, and comes with a smooth, pleasant taste — no fishy aftertaste. In fact, it's more like a Mediterranean diet.

The benefits are well-documented: 18 EFSA-approved health claims covering brain, heart, and immune system function, plus support for healthy bones, muscles, teeth, skin, calcium levels, and cell division.

How to Take It

Liquid: Dose by weight — 0.0136 tsp per pound of body weight. Pour it straight, mix it into a smoothie, stir it into juice or kombucha, or drizzle it over a salad. Take it with or without food.

Capsules (Essent+): Up to 150 lbs, take 2 daily. Between 150–220 lbs, take 3. Over 220 lbs, take 4. The soft gels are made from fish gelatin with pure anchovy triglyceride concentrate (high EPA and DHA) and cacao powder for antioxidant support. They're ideal for travel since they don't require refrigeration.

Storage tip: Once opened, keep the liquid BalanceOil+ in the fridge to prevent oxidation. Capsules are nitrogen-sealed and don't need refrigeration.

A vegan version of BalanceOil+ is also available.

Test, Don't Guess: The Zinzino Balance Test

Here's a striking statistic: 500 million people worldwide take Omega-3 supplements — yet 97% of those who take the Zinzino Balance Test find their Omega-6:Omega-3 ratio is still out of balance. Supplementing blindly doesn't guarantee results. Testing does.

The Balance Test is a simple at-home finger-prick blood test that analyzes 11 fatty acids in your blood:

- Saturated fats: Palmitic acid (PA), Stearic acid (SA)
- Monounsaturated fat: Oleic acid (OA)
- Omega-6: Linoleic acid (LA), Gamma-linolenic acid (GLA), Dihomo-gamma-linolenic acid (DHGLA), Arachidonic acid (AA)
- Omega-3: Alpha-linolenic acid (ALA), EPA, DPA, DHA

From those 11 markers, you receive six key health insights: your Omega-6:3 ratio, Omega-3 Index, Protection Value, Cell Membrane Fluidity, Mental Strength score, and more.

How the Test Works

- Prick your finger, collect a few drops of blood on the test card, and mail it in the prepaid envelope.
- Save the number printed on your test card — it's your key to retrieving your results.
- In 10–21 days, log in at zinzinotest.com to access your personalized report.

Samples are analyzed by a world-class independent clinical laboratory in Oslo, Norway. The process is confidential, and results come with color-coded charts and practical nutrition recommendations tailored to your specific profile.

Because red blood cells regenerate every 120 days, re-testing every three months is recommended to track your progress. Good news: the second test is free.



Make It a Habit, Make It Count

The science is clear, and the tools are simple — but consistency is what makes it work. Whether you take your BalanceOil+ straight, blend it into your morning smoothie, or pop a few soft gels, the key is making it part of your daily routine.

When you pair a daily dose with periodic testing, you're not guessing at your health — you're managing it with real data. Over time, most people notice real improvements in energy, focus, memory, skin quality, and overall vitality, to mention some of the benefits.

That's the Zinzino approach: personalized, test-based, and built around you. To find out more and get your own supply, **click here.**

Maintenance

You'll find that you can adjust your doses of nutrients over time but do stay on a maintenance program to keep your mind sharp, your moods stable, and to help prevent cravings that may lead to a relapse or regression to your previous condition.

Conclusion

Your brain is a remarkable organ. Weighing in at a mere three pounds, it can be the abode of fear, anxiety, deep depression and severe physical pain. It also has the capacity to hold countless memories and allows us to experience the beauty of music, the ecstasy of love, the thrills of sex and the bliss of inner peace. Your new understanding of how the brain works will help you to decrease the negative experiences and enhance the positive ones.

For more information specifically on the brain, read my book ***Natural Highs***. To understand how the body, including hormones, stress, and digestion, and more, affects the brain and vice versa, see my book, ***8 Weeks to Vibrant Health***. For natural solutions to recovery from addiction, check out ***The Addicted Brain and How to Break Free***.

All are available at **www.cassmd.com**

Most of the supplements mentioned are available here with a discount when you use these links:

Fullscript™ Dr. Cass' ZINZINO INSPIRE CHANGE IN LIFE