

# The NeuroTransmission

*Helping practitioners assess, monitor, and correct neurotransmitter and adrenal hormone imbalances.*

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## Featured Author



Sharon Norling, MD, MBA

## Omega Fatty Acids as a Powerfull Adjunct to the “CSM” Model in Managing Mood Disorders

*Sharon Norling, MD, MBA*

*“Today one in three people suffer from a broken brain.  
Is this a normal part of the human condition? No, it is not.  
There is something wrong with this picture and we,  
as physicians, can do better.”*

**As education is often the key to health, keeping abreast of advances in medicine is critical, albeit challenging. In the past, physicians were taught to “blame or name” a disease. Today, however, we’ve learned that there are few illnesses that manifest as a single disease entity, but rather it is more commonly a combination of antecedents or imbalances that bring about disease. If the underlying cause of a symptom is not identified and treated, the outcomes are compromised. This explains why people are often diagnosed with multiple mood disorders or symptoms and they get sicker and sicker over time.**

Patients’ brains are broken. They know it. They feel it. They live it. If they have a physical disease, it may be obvious. They may not be able to hide it. On the other hand, mood disorders, “psychiatric disease”, and memory loss are often suffered silently. The symptoms, lack of motivation, fatigue, lack of focus, and brain fog, may be viewed as character flaws. Instead, those of us who use the CSM (Communication System Management) model often find neurotransmitter or hormone imbalances

## Featured Author



Dr. Norling established The Mind Body Spirit Center in Westlake Village, CA to practice Integrative Medicine and Functional Medicine. She is the only physician in the United States known to be nationally board-certified in OB/GYN, Integrative/Holistic Medicine, and Medical Acupuncture. Dr. Norling served on the faculty of the University of Minnesota Medical School for 12 years and had the opportunity to testify before the White House Commission on Complementary Alternative Medicine.

Dr. Norling is a Medical Board Member at Sanesco International.

## Online Resources

See Dr Norling's presentation on **Fatty Acids** online at [www.Sanesco.net](http://www.Sanesco.net)

Click on "Education and Resources" for access to all of the training and educational resources available to practitioners.

that can be corrected, which can result in relief of symptoms. With the onslaught of so much stress and so many chemical and other environmental challenges, it is no wonder that our body systems are challenged and our brain functions are not what they should be.

Today one in three people suffer from a broken brain. Is this a normal part of the human condition? No, it is not. There is something wrong with this picture and we, as physicians, can do better.

At a recent national medical conference, Dr. Hedaya, Professor of Psychiatry at Georgetown University, reviewed the evolution of the model of mood disorders.

- Middle Ages: Demons within – exorcism is treatment of choice
- 1917: Freud explains that those demons are really our mothers.
- 1988: Eli Lilly releases our mothers from 80 years of victimization, explaining that depression is really a Prozac deficiency.

Dr. Hedaya's humor draws attention to the current model of therapy for mood disorders. The problem is that the model does not work. The current treatment process for mood disorders is based on sequential augmentation strategies. First, psychotherapy; if not responding, add medication; if that is not effective, increase the dose; if there is not an adequate response, change the medication or add another medication; if the response is incomplete consider adding Lithium or thyroid (T3) and so it goes. Many times bipolar disorder is diagnosed after a patient has been started on a drug or 2 or 3 drugs. Is it drug induced?

### *How many people respond to antidepressant medications?*

Most people who take anti-depressants either don't respond or have only a partial response. In fact, success is considered to be a 50 percent improvement in half of the symptoms. And this minimal result is achieved in less than half of the patients taking these medications.

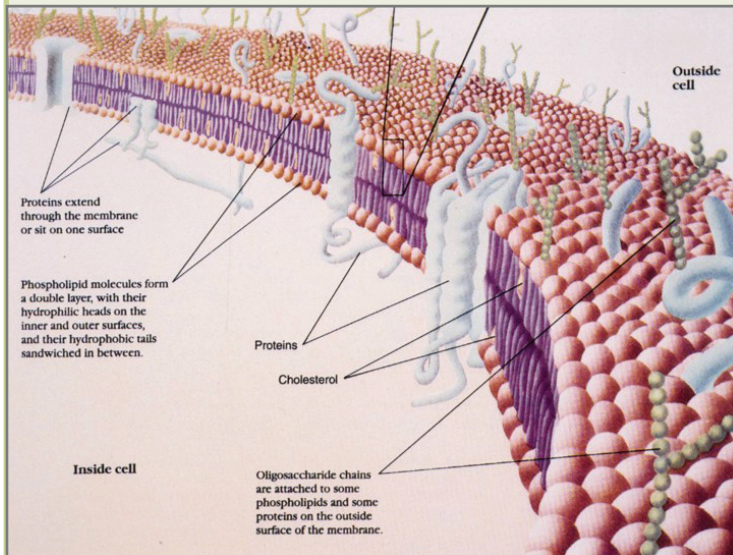
That is a very low success rate! It's made worse by the fact that 86 percent of those who do find some relief in their symptoms have one or more side effects, including sexual dysfunction, fatigue, insomnia, loss of mental abilities, nausea and weight gain.

*Mood disorders can result from, be exacerbated by, or maintained by neurotransmitter imbalances.* It is important to test the neurotransmitters before treatment. Testing the individual's bio-chemistry provides information for the physician and the patient to customize his or her treatment. Treating the average is overrated and ineffective. We wouldn't give someone insulin unless we knew the current blood sugar levels. We wouldn't give thyroid medication unless we knew what the existing thyroid levels were.

It makes perfect sense to test neurotransmitters when individuals are stressed, anxious, depressed, lack motivation, experience cravings, have difficulty sleeping or are experiencing fatigue or pain. All these conditions can make a person more vulnerable to seek medications, drugs or alcohol to relieve these symptoms. Everyone wants to feel better.

Neurotransmitter balance contributes to our health. It's no secret that long-term diet and nutrition choices affect the way we look and feel; but new studies show that nutrition can also affect the way we think. As it turns out, there really is such a thing as "food for thought."

The imbalances can be corrected with amino acids and other nutrients, which are the building blocks of the neurotransmitters. In addition, Omega-3s and Omega-6s, a quality multivitamin, Vitamin D, and the B vitamins (the anti stress vitamins) may be recommended. Magnesium, zinc, calcium, copper, iron and potassium are minerals that support brain function.



Our brain cell membranes are composed primarily of lipids, or fats. Omega-3 and Omega 6 fatty acids and cholesterol stabilize these membranes and are required for proper brain cell function. The membrane surrounds and protects every cell of every organ including the tissues of the heart and the neurons of the brain. Our cell membranes are made up of over 80% fat. For all of life, the essential fatty acids (EFAs) that make up the membrane are not just essential but, inarguably, the most essential of all nutrients.

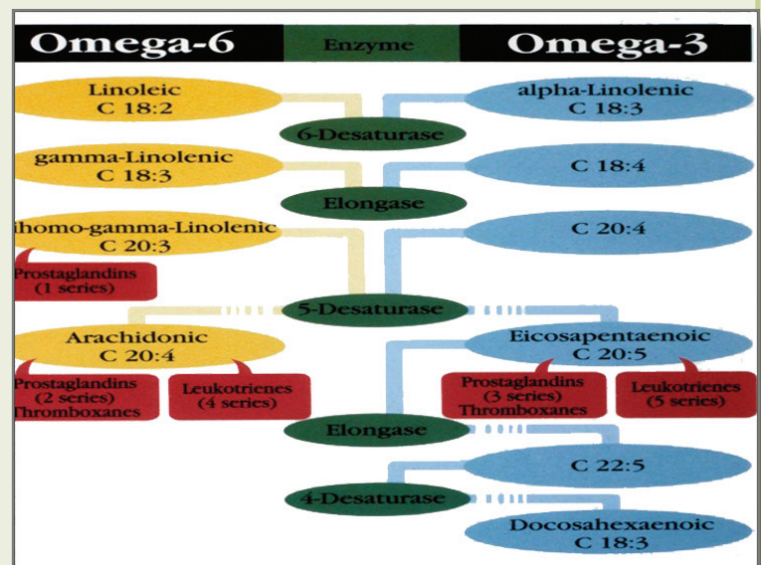
Throughout the brain, biochemical messengers called neurotransmitters help the brain make the right connections. Food influences how these neurotransmitters operate.

Not all fats are bad for you. In fact, some fats are essential for proper brain function. Two

lipids important to the brain are n-6 (omega-6) and n-3 (omega-3) fatty acids. Low levels of n-3 fatty acids in a diet can cause visual problems especially by affecting the retina. Studies in animals have shown that diets without n-3 fatty acids cause learning, motivation and motor problems and may affect systems that use the neurotransmitters dopamine and serotonin in the frontal cortex. The n-6 fatty acids are also important in proper brain function because they affect neurotransmitter release and they also influence the ability of neurons to use glucose.

*The balance of fatty acids helps to support neurotransmitters and enhance the effectiveness of targeted nutritional therapy.* Omega 3 fatty acids --- EPA and DHA---are the big news in nutritional medicine today. The scientific evidence is now irrefutable that DHA and EPA are essential for good health and a long life. Both are highly active and powerful nutrients with a wide range of functions including the brain, sensory organs, synaptic functions, heart modulation, control of arachidonic acid (inflammation), etc.

While using Omega 3 fatty acids is a positive, it must be balanced with Omega-6s. Patricia Kane, PhD. and other researchers in fatty acid metabolism have shown the suppression of arachidonic acid by the overconsumption of fish oil resulting in an unusual increase in physical and mental distress. Contrary to popular belief that Omega 6s are to be avoided, research by Yehuda and others have documented the ratio of Omega 6 to Omega 3 should be 4:1. The Omega 6s have been viewed as just an inflammatory cascade with the Arachidonic Acid pathway. However, this pathway also produces prostacyclin (PGI2) which is a potent anti-inflammatory agent, a vasodilator and blood pressure and pulmonary regulator.



Arachidonic Acid and the entire Omega-6 fatty acid family including linoleic acid have been **mislabeled** as “Bad-Guys.” The Omega-6s are the primary EFA’s with the highest concentration in the body. The use of NSAID’s as well as steroids are specifically designed to block these processes and in so doing produce disturbing side-effects. The data surfacing in the medical literature about the metabolic functions that the Omega-6s control is literally endless. These include the common symptoms we see with neurotransmitter and hormonal imbalance; sleep, temperature control, heart rate, nerve transmission.

Over 80% of the red blood cell fatty acid tests from John Hopkins’ Kennedy Krieger Institute register high Omega-3s and low Omega- 6s. Associated with this distorted fatty acid analysis is a wide array of disorders such as fatigue, irritable bowel, nausea, and memory loss.

Foods that support Omega-6s include egg yolk, evening primrose oil, sunflower oil, olive oil, avocados, nuts, and seeds. Avoid the mayonnaise and margarine!

*Our clinical practices are filled with patients symptomatic with mood disorders.* Testing the neurotransmitter levels as well as cortisol and DHEA give us data which enables us to treat the patient as an individual. The targeted nutritional therapy products and good nutrition are a very effective way to treat mood disorders. Testing fatty acids gives the clinician an added tool. Based on this information, recommending appropriate intake of Omega 3’s and Omega 6’s is an effective therapy for brain function. The fatty acids support the brain, cell membranes, neurons, myelin as well as overall health enhancing the effect of the nutrient therapy.

*Health, life and fatty acids are all about balance.*

## Summary

- Comprehensive assessment
- Test, Test, Test
- Treat the patient as an individual
- Good nutrition and targeted nutrient products
- Balance Omega 3’s and Omega 6’s
- Watch your patient get well

## Case Study:

L. B. is 47 y.o. female who presented with depression, bipolar disorder, anxiety, irritability, panic disorder, ADHD, insomnia, carbohydrate cravings, irritable bowel syndrome, and daytime sleepiness. She had difficulty with concentrating, balance, thinking, judgment and memory. Additionally, she had GERD, reflux and nausea.

She is married with 2 children and describes her only stress is not feeling well and “not being a good mother” because of her illness. Her husband is very supportive.

### Medications prescribed her previous MD and her psychiatrist:

Cymbalta which was changed to Lexapro 30 mg

Depokote 1500 mg

Adderal 80 mg

Klonopin .25mg BID

Prilosec 60 mg

Ambien CR 12.5 mg

Lipitor 80 mg

Lisinopril 40 mg

**Labs:**

Sanesco's HPA test  
Food allergies  
GI test  
Fatty acid test  
Chemistry panel

**Results:**

HPA: high GABA, high Dopamine, low Cortisol

RX: Prolent, Lentra, Somni TR, Tranquilent

Food allergies/ sensitivities: positive for multiple foods

RX: Avoid foods, nutritional counseling, anti inflammatory Medical Food

GI test: Negative for H. Pylori, positive for Saccharomyces cerevisiae,

RX : Anti-fungal and nutritional counseling

Fatty acid test: High saturated fats, significant demyelination, low Omega 6s and low normal Omega-3s.

RX: EPA and DHA and nutritional counseling

Chemistry panel wnl except Vitamin D 23.7

RX: Vitamin D 5,000 IU and multi-vitamin and minerals

**Patient's symptoms score went from 98 to 24 in 2 months. She has discontinued her antacids, Adderal and Lipitor. She is tapering off the Lexapro. She is significantly improved with less depression and minimal anxiety, sleeping better, less fatigue; GERD, reflux and nausea are absent, IBS resolved. Mentally she describes her "brain fog" as clearing and best of all, according to her, she is a much better mother.**

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**About Sanesco International**

Sanesco International is a medical company leading the way in assessing, monitoring, and correcting neurotransmitter and adrenal hormone imbalances affecting HPA-T axis function. Since inception in 2004, the Sanesco team remains committed to providing an effective clinical model with practical solutions to help practitioners address their patients' chronic symptoms, acute conditions, and to practice preventive medicine. **Contact one of our Practice Building Specialists today to learn how you can find more success with addressing your patients chronic symptoms and conditions.**

**1010 Merrimon Ave. • Asheville, NC 28804 • 866.670.5705 • www.Sanesco.net**