

# Orthomolecular Nutrition and Brain Function

Billie J. Sahley, Ph.D., C.N.C.

Orthomolecular nutrition is now the choice of millions of people. It is both corrective, preventive, and treats the whole person's biochemical imbalances. Orthomolecular nutrition can offer immediate as well as long-term benefits. Dr. Abraham Hoffer, a noted orthomolecular psychiatrist, published a paper in 1978 that stated, "Vitamin deficits in the brain may cause mental illness." Research scientists uncovered evidence that similar metabolic processes dependent upon nutrition may link mental illness and other degenerative diseases. In all body cells vitamins are found in minute amounts. They actually combine with the molecular structure of enzymes to help the enzymes work properly. Our body's enzymes cannot function if an ample amount of vitamins and amino acids are not available, and the required cellular process will not continue.

A major problem is that mental illness could result if these cellular processes that relate to brain function are not stopped. Many psychiatrists will not accept the fact that brain function is affected by nutrition. They believe instead that brain function is completely unaffected by nutrition, and the only solution is toxic drugs. In Dr. Hoffer's book, *Orthomolecular Nutrition*, he sums up the feelings of the ridged medical community, "It seems that many psychiatrists and their colleagues such as psychologists and neurologists consider the brain is not an organ of the body that needs nourishment." The orthomolecular concept clearly states that cells must be provided with the right molecules in optimum amounts.

Each of your brain cells contains about ten billion molecules of protein, carbohydrates, fats, vitamins, nucleic acids and amino acids. Your body cells die because they do not proper nourishment. Toxins such as cigarette smoke poison them. Many scientists now work on the premise that nerve cells die of malnutrition. This occurs when the diet is totally junk food and no supplements or amino acids are taken to support proper cell growth and brain function. In my book, *Heal with Amino Acids*, I outline the vitamins and amino acids needed for proper brain and body function. There is a strong possibility that psychological disorders may be directly related to diet and nutrient metabolism. I have found this to be true in many hyperactive children and, when their diet is corrected and proper supplementation is provided. The change is noticeable within weeks. Orthomolecular practitioners believe abnormal behavior can be a metabolic disorder, airborne, food or chemical sensitivities. Doris Rapp, M.D. has done extensive research in this area, and her clinical testing supports the needed evidence. Dr. Rapp has demonstrated incorrect concentrations of specific nutrients in the brain can and do cause certain forms of mental disorders. An adult or child

who is having mental problems is more than likely to have something wrong in the molecules of the brain. In cases of depression, there are not enough neurotransmitters and norepinephrine at the right location in the brain to ensure the availability of chemical precursors of norepinephrine. Norepinephrine is synthesized from the amino acids phenylalanine or tyrosine. Of the four essential nutrient groups, amino acids may be the most fundamental to brain chemistry. The dietary dependence of the neurotransmitters dopamine, serotonin and histamine upon their amino acid precursors is now well established. Neurotransmitters can be influenced to a great degree by the amino acids in the diet or by supplementation. Interest in amino acids in therapeutics is continuing to grow. Tyrosine, the stress amino acid, has been proven to be effective for depression in children and adults. Tyrosine was clinically tested in the Department of Psychiatry at Harvard Medical School.

The use of tyrosine in depression increases the levels of norepinephrine, serotonin, and other neurotransmitters. This helps restore a sense of well-being. For those with depression, obsessive-compulsive disorder, insomnia, headaches, and addiction. 5-HTP or 5-hydroxytryptophan gives relief. 5-HTP is responsible for serotonin. Serotonin is the key to numerous brain functions. 5-HTP can be used alone or in combination formula such as Teen Link <sup>tm</sup>. Other amino acids that have a proven therapeutic track record include: DLPA for chronic pain and depression, taurine for nervous twitches and hyperactive behavior. GABA for anxiety, muscle spasms, nervous stomach, and post traumatic stress disorder. Glutamine enhances memory and concentration.

The brain is the most undernourished organ in the body, yet it is the busiest. Prescription drugs only address symptoms. Amino acids and nutrients treat the cause. Orthomolecular nutrition takes into consideration that every individual is biochemically unique. Every person has a very different nutrient and amino acid requirement. With application of this therapy, each individual's need is met and the mind and body are in a state of homeostasis. This is a condition where everything in the body is in balance and capable of resisting environmental changes, while regulating internal metabolic function. In *Orthomolecular Medicine for Physicians* Dr. Hoffer states, "Every tissue of the body is affected by nutrition." Under conditions of poor nutrition, the kidneys stop filtering, the stomach stops digesting, the adrenals stop secreting and the other organs follow suit. Good orthomolecular nutrition is essential to the preservation of health and the prevention of disease. The key is to understand how amino acids and brain function go hand in hand and produce needed brain and

body power. When you understand your brain function then you have a comprehensive picture of how to use various amino acids to effectively treat your pain, stress, anxiety and depression. Your body needs and uses basic nutrients every day. These include vitamins, minerals, proteins carbohydrates and fats. If you take the fat and water out of your body, 75% of the remainder is protein (amino acids). Your muscles, cell membranes, enzymes and neurotransmitters are all proteins.

Your brain controls every cell in your body. Its commanding presence is responsible for all sensation, movement, thought, behavior and a lifetime of memories and dreams. The importance of a healthy, well nourished, efficiently functioning brain cannot be overstated. This three-pound power pack comprises less than 2% of your total body weight. Your brain regulates your healthy heartbeat, body temperature and hormonal balance. Your speech at any level would be impossible without needed nutrients for proper brain functioning. Your brain must be fed daily with amino acids. For your brain to be chemically balanced amino acids must be taken daily and in specific amounts.

#### **Suggested Nutritional Support**

**TotalVite** – 1 capsule OR **Brain Link** mixed in juice according to weight instructions. Either one is considered a good multiple vitamin.

**SBNC (Super Balanced Neurotransmitter Complex)** – three capsules. If over 200 pounds take four capsules. This mix of amino acids will address chemical deficiencies in the brain.

**MagLink** – two capsules twice daily will help with muscle tension and spasms. If loose stools or diarrhea occur spread out time between doses before reducing the number of capsules taken.

**NeuroLinks** – one full dropper twice daily to replenish dopamine and serotonin levels.

**Anxiety Control** – two capsules twice daily for an increased anxiety level.

**Taurine, 1000 mg** – one capsule daily to help support the central nervous system during stressful times. This amino

acid is known as the “stress amino acid” and depletes quickly with stress.

**Sleep Link \*\*** - one or two capsules an hour before bedtime. The various amino acids and supporting items restore chemical balance and allow a restful sleep.

**ProDHA** – according to label instructions will help support the brain and central nervous system. Do not use if you are allergic to iodine, use blood thinners or anticipate surgery. Consult your physician before using if you are pregnant or diabetic.

**Mood Sync \*\*** – two capsules twice to three times daily restores brain chemistry imbalance caused by depression, anger, aggression or mood swings.

**\*\* CAUTION: Do not use with SSRI, tricyclic or MAOI antidepressant medications. Consult your pharmacist.**

#### **References**

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