

AMINO ACIDS FOR PAIN, STRESS AND ANXIETY

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There are twenty-two amino acids necessary for daily brain and body functions. The body can manufacture fourteen of them, and the other eight are essential amino acids that must be received through diet and supplementation. The demand for amino acids by the body and brain is continuous. Amino acid requirements are vastly increased by stress, disease, and inborn metabolic errors. Stress, anxiety, chronic pain, depression, grief and panic attacks increase the brain's need for more amino acids. Each of us has different amino acid requirements because of our biochemical individuality. Stress takes it toll on each of us in a different way. Some complaints are headaches, nervous stomachs, ulcers, low back pain, bladder infections or a multitude of other problems. When stress is continuous the immune system begins to break down, and we become vulnerable to the disease state.

Orthomolecular therapy means supplying the cells with the right mixture of nutrients. Amino acid therapy is the preservation of optimal health and the prevention and treatment of disease using those nutrients that belong in the brain. The brain is the most undernourished organ in the body. Amino acids aid optimal health and do not suppress it with foreign substances such as drugs. Amino acids are the building blocks of protein. The functions of amino acids are the most diverse of any of the nutrient groups. They contribute to the formation of proteins, muscles, neurotransmitters, cell identity, antibodies, and receptors.

The exciting area of amino acid research is the study of brain metabolism. Communication with the brain, and the rest of the nervous system occurs through chemical language called neurotransmitters. There are two kinds of neurotransmitters. Acetylcholine is an example of an excitatory transmitter that is part of the memory machine function while serotonin is an inhibitory neurotransmitter that decreases the likelihood of anxiety or stress-related messages firing from the limbic system in the brain. The brain and other organs talk to each other through the amino acids and related neurotransmitters.

Amino acids are now being recognized for their importance since amino acid therapy is beginning to revolutionize the treatment of disease. Amino acids are extremely important in our body functions. The heart muscle and other organs derive their structure and function from amino acids. Research has established there are circadian rhythms that are associated with amino acids and the utilization in the nervous system. Circadian implies a specific time period for the uptake of substances in the body. This has recently been shown with regards to

use of 5HTP in the treatment of insomnia, depression and pain. 5HTP used during the day does not induce sleep. It only helps to induce a calm relaxed state or decreases pain and depression. But if 5HTP is taken near bedtime, it does induce sleep. This indicates 5HTP crosses the blood-brain barrier. The brain's own conversion of 5HTP (HTP10 for children) to serotonin is more effective during times when you normally sleep.

Glycine is the simplest nonessential amino acid. It is called glycine because it resembles the sweet taste of glucose and glycogen. Glycine can be used to replace sugar in the diet. It is a major inhibitory neurotransmitter and has a calming effect. Glycine helps trigger brain cells to fire and speed learning and memory.

GABA is the amino acid of the 21st century with more and more exciting research being conducted. GABA or Gamma-amino butyric acid is an inhibitory neurotransmitter found in the central nervous system. GABA fills certain receptor sites in the brain. By filling the receptor, GABA prevents the amygdala from sending constant anxiety-related messages to the cortex than can overwhelm an adult or child.

Tranquilizers encourage a passive role in existence. Nutrient, amino acid, and vitamin deficiencies can exist, but there is no such thing as a tranquilizer deficiency. GABA is a very important nutrient since it is the most widely distributed inhibitory neurotransmitter in the brain. There are GABA receptor sites throughout the brain and body. Vitamin B6, a co-factor, is the most important physiological compound that regulates the manufacture of GABA in the brain. GABA research demonstrates it is likely to provide an even greater therapeutic potential in the future. Clinical studies with GABA shows that pure GABA dissolved in water, breaks down rapidly. Therefore, it goes into the bloodstream rather quickly and you feel calm and relaxed. GABA is not only helpful in anxiety and stress, but it can be used as a natural muscle relaxant.

When a person thinks about pain or the onset of pain, they often become more anxious. This causes the brain to fire more anxiety related messages in preparation for the onset of the dreaded pain. It stands to reason that GABA lowers the excitatory level and thus apprehension is reduced to a minimum.

The two effective forms of GABA are GABA 750 and Anxiety Control 24. Anxiety Control 24 is a complete antianxiety formula that contains GABA, glutamine, and glycine. For those with chronic anxiety take two capsules of Anxiety Control in the morning and two capsules in afternoon for relief. Clinical studies have

shown that tyrosine controls medication resistant depression. Two studies in 1980 are of particular interest. Allen Gelenberg of the Department of Psychiatry at Harvard Medical School published the first in the American Journal of Psychiatry. Dr. Gelenberg discusses the role of tyrosine in controlling anxiety and depression. He postulated that the lack of available tyrosine results in the deficiency of the hormone norepinephrine. At a specific location within the brain, a deficiency relates to mood problems, such as depression. The biochemical basis of depression seems to be a deficiency of neurotransmitters. Dr. Gelenberg treated patients having a long-standing depression not responding to standard therapy administering tyrosine supplements. Tremendous improvement was noted, patients were able to discontinue or reduce amphetamines to a minimum level in a matter of weeks. For those with depression, 1,000 to 2,000 milligrams per day is indicated. Mood Sync contains 5HTP and tyrosine and is an excellent neurotransmitter formula. Teen Link is available for adolescents and teenagers.

Another study noted that allergy sufferers have also responded well to tyrosine supplementation as well as those on weight loss programs. For those people who want to use tyrosine for weight loss, studies show that 850 milligrams of tyrosine taken one hour before eating will suppress the appetite. Tyrosine plays an important role in assisting the body to cope physiologically with stress. Stress exhaustion needs tyrosine that is converted to dopamine, norepinephrine, and epinephrine. Tyrosine and GABA combined with other vitamins, minerals and nutrients balance the brain's chemistry.

The late Dr. Carl Pfeiffer, author and prominent physician at the Brain Bio Center states, "We have found if a drug can be found to do the job of medical healing, a nutrient can be found to do the same job. When we understand how a drug works, we can imitate its action with one of those nutrients. For example, antidepressants usually enhance the effect of serotonin and epinephrine. We now know that if we give the amino acid 5HTP or tyrosine, the body can synthesize those neurotransmitters, thereby giving the same effect of the drug. Nutrients have fewer or no side effects and challenge the future to replace or maybe combine with what natural healers call nutrients." The brain must be supplied daily with neurotransmitters and in specific doses to be chemically balanced. Super Balanced Neurotransmitter Complex (SBNC) contains 13 amino acids that will feed your brain. SBNC should be taken in the morning and afternoon, 3-4 capsules. SBNC is effective for stress, anxiety, depression, fear, pain and alcohol abuse. Children and teens, 2-3 capsules daily.

Glutamine is a surprising brain fuel. Clinical tests document glutamine improves intelligence, is a lift for fatigue, helps control the craving for sweets and alcohol, and helps schizophrenia. Glutamine was discovered and researched by Dr. Roger Williams at the Clayton Foundation at the University of Texas in Austin. The properties of glutamine have been studied carefully

and its effects not questioned. One alcoholic, when given 3,000 to 4,000 milligrams of glutamine daily stopped drinking altogether.

Glutamine is a major fuel for the brain. Glutamine and GABA work together in the brain. Dr. Pfeiffer found that glutamine shortens the healing time for ulcers, helps fight fatigue and depression. Glutamine has been proven to be a benefit to many patients with memory problems. Dr. Abram Hoffer of the Academy of Orthomolecular Medicine determined glutamine with other nutrients was successful in fighting schizophrenia, senility, and retardation. Studies have shown when patients are given glutamine, improvement is noticeable within fourteen days. If a patient is trying to control drinking, glutamine is useful in doses of 3,000 to 4,000 milligrams per day, divided. Glutamine is available in capsule or powder form.

Recent clinical research has shown DL-phenylalanine to be helpful in keeping or elevating the endorphin level to the normal level. DL-phenylalanine also inhibits the desire for alcohol and decreases depression. DL-phenylalanine and glutamine combination have been very positive and seem to elevate the alcoholic's depression while inhibiting the desire for alcohol.

Theanine, the amino acid that comes from green tea and promotes a state of relaxation is a now one of the best formulas you can take. Recently the relaxation effect and other benefits have been scientifically evaluated and documented. Theanine works by inhibiting the release of dopamine and serotonin. The relaxation effect is usually felt within 20 to 25 minutes your body relaxes but you have enhanced focus and concentration. Theanine, 50 to 200 milligrams twice daily has been shown effective in reducing stress, anxiety and tension and caffeine nerves. Theanine increases the alpha waves in the brain and allows you to focus, work or just relax. Recent studies show continued research demonstrates theanine can lower blood pressure, improved learning, promote concentration and improve the immune system.

In *The Healing Nutrients Within*, Dr. Pfeiffer states, "Every tissue in the body is affected by nutrition. Under conditions with poor nutrition, the kidneys stop filtering, the stomach stops digesting, the adrenals stop secreting, and other organs follow suit." It seems that many psychiatrists and their colleagues consider the brain is not an organ of the body and does not need nourishment. They live under the false misrepresentation that there must be some kind of tranquilizer deficiency in the brain. The "deficiencies" are nutrients, amino acids and vitamins needed by the brain. Brain deficiencies from amino acids cause changes in perception and thinking. There are two main lines of evidence: one is from disease that is known to destroy the brain chemistry causing symptoms, and two is from the study of hallucinogenic drugs.

There is an exciting new development in the field of neuropharmacology recognizing for the first time that diet has an important impact on the brain's

neurochemistry. In other words, amino acids can influence neuro-regulatory substances that ultimately clinically cause changes in mind, mood, memory and behavior. People are beginning to realize what makes them feel better, and they want to free themselves from being slaves to tranquilizers and being chemically dependent on painkillers. Pain feeds stress, stress energizes pain, and pain releases fear. It is a viscous cycle that never ends.

If you have been taking a prescription medication for a long time, your recovery is the length of time it takes the body to rid itself of the poison plus the time it takes the brain's chemistry to return to normal. The brain, utilizing natural substances such as amino acids, can help to reduce or eliminate anxiety. The brain does not need drugs. Drugs only use available neurotransmitters. They do not create any themselves. Before recovery can be made from anxiety, depression, or stress the brain must reproduce the natural substances that were there in the first place, neurotransmitters. Brain Link is an amino acid complex that creates the neurotransmitters for enhanced brain function. Brain Link provides nutrients that are necessary for the production of neurotransmitters that control mind, mood, memory and behavior. This powder of amino acids, vitamins and minerals is mixed in juice according to body weight.

Interest in therapeutic use of amino acids is growing. Scientists now know that protein as peptides can be absorbed immediately without digestion, into the bloodstream. Amino acids are most useful in psychiatry because they are the precursors to neurotransmitters, the chemical language of the brain. Measuring plasma amino acid content has helped identify specific chemical imbalances associated with depression, schizophrenia, anxiety, and insomnia. Amino acids are invaluable also in general medical problems such as diabetes, obesity, anorexia, hair loss and allergies. These are all better understood by amino acid tests. Biochemical imbalances of amino acids are commonly found in all these medical conditions and many more. Amino acids are so central to health that most diseases alter their balance. Amino acids are invaluable in surgery. Most patients tested show deficiencies in amino acids after surgery, and supplementing them with these amino acids may accelerate recovery. Every branch of medicine and the maintenance of every person's health requires an understanding of amino acids to control disease. **Feed and nourish your brain. Don't drug it!**

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