Article

Proposed Treatment of Light, Sound, Touch, and EMF Sensitivity

By Suzanne Fisher

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Amino acids are the raw nutrients needed to manufacture neurotransmitters.

Neurotransmitters are chemicals that are used to relay, amplify and modulate electrical signals between a neuron and another cell. The three major categories of substances that act as neurotransmitters are:

1. amino acids (primarily glutamic acid, GABA, aspartic acid & glycine),
2. peptides (vasopressin, somatostatin, neurotensin, etc.) and
3. monoamines (norepinephrine, dopamine & serotonin) plus acetylcholine.

The major "workhorse" neurotransmitters of the brain are glutamic acid (=glutamate) and GABA. The monoamines & acetylcholine perform specialized modulating functions, often confined to specific structures. The peptides perform specialized functions in the hypothalamus or act as co-factors elsewhere in the brain.

What do neurotransmitters do?

Neurotransmitters help regulate pain, reduce anxiety, promote happiness, initiate deep sleep, and boost energy and mental clarity. The neurotransmitters that cause excitatory reactions are known as catecholamines. Catecholamines, epinephrine, and norepinepherine (adrenaline) are derived from the amino acid phenylalanine. Inhibitory or relaxing neurotransmitters include serotonin and gamma-aminobutyric acid (GABA). The neurotransmitter serotonin is produced from the amino acid tryptophan. GABA is produced from the amino aid glutamine.

Sound sensitivity, light sensitivity, touch sensitivity, and EMF sensitivity – are they related?

It is believed that sound sensitivity is caused by serotonin imbalance. Researchers at the University of Pennsylvania School of Medicine have also determined that serotonin decreases the body's sensitivity to light. Since people who have sensitivity to both light and sound often have touch sensitivity and EMF sensitivity, it is reasonable to hypothesize that these neurally mediated symptoms are all related to serotonin deficiency.

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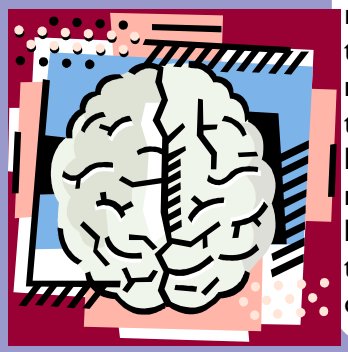
The neurotransmitter serotonin is produced from the amino acid tryptophan, which is no longer allowed to be sold over the counter. However, 5-HTP (5-hydroxytryptophan) is the direct precursor to serotonin, and is available at most stores that carry supplements. 5-HTP is usually sourced from the seeds of the Griffonia Simplicifolia plant. Production of 5-HTP as a supplement increased when L-tryptophan was banned in the United States because of a tainted batch which caused serious side-effects in users.



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5-HTP has many advantages over L-tryptophan. Besides being safer to produce and arguably more potent, it easily crosses the blood-brain barrier and effectively increases central nervous system (CNS) synthesis of serotonin. Its role as an intermediary in the biosynthesis of serotonin indicates that this chemical may indeed be effective in treating serotonin-related disorders.

Intestinal absorption of 5-HTP does not require the presence of a transport molecule, and is not affected by the presence of other amino acids; therefore it may be taken with meals without reducing its effectiveness.

Amino acids are the "building blocks" of the body. Besides building cells and repairing tissue, they form antibodies to combat invading bacteria & viruses. They are part of the enzyme and hormonal system, they build nucleoproteins (RNA & DNA), they carry oxygen throughout the body, and they participate in muscle activity. When protein is broken down by digestion, the result is 22 known amino acids. Eight are essential (meaning they cannot be manufactured by the body) and the rest are non-essential (and can be manufactured by the body with proper nutrition).

Supplementation with amino acids has been shown to reduce light, sound, touch and EMF sensitivity by making more of the "building blocks" necessary for neurotransmitter formation available to the body.

Stress is an all-purpose term for anything that causes the body to activate its "stress circuit," the process designed to mitigate upsetting events. When the brain receives a disturbing signal, the hypothalamus immediately releases corticotropin-releasing hormone (CRH), which causes the pituitary gland to release another hormone, adrenocorticotropin (ACTH). ACTH tells the adrenal glands to release yet more hormones, including cortisol, while related neurological signals stimulate the release of epinephrine (adrenaline) and norepinephrine. These hormones place the body in a 'flight-or-fight syndrome' in which the blood pressure, heart rate, and body temperature rise; and the muscles get ready to tense. People with a chronic illness tend to live in the 'fight-or-flight syndrome' all the time.

Stress can exhaust the body's mental and physical resources. The body processes that occur during stress use up an inordinate amount of nutrients, leaving the body nutritionally deficient. A nutritionally deficient body does not have the resources (amino acids) necessary to make the critically important neurotransmitters needed by the brain to prevent light, sound, touch, and EMF sensitivity.

Other important nutrients for overcoming light, sound, touch and EMF sensitivity include B-6, magnesium, and potassium. B-6 helps transform tryptophan into serotonin. Magnesium helps the brain release and absorb serotonin.