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Does your brain need a tune-up?

It has been almost a century since the concept that was later termed neurotransmitter came into being. Add this term to your vocabulary since so much research has been done in this field in the last decades. The first neurotransmitter to be isolated was acetyl

choline. Later, norepinephrine, serotonin and dopamine were defined. These are small chemical molecules your body synthesizes from amino acids in your food and uses as nerve-conductors.

The neurotransmitter allows one nerve cell (neuron) to give an electrical impulse to communicate with another. The nerve cell has a body with a nucleus and several elongated wire-like axons with a "plug" known as dendrites on one end, which is the transmission site.



**DR. J.E.
BLOCK**

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The receiving cell is very similar having another dendrite as its "socket" very near the "plug" of the transmitting cell. Between the two is a small space called a cleft. The neurotransmitters are stored in a micro-reservoir (vesical) at the end of the axon. When an electrical charge signals, the chemical is released and attaches to a receptor on the receiving cell axon. When these receptors have enough neurotransmitter molecules, it sends another electrical signal down the axon. These neurons, axons and dendrites are found all over the body, since our nervous system happens to touch every cell in our body. We will limit the rest of this column to the central nervous system, which is the brain and spinal cord.

Diseases such as Fibromyalgia, Chronic Fatigue, Alcoholism, Premenstrual Syndrome, Mitral Valve Prolapse, Migraines, Attention Deficit Hyperactivity Disorder, Irritable Bowel Syndrome, Alzheimer's Disease, Restless Leg Syndrome, Depression and Panic Attacks are all related to malfunctioning of neurotransmitters. In addition, we find out how obesity and all it includes

(hypertension, heart disease, diabetes mellitus, osteoarthritis) is now noted to be caused by neurotransmitter abnormalities. Annoying characteristics in us, such as inappropriate anger, poor concentration, low IQ, impulsivity and poor sleeping are also related to abnormal neurotransmitter function. Humans are predisposed to these genetically and the stressors of today's civilization bring out the problems. The resulting disease depends upon where the faulty transmitter function is located.

Some of my staff and I recently attended a symposium given by Marty Hinz, MD, with nearly 100 attendees, on the diagnosis and treatment of these diseases, and learned there is an easy way to not only diagnose the specific neurotransmitter at fault, but also a natural, non-prescriptive method to successfully treat these problems. Urinary and salivary tests are available for less than \$100 to measure the neurotransmitters and determine exactly what the problem is. The treatment includes amino acids, vitamins, minerals and the herb, macuna. More details will be given next week.