

BIO/TECH NEWS

Inside Information on Breakthroughs and Innovations in Bio/Science and Technology

All in Your Head?

**Breakthrough in NeuroScience Offers You Hope for a
Multitude of Brain Diseases and Neurological Disorders —
*Without Drugs and Without Drug Side-Effects!***

WHICH OF THESE DESCRIBES YOU?

- ✓ Depression
- ✓ Anxiety
- ✓ Panic attacks
- ✓ Insomnia
- ✓ Gradual Memory Loss
- ✓ Frequent Irritability
- ✓ Parkinson’s Disease
- ✓ Dementia
- ✓ Migraine Headaches
- ✓ Chronic Headaches
- ✓ Chronic Pain
- ✓ Brain Fog
- ✓ Night-time Muscle Twitching, Spasms
- ✓ Sleep Apnea
- ✓ Irritable Bowel Syndrome (IBS)
- ✓ Fibromyalgia
- ✓ Chronic Fatigue Syndrome
- ✓ Crohn’s Disease
- ✓ Ulcerative Colitis
- ✓ Decreased Ability to Think of the Right Words while Speaking or Writing
- ✓ Premenstrual Syndrome (PMS)
- ✓ Menopause/Menopausal Symptoms
- ✓ Post Traumatic Stress Disorder (PTSD)
- ✓ Obsessive Compulsive Disorder (OCD)
- ✓ Decreased Ability to Learn New Information
- ✓ Impulsiveness
- ✓ Low Motivation
- ✓ Tension Headaches
- ✓ Difficulty with Reasoning, Problem-Solving
- ✓ Carbohydrate Cravings
- ✓ Obesity
- ✓ Restless Leg Syndrome
- ✓ Adrenal Fatigue/Burnout
- ✓ Traumatic Brain Injury
- ✓ Increasing Difficulty with Reading Comprehension
- ✓ Addictions
- ✓ Alcoholism
- ✓ Inappropriate Aggression
- ✓ Inappropriate Anger

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- ✓ Epilepsy
- ✓ Autism
- ✓ Psychotic Illness
- ✓ Fear
- ✓ Paranoia
- ✓ Claustrophobia and/or other Phobias
- ✓ Schizophrenia
- ✓ Recurring Nightmares, Night Terrors
- ✓ Seasonal Affective Disorder (SAD)
- ✓ Suicidal Thoughts/Behavior
- ✓ Attention Deficit Disorder (ADD)
- ✓ Attention Deficit Hyperactivity Disorder (ADHD)
- ✓ Hyperactivity
- ✓ Bulimia
- ✓ Anorexia
- ✓ Compulsiveness
- ✓ Obsessiveness
- ✓ Deterioration of Organ System Innervation
- ✓ Hormone Dysfunction Problems
- ✓ Adrenal Dysfunction Problems
- ✓ Cortisol Dysfunction Problems

If you find yourself or a loved one described by any one or more of the above, then *you need to keep reading*. The information we provide in this Special Report has the potential to turn your life (or the life of a loved one) completely around for the better.

Although the subject we're about to tackle in this Special Report is in many ways unbelievably complex, it is also very simple. We need to give you just a taste of the complexity involved, but we promise we won't drag you "into the weeds" and overwhelm you with the intricacies and minutiae of the subject. Our aim here is to give you two things to take away with you: 1) a basic understanding of what we call "Neurotransmitter Disease" and how it is that it presents with so many apparently diverse and varied symptoms; and, 2) an understanding of how, in many cases, it might be possible for you or a loved one to secure a simple, non-drug solution to this widespread, increasingly common problem...

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NOTICE/DISCLAIMER: The challenge for us at the Bio/Tech News is that we know our Subscribers don't want to have to wait around on the "men in white coats" to verify what seems to be clear as crystal to a person with a bit of down-home, plain-folk, common sense. Our Subscribers not only have plenty of common sense, but they are also savvy enough and sophisticated enough to recognize that much in this life is yet unanswered. Nevertheless, they want what we're able to come up with and report on despite the sometimes-obvious gaps in understanding; and, they want this information right now. They want to read about subjects now which might someday turn out to be "tomorrow's news"...perhaps months or even years down the road, and which most people may never even hear about, even then. So...our Readers pay us for our considered opinion, speculation, guesses, intuition—you name it—based upon the homework we do as we research various breakthroughs in BioScience and Technology. We've been doing this kind of thing for more than a decade now and *thousands* of Subscribers have been more than satisfied to get what we can give them now, knowing that there is often a long lag-time before the explanations for various phenomena ever come around. Since much of our reporting covers material which is "cutting edge", you need to know that if you are looking for all kinds of scientific documentation—the kind of thing you'd find in a stodgy, peer-reviewed scientific journal—then you're going to be disappointed. Oftentimes, there's just not a whole lot of this kind of "science" available. Sometimes, all we may have to go on is a little bit of theory, a bit of "common sense"...and a number of reported experiences. Often, we find ourselves having to "fly by the seat of our pants", sometimes speculating about why or how a product may work, but not knowing for sure. But, if we waited around for all the "science" to be done, then most of us would end up dying of old age before the obvious could be confirmed!

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Regarding the use of the term "cure", we want to be absolutely clear about the fact that we are not comfortable with this term and are therefore reluctant to use it in our descriptions involving the use of various natural and/or nutritional substances, no matter how startling and amazing the results may appear to be. Rather, if a nutritional product seems to be helpful to you, instead of calling it a "cure" we think it is often far more accurate to suggest that the product may be providing your body with whatever specific "raw material" it needs in order for it to effect its own God-given, innate healing and repair process. In other words, the nutritional substance itself is not a cure. It does not make you well, per se. Rather, it is simply something which your body employs to enable itself to once again function properly. Once your body has regulated itself, various troubling symptoms and disorders tend to resolve themselves and ultimately often completely disappear.

Nothing contained in this Report has been evaluated by the FDA nor is it intended to be, nor should it be construed to be, any kind of recommendation of any product or service in the diagnosis, cure, mitigation, treatment, or prevention of any disease, nor should it be construed to be any kind of attempt to either prescribe or practice medicine. As always, it is our stated policy to encourage our readers to always, always, always consult with a competent, well-informed health practitioner before making any significant decisions regarding one's health.

First Causes

“As a doctor who has been focusing on brain research and treatment for more than twenty-five years, I know from firsthand experience that **when your body is not working properly, the first place to look is your brain.**”

—Eric Braverman, M.D.

Millions of Americans struggle to drag themselves out of bed every morning, knowing that they have to somehow slog through another day while having to deal with any of a number of the symptoms and disorders we have listed for you, above. It may surprise you to know that *all* of these serious, often debilitating problems and complaints — every single one of them! — can be caused by a deficiency (and subsequent imbalance) in a number of powerful, natural chemicals your brain and nervous system need on a moment-by-moment basis in order to function properly and at optimum levels. These critical, life-enabling, natural chemicals are called **neurotransmitters**.

Although the science behind neurotransmitters is still very much in its infancy, cutting-edge researchers are beginning to get a handle on the absolutely crucial role which neurotransmitters play in our day-to-day living. We now know that *every* thought you have, *every* feeling, *every* emotion, *every* order your brain sends to your various organs and cells and fibers in your body, consciously or unconsciously, awake or asleep... *all* of this and much, much more involves specific signals which zip along an intricate, complex, delicate network of specialized cells called **neurons**, each having to rely upon the action of **neurotransmitters** in order to mediate, process and convey electro-chemical information throughout the body.

In order to give you an adequate understanding of neurotransmitters and their vital, critically important function, we need to briefly consider the nervous system in which they are found and with which they are intimately involved...

Neurology 101: How You Are Wired

As we just mentioned, your nervous system is made up of an intricate network of specialized nerve cells that coordinate signals between different parts of your body. Science textbooks describe the nervous system as having two fundamental components, *central* and *peripheral*. The *central* nervous system is made up of your brain, spinal cord and retina. The *peripheral* nervous

system consists of interconnected nerve cells which reach from the central nervous system all the way to the remotest regions of your body.

One part of the peripheral nervous system, called the *enteric* nervous system, is primarily involved with regulation and control of gastrointestinal function. The enteric nervous system is a network of neurons and neurotransmitters located in the tissue lining and surrounding the esophagus, stomach, small intestine and colon. Like your brain, your gut has its own complex circuitry which enables it to learn, remember and produce “gut feelings”. The gut can affect the brain just as the brain can affect the gut. Recently, scientists have discovered that the enteric nervous system has a remarkable capacity to function *independently* of the brain; so much so that some researchers now even consider it to be a nervous system in its own right, calling it the body’s “second brain”.

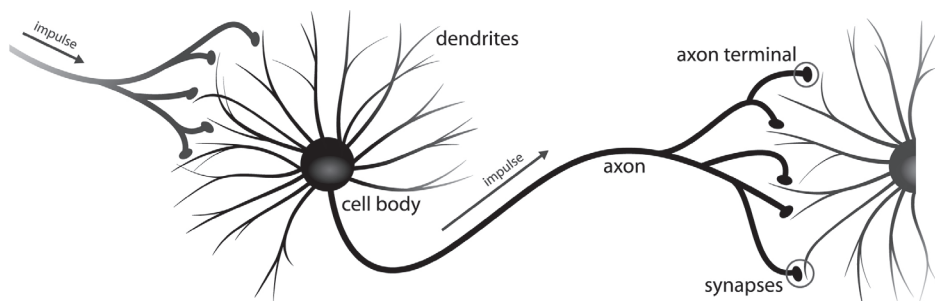
The various regions of the *peripheral* nervous system are all interconnected to the *central* nervous system by means of complex neural pathways. Part of your peripheral nervous system is a subsystem called the *autonomic* nervous system. It acts as a control system and operates largely below the level of consciousness. Your autonomic nervous system regulates your heart rate, digestion, respiration rate, salivation, perspiration, diameter of your pupils and other functions. For the most part, you are hardly ever aware of the vast amount of activity which is being carried on moment-by-moment by this part of your nervous system.

Neurons (nerve cells) are the ba-

sic information processing structures which make up your nervous system. The function of each neuron is to *receive* information from other neurons, to *process* that information, then to *send* that information along to other neurons. Neurons process *all* of the information that flows within, to, or out of any part of the nervous system, be it central, peripheral, enteric, autonomic. *All* of the *motor* information through which we are able to move; *all* of the *sensory* information through which we are able to see, to hear, to smell, to taste, and to touch; and, *all* of the *cognitive* information through which we are able to think, to reason, to dream, to plan, to remember and to do everything else that we do with our minds; all of this and more requires the active involvement of optimally-functioning neurons.

As you might guess, processing so many *kinds* of information requires many *types* of neurons; there may be as many as 10,000 different types of them. Processing so *much* information requires a *lot* of neurons. Best estimates indicate that there are around 200 *billion* neurons in the brain alone! And, as each of these neurons is connected to between 5,000 and 200,000 *other* neurons, the number of possible ways that information can flow among the neurons in the brain is so large that the potential circuits you are carrying around in your head have been compared to the number of stars in the entire universe!

A typical neuron has four distinct parts, or regions (see illustration, below). The first part is the **cell body**, or “soma”. The soma is the metabolic “control center” of the neuron; it is also its “manufacturing and recycling plant”. The second and third parts of the nerve cell are called *processes* — structures which extend out from the cell body. Generally speaking, the function of a process is to be a conduit through which signals flow either *towards* the cell body or *away from* the cell body. *Incoming*



A typical neuron (nerve cell) has multiple dendrites, a single axon and multiple axon terminals. Neurons do not directly touch but are separated at synapses.

signals from other neurons are typically received through processes called *dendrites*. The *outgoing* signal to other neurons flows along a process called the *axon*. A neuron may have many thousands of dendrites, but it will have only one axon. The fourth distinct part of a neuron lies at the end of the axon, the *axon terminals*. Axon terminals are the structures that contain neurotransmitters.

Electro-Chemical Information

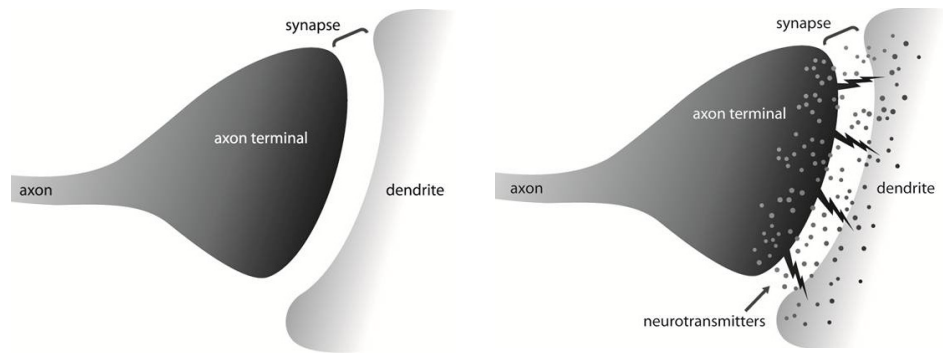
Neurotransmitters are small messenger chemicals that are produced in the neurons and stored in the nerve cell endings of the axon. The neurons synthesize neurotransmitters by using various natural, raw materials — primarily, specific amino acids (found in protein) together with necessary vitamins, minerals and co-factors.

Although they are extremely close to one another, **nerves do not directly touch**. At the junction between the axon terminals of one neuron and the dendrites of another neuron there is a *space* called the *synapse*. It has been estimated that you have approximately 100 *trillion* synapses within the complex web of your nervous system!

Within each synaptic space, neurotransmitters are secreted, being stimulated by electro-chemical current traveling down the axon. **Neurotransmitters are the medium by which and through which various signals and other bio-chemical information flows from the axon terminals of one neuron to the dendrites of another neuron. They relay, amplify and modulate signals between neurons.**

As we've already mentioned, neurotransmitters are intimately involved in every thought, mood, emotion, pain and pleasure sensation that we feel. Neurotransmitters affect *all* of our glands and organs, and *all* major metabolic processes. Breathing, heartbeat, heart rate, blood pressure, digestive function, body temperature, you name it. They control our energy level, appetite, eating patterns, food cravings, sleep and sleep patterns, libido, plus whatever other bodily functions we may have failed to mention here.

As you read this newsletter you consciously guide your eyes over each word and line of text. While you do so, tiny muscles in your eyes adjust to any varying light, helping you keep this page in focus. If you're seated comfortably in a chair, your heart rate has adjusted to your resting position, your blood vessels



Synaptic space between nerves.

have been widened or narrowed where necessary in order to keep your blood flowing at a suitable rate; you continue to breathe and at just the rate you need to provide you with the amount of oxygen you require at this present moment; your digestive system is quietly working to deal with a recent meal you ate; and various other organs, glands and muscles are constantly responding and adjusting to your present circumstances in order to keep you functioning at the best possible level. Many of these things are taking place without you even being aware of it. And yet, **every one of these processes (plus thousands and thousands of others) are occurring and can only occur as a result of specific neurotransmitters entering the synaptic space between neurons.**

Once they have completed their task, having transferred needed neuro-chemical information and energy, neurotransmitters are then either degraded by special enzymes or are absorbed back into the axon terminals, shutting off the signal for the moment, making the neuron once-again ready for the next impulse.

It is extremely critical that the concentration of neurotransmitters in the axons be maintained at high enough levels. Otherwise, when there is a deficiency and resulting imbalance of neurotransmitters, making them unavailable to flood into the synaptic gap, serious problems begin to develop. The result is a weakening or even complete breakdown of nerve transmission, and the relay of important information then fails to occur. Simply stated, the neurons are no longer able to "talk to one another".

Let's try a simple illustration. Assuming you are now sitting comfortably in your home or office, look around you. You are surrounded by all kinds of devices and appliances which rely upon the flow of electricity in order to

Neurotransmitters flood into the synapse to allow energy/information flow.

function properly: your heating and air-conditioning system, your television, computer system, lighting, washer and dryer, stove, oven, refrigerator, freezer, etc. In order for all these things to operate, there must be a solid connection — in this case, an intact electrical wire — running between the device and the supply of energy. To accomplish this, hundreds of electrical wires run throughout the walls and ceilings, some connected either directly or connected via various switches and wall outlets. If a break in the circuit develops anywhere in the electrical line, energy cannot flow and the lights or the appliance simply cannot and will not work. Or, if the connecting wire should become frayed or partially cut, then the device will, at best, barely run, if it runs at all.

Now, instead of having a continuous run of electrical wires throughout your building, imagine that these wires have all been replaced with hundreds and hundreds of different extension cords of varying lengths, connected end-to-end. So long as each extension cord remains securely attached to another extension cord all the way from your electrical panel to the outlet or appliance, sufficient electrical energy can be provided. However, if each extension cord was unplugged, leaving a small space between the end of one cord and the beginning of another, then no power could flow and no electrical device would be able to operate unless there was a way to bridge the gap to allow the energy to move from cord to cord.

Although greatly simplified, this is similar to the situation with your nervous system. Like the disconnected extension cords we mentioned in our illustration above, neurons do not physically touch one another but are separated by gaps called *synapses*. Because of this break in the circuit from neuron to neuron, **no contact can be established**

and no resulting communication between neurons can occur — and, therefore, no information, no energy can be transferred — *unless sufficient numbers of neurotransmitters are present to flood into the space.* If the required amount and concentration of neurotransmitters falls off, necessary neuro-chemical energy and critical information cannot be conveyed from one neuron to another. Once this happens, and depending upon *where* it happens and for how long, various groups of cells, then organs, and even complete systems in your body will start to deteriorate, malfunction and eventually completely shut down.

By now, you should be starting to see how deficiencies and imbalances of neurotransmitters can cause the wide variety of symptoms, diseases and disorders we mentioned at the beginning of this Special Report. Though many of these seem completely unrelated, **the common denominator is the extensive, complex network of billions and billions of neurons which reaches into “every nook and cranny” and which depends upon specific neurotransmitters in order to send and receive life-maintaining information throughout your body every millisecond of every second of every minute of every hour of every day that you are alive.**

Again, depending upon *where* a “disconnect” or “broken circuit” happens to occur, this is the reason why one person will have problems with depression or anxiety, another will be troubled with digestive problems, another person will struggle with insomnia, another with obesity and food cravings, another will be plagued with migraine headaches, and so on. **What each of these diverse problems share in common is a lack of sufficient amounts of neurotransmitters entering the synapses between neurons in order to establish vital connections.**

What’s more, this is also why a person can, and often does, *simultaneously* struggle with seemingly-unrelated, *multiple* symptoms. For example, researchers have come to discover that the *enteric* nervous system (the “second brain” of the gut, mentioned earlier) actually contains *more* of the neurotransmitter Serotonin than the brain does. So, in addition to some of the more commonly-recognized symptoms of low/unbalanced levels of Serotonin (i.e., depression, insomnia, anxiety, etc.), these same low/unbalanced levels of Serotonin also

occurring in the *enteric* nervous system play a major role in the onset and development of gut pathologies like Irritable Bowel Syndrome, Colitis, Crohn’s disease, etc.

At first glance, one might miss the relationship; but when you think about it, it only makes sense, given the fact that, in *addition* to your brain, there are billions of neurons distributed throughout the rest of your whole body. So, when an insufficient supply of neurotransmitters occurs, the effect can be *global* and you can therefore expect to eventually see symptoms appearing in what at first pass would be considered to be “unrelated” regions, organs, organ systems, etc. Mood, emotions, thinking, digestion, sleep, addiction patterns, eating patterns, etc. have a lot more to do with each

other than you might otherwise think. All this said, **here is the bottom line: It is absolutely crucial that you continuously synthesize and maintain sufficient amounts of neurotransmitters and that you have them in proper balance.** Failure to do so means certain sickness near term with chronic disease and serious, debilitating disorders developing over time. The good news, which we will address in more detail in a few minutes, is two-fold: 1) raising neurotransmitters to proper, therapeutic levels is fairly easy to do; and, 2) various categories of diseases and symptom complexes have often been clinically shown to be rapidly repaired or relieved (or even completely disappear!) once this happens.

* * *

Vital Connections

So far, we have established the need for the continuous presence of sufficient amounts of neurotransmitters at each of the billions and billions and billions (actually, trillions) of synaptic junctions throughout your nervous system. Now, let’s take a closer look at a few of these bio-chemical messengers. This will help you to better understand the reasons behind the specific recommendations we make at the end of this Special Report...

Researchers have described at least ten *essential* neurotransmitters: **Acetylcholine, Histamine, ATP/adenosine, Glutamate, GABA (gamma aminobutyric acid), Glycine, Epinephrine (adrenaline), Norepinephrine (noradrenaline), Dopamine, and Serotonin.** Of these, **Serotonin, Dopamine, GABA and Acetylcholine** are considered to be *dominant*, having much to do with the synthesizing, regulation and control of many of the others.

Although they have multiple characteristics in the way they behave, Serotonin and GABA *generally* tend to have moderating, calming influences in the way they act; and, *generally* speaking, Dopamine and Acetylcholine tend to be more stimulating. Serotonin and GABA are more like the brakes on your car; Dopamine and Acetylcholine are more like the accelerator pedal. Although the roles can be reversed in some circumstances, Serotonin and GABA are often referred to as being “inhibitory” neurotransmitters; Dopamine and Acetylcholine are referred to as being “excitatory”.

Until recently, it was thought that any given neuron utilized only one kind of neurotransmitter, but we now know that many neurons use two or more different kinds of neurotransmitters.

Serotonin

Serotonin ranks above Dopamine in the hierarchy of overall importance, being widely recognized as the *Master* neurotransmitter since it has been implicated in almost every conceivable physiological and/or behavioral function — the experience of feeling and emotion, aggression, appetite, cognition, emesis, endocrine function, gastrointestinal function, motor function, perception, sensory function, sex, sleep, vascular function, etc. It is not uncommon for those who have low levels of Serotonin to have a family history of depression, anxiety, OCD, and/or eating disorders.

Serotonin influences a wide range of normal brain activity, including our feelings of well-being, serenity, moods and mood stability, eating patterns, appetite satiety (fullness), pain transmission, and more. The level of Serotonin present in your nervous system can have a tremendous impact on how you think, feel and behave. It should therefore come as no surprise that many drugs which are currently used for the treatment of psychiatric disorders (e.g., depression, mania, schizophrenia, autism, obsessive-compulsive disorder, anxiety disorders) are designed to act via mechanisms which involve, influence, even manipulate, the

presence and activity of Serotonin.

The primary natural substance your body uses to synthesize Serotonin is the amino acid, L-Tryptophan. Your neurons use Tryptophan to make a substance called 5-HTP which is then made into Serotonin. **If your body is deficient in either Tryptophan or 5-HTP, you will not be able to maintain critically-needed levels of Serotonin.**

To the degree and extent your Serotonin levels fall off, you can become depressed, nervous; you might become anxious and struggle with anxiety attacks and disorders; you can turn into a chronic worrier; you might find yourself haunted by various fears and even develop phobias; you become pessimistic and negative; irritable, impatient, edgy; you start becoming obsessive, compulsive; you start thinking about the same things over and over again; you suffer from low self-esteem and lack of confidence; you might develop feelings of anger or rage and your behavior can become overly aggressive or even explosive; you find that you can't sleep soundly and have other problems with sleep; you crave sugar and carbohydrates and find that these help your mood; you feel worse in dark and stormy weather; you suffer from chronic pain in the form of headaches, backaches, fibromyalgia; you may even turn self-destructive and entertain suicidal thoughts. **All of this (and more) simply because you lack sufficient amounts of this critical neurotransmitter.**

Dopamine

Your neurons use the amino acid L-Tyrosine to make a substance called L-dopa, which is then converted to Dopamine. Dopamine is necessary for mental concentration, alertness, high energy, motivation, hunger regulation and sex drive. It monitors your metabolism. It controls your energy, excitement about new ideas, and motivation. It influences blood pressure and digestion, intelligence, abstract thought, goal-setting, long-term planning, and voluntary movement. From Dopamine, your neurons can synthesize any required amounts of Norepinephrine, which can then be further synthesized into Epinephrine ("Adrenaline"). It is not uncommon for those with low Dopamine levels to have a family history of addiction, alcoholism, ADD/ADHD.

To the degree and extent your Dopamine levels fall off, you can become depressed; have a reduced ability to feel pleasure; feel flat, bored, apathetic; have

low enthusiasm; your drive and motivation starts to fall off; you find it increasingly difficult to get through tasks; procrastination becomes routine; you find it harder and harder to concentrate and focus; paying attention can become a real challenge; your thinking slows down; you find it difficult to learn new things, entertain new ideas; you rely upon caffeine and other stimulants to improve your energy, mood, motivation; you become more and more introverted; you start sleeping more and more and have trouble getting out of bed; you are easily fatigued, both mentally and physically; you find that you gain weight easily. **All of this (and more) simply because you have not maintained Dopamine at sufficient levels.**

GABA

Your neurons synthesize Gamma-amino-butyric-acid (GABA) from the amino acid, Glutamine. GABA provides a sense of calm to the body, mind, emotions. It is also involved in the production of endorphins, the brain chemicals that create feelings of well-being.

To the degree and extent your GABA levels fall off, you can start to feel stressed, pressured, overwhelmed; you get butterflies in your stomach and a lump in your throat; your hands become sweaty, clammy; you develop a low tolerance to stress; you have trouble relaxing; your body starts to get tense, stiff, uptight; you find yourself trembling, twitching, even shaking; you start to get nervous, edgy, jumpy; you feel panic and anxiety; your heart beats irregularly, often too fast; sleeping prob-

lems become routine. **All of this (and more) simply because you have not maintained GABA at sufficient levels.**

Acetylcholine

Acetylcholine is a neurotransmitter which is critical for communication between neurons and muscles at the neuromuscular junction. It is involved in direct neurotransmission in the *autonomic* nervous system (see above), and has been implicated in cognitive processing, arousal, and attention in the brain. Acetylcholine is critical for a properly functioning memory, and it is the subject of the majority of research looking for treatments for memory deficits, like those found in Alzheimer's disease. Any mental health issue that involves poor memory function directly or indirectly relates to Acetylcholine.

To the degree and extent your Acetylcholine levels fall off, you may start having difficulty remembering names, faces, birthdays, numbers, lists, directions, instructions; you find yourself forgetting common facts; you forget where you put things and your thinking is slowed and somewhat confused; you start having trouble with finding the right words before speaking; a feeling of disorientation sets in; you'd rather be alone instead of around groups; you rarely feel passionate and often feel a sense of despair and lack of joy; you feel like you're losing your creativity and lack imagination. **All of this (and more) simply because you have not maintained Acetylcholine at sufficient levels.**

* * *

What Causes Neurotransmitter Deficiency?

You now should have a pretty good feel for the critical need to maintain adequate levels of the various neurotransmitters and what happens when there is a neurotransmitter deficiency. Keep reading as we consider the obvious, next question: "So, what *causes* neurotransmitter deficiencies?"

The cause sometimes can be genetic. There are certain genes that program our neurons to produce neurotransmitters and some of us have inherited genes that make us unable to produce what we fully require. Parents who have low supplies of neurotransmitters often produce depressed or anxious children who use food, alcohol, or drugs as substitutes for the brain chemicals they desperately need. Other causes can include: inadequate sunlight exposure;

PCBs, fertilizers, pesticides and plastic chemicals exposure; prolonged drug or alcohol use; insufficient sleep; chronic infections; food allergies; lead, arsenic, mercury and cadmium exposure; excess copper levels; adrenal insufficiency; influenza; chronic pain; caffeine excess; electromagnetic radiation; elevated blood sugar/insulin resistance; plus, a number of other factors. However important all of these may be, we suggest that only a relatively small percentage

of those who suffer from neurotransmitter-driven diseases do so as a result of what we've listed so far.

In a nutshell, **the most important, primary contributors to neurotransmitter insufficiency are: diet, age, and chronic stress.**

Diet

Diet plays an incredibly important role since the required quantities of essential amino acids, vitamins, minerals, trace elements and other co-factors are rarely consumed in the foods we choose to eat. **If our bodies don't have sufficient amounts of the necessary raw materials, it is absolutely impossible for them to synthesize the neurotransmitters we need for optimal living. It's that simple.**

Dietary corrections are important for supporting healthy nerve function but are not enough to restore and correct a significant neurotransmitter deficiency. Foods vary widely in their concentrations and quality of nutrients, and the efficiency of digestive function and intestinal absorption varies widely from person to person (go back and read the **Bio/Tech News Special Report, "Death Begins in the Colon"**).

The amount of protein required to supply enough amino acids to replace depleted neurotransmitters is unrealistic and unhealthy. As an example, you would have to eat a 32-ounce steak or 3-dozen eggs every day just to supply the amino acid component needed to help improve some of the neurotransmitter-driven conditions we listed for you at the beginning of this Special Report. Experts in the field of brain nutrition will tell you that it is now virtually impossible to get the necessary supply of amino acids, vitamins, minerals, trace elements and other co-factors from today's typical American diet. So we need to look to nutritional *supplements* for help. Specifically formulated supplementation is the safest, most efficient solution to provide the proper raw materials, the precursor building blocks, to synthesize neurotransmitters and enable the body to once again efficiently regulate and correct itself.

What's more, the fact that most Americans are walking around with Chronic, *Subclinical Scurvy* (CSS) has much to do with the widespread prevalence of neurotransmitter-driven diseases and conditions in this country. The name "scurvy" is derived from the Italian *scorbutico*, meaning an irritable, neurotic, discontented, whining, and

cranky person. The disease is associated with listlessness and general malaise, fatigue, weakness, irritability, changes in the personality and psychomotor performance, and a lowering of the general level of arousal. These behavioral effects can be attributed to impaired synthesis of certain neurotransmitters as a result of insufficient quantities of Vitamin C (or, "ascorbic acid").

Vitamin C plays a *major* role in the biosynthesis and maintenance of neurotransmitters. Ascorbic acid influences the metabolism of the amino acid, Tyrosine, which is involved in the formation of norepinephrine from Dopamine. Ascorbic acid is also required for the synthesis of Serotonin from the amino acid, Tryptophan. **Without Vitamin C, many essential conversions in synthesizing neurotransmitters simply can't take place.** We suggest you go back and read the **Bio/Tech News Special Report, "Oh Say Do You C?"** to refresh your memory and remind you of the importance of consuming high doses of Vitamin C on a daily basis.

Age

As we get older, our ability to synthesize and maintain adequate levels of neurotransmitters becomes more of a challenge. Age-related changes include changes in neurotransmitter synthesis, storage, synaptic release, and neurotransmitter re-uptake.

As an example, Dopamine commonly falls off during the aging process at a rate of about 10-15% per decade, beginning around age forty. Even in healthy people, a decline of about 50% usually occurs by age eighty. Should Dopamine levels fall off at a significantly faster rate, the results can be disastrous. And, when Dopamine levels fall to about 30 percent of our full, youthful levels, the result is often a condition called Parkin-

son's disease. Sadly, when levels fall too far, the Parkinson's patient often dies.

If you are over 40, to help prevent age-related declines it is *critical* that you take extra care to insure that you are *daily* consuming all of the raw materials your body needs in order to produce sufficient quantities of neurotransmitters.

Stress

Countless numbers of people are suffering today from a myriad of health problems that are a direct consequence of our stressed-out way of living. Whether it be in the form of a traumatic episode (death of a loved one, divorce, job loss, physical injury, abuse, etc.) or the unrelenting pressures we face daily, stress causes your body to "burn through" essential neurotransmitters, depleting them and throwing them out of critical balance with one another. Stress wreaks havoc on them. Stress is a disabler. Stress is a *killer*. If your body is unable to replace crucial neurotransmitters quickly enough, symptoms then soon begin to present, causing more and more stress, depleting more and more neurotransmitters, causing your body to be caught in a vicious, downward spiral towards eventual, serious, chronic and often disabling problems and disorders.

Obviously, the ideal would be to find ways to remove yourself from chronic stress and stressors. The problem is that most of us are not able to do this and therefore we have to find other ways that help us deal with our stressful lives. Once again, one of the very best things you can do is to consume, on a *daily* basis, sufficient amounts of the raw materials your body needs so that you can synthesize, replace and replenish your neurotransmitters and maintain them at sufficient levels.

* * *

Solutions — A Matter of Balance

Earlier, we made reference to Serotonin and GABA acting in a way similar to the brakes on a car and Dopamine and Acetylcholine acting like the accelerator pedal. Let's continue with our automobile analogy in order to drive home an important point concerning neurotransmitters...

If you have ever driven a 4-Wheel Drive (4WD) vehicle, you know that power from the engine is distributed to each wheel. If you are driving on a reasonably level road, power is delivered to each wheel evenly. When you get on rough, uneven terrain, power is distributed moment-by-moment to

whichever wheels can get the best traction. Each wheel does its part to move the vehicle down the road. In order for the vehicle to operate optimally, the tires on each wheel need to be properly inflated. If a tire goes flat, the vehicle's ability to operate is severely compromised. And, if the vehicle was to lose

a wheel entirely, the 4-Wheel Drive capability would not be able to keep the vehicle from being completely disabled. The key to optimum 4WD operation is *balance*: all four wheels must be intact and there must be sufficient air pressure in all the tires. Anything less than this and you're going to have a rocky ride.

The same goes for neurotransmitters. In this admittedly simplistic illustration, Serotonin, Dopamine, GABA and Acetylcholine are like the four wheels on a 4WD vehicle. They all need to be in balance and there must be sufficient quantities present in the neurons. If you concentrate only on Serotonin, for example, and "overinflate" that "tire", the others will not get the kind of traction they need. If your Dopamine concentration falls off significantly (the Dopamine "tire" goes "flat"), then the other three wheels cannot adequately make up for it. You need to have all four of these neurotransmitters at full levels and in proper balance with each other.

The mistake some make when trying to restore neurotransmitter levels is that they concentrate on the neurotransmitter which seems to be causing the problem (for example, lack of Serotonin causing depression). Initially, taking measures to "pump up" the Serotonin levels may yield positive results, but "overinflating" a single tire like this ends up throwing the rest out of sync with each other. For example, if you only increase Serotonin levels, your Dopamine levels will fall off. If you only increase Dopamine levels, your Serotonin levels will fall off. Imbalance leads to more imbalance.

In and of themselves, low levels of single neurotransmitters are not the primary cause of disorders and disease. The problem is more one of neurotransmitter levels not being nearly high enough and in balance with one another. Whenever you are dealing with neurotransmitter-driven disorders and disease, and in order to get optimum function, you need to make sure you allow your body to regulate itself by giving it all of the specific raw materials it needs to synthesize sufficient quantities of any and all of the four primary neurotransmitters.

Experienced clinicians report that, once proper nutrients are regularly provided and in sufficient quantities, patients afflicted with various neurotransmitter diseases and disorders often begin to see improvement, sometimes dramatic improvement, in a matter of days. Once neurotransmitter levels have reached proper levels, diseases and disorders are sometimes completely re-

solved.

A rule of thumb is that it usually takes 3-6 months for the body to fully restore neurotransmitter levels to normal. Once this happens, the therapeutic levels of raw materials can usually be reduced to

a lower, daily maintenance dosage. It is important to continue providing the body with these important nutrients in order to avoid the possibility of a return of the original symptoms.

* * *

Final Word

Because nerves affect the functioning of *all* the cells in the body, neurotransmitter-related disorders are common. In fact, an estimated **84 percent of the population has some degree of neurotransmitter deficiency or imbalance!** Therefore, we think everyone who is over 40 years of age should be making a special, concerted effort towards maintaining and, where needful, restoring neurotransmitter balance.

Because your body has an innate, God-given ability to regulate and restore itself, the important thing is that you make sure you give it all the nutritional raw materials it needs in order to do its job. As we mentioned earlier, **it is difficult and probably impossible in our day and time to do this without relying upon the use of nutritional supplementation.**

So, if you or a loved one struggle with any of the neurotransmitter-driven disorders and diseases we listed at the beginning of this Special Report, we can't urge you strongly enough to **begin taking the proper nutrients as soon as possible.** We think you'll be surprised how well your body can respond, if you only give it a fighting chance.

Recommendation

Power Formulas, Ltd. (www.powerformulas.com) offers the most complete, balanced nutritional neurotransmitter support formula you'll find anywhere. In fact, we're confident you can look the world over and you won't find anything quite like this unusual product.

The formula, **SeroDopa**, contains the necessary precursors for *all four* of the primary neurotransmitters (Serotonin, Dopamine, GABA and Acetylcholine), *plus* the various vitamins, minerals, trace elements and co-factors which your body requires in order to efficiently synthesize them.

SeroDopa comes in a jar containing 360 capsules, enough product for a month's supply at the *daily maintenance* dosage. Depending on a person's condition, *therapeutic* dosing might initially require taking additional **SeroDopa** until neurotransmitter levels are sufficiently high enough to move to the daily maintenance dose.

We recommend that you get yourself 2-3 jars of **SeroDopa** and start with the daily maintenance dose and see how you

feel after about three-five days. If you don't realize any noticeable improvement (oftentimes, family members and friends are the first to notice a change), then you will want to increase the amount of **SeroDopa** you take each day. Again, after 3-5 days, you will be able to tell whether or not you should maintain at this level or once again increase your daily dosage. As your body replenishes and restores the level of neurotransmitters it requires, you will be able to move back down towards the regular daily maintenance dose. You will need to pay attention to how you feel. Everyone has their own biological uniqueness in the way they respond. Your body and your overall emotional disposition will tell you when it's time to move up or down on your daily dosing.

Retail pricing for **SeroDopa** runs \$119-\$129 per jar **but you can get the special pricing of only \$69 per jar if you'll simply identify yourself as a Bio/Tech News reader when you order.** Simply enter "BTN13" on the order form. Shipping/handling charges are \$10 per order, no matter how many jars of **SeroDopa** you buy. This **\$50 savings per jar** is a limited-time offer and **Power Formulas, Ltd.** reserves the right to discontinue it at any time. Therefore, we urge you to take advantage of this incredible savings opportunity while it's still available to you. To order, simply go to www.powerformulas.com. **Power Formulas, Ltd.** guarantees 100% satisfaction or your money back. **Act NOW...**

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