

Eat to Heal:

New York Doctor Treats

Attention Deficit Disorder (ADD) with Nutrition

by Charles Gant, MD, PhD

Attention Deficit Disorder (ADD) is becoming one of the most important issues of our time. Currently, there are two polarized camps that offer completely different treatments for ADD, and a war of words and paradigms has emerged. It is little wonder that parents, educators, the public, and most importantly, our children, are very confused about this problem.

One camp presents evidence that ADD is a “neurobiological thing,” a deficiency in brain chemicals called neurotransmitters. They approach ADD as medical problem and primarily employ conventional medical treatments, such as amphetamines and other drugs. The main support for this view is that science has indeed confirmed that a biological basis for ADD probably exists and that drug therapies are very effective in most children or adults with this problem.

The other camp has grave concerns about medicating two million children with one of the most dangerous and addictive classes of drugs. They believe that this is too high a price to pay, even if it is symptomatically effective. Instead of drug treatment, psychotherapeutic, psychospiritual, or family interventions for ADD are recommended.

They are predicting doom for a culture that is doubling the amphetamine prescriptions for ADD every two years. The main support for this perspective comes from an intuitive, “gut” acknowledgement that we are doing something very unethical, perhaps immoral, and at least contradictory, to all of the efforts at prevention of drug abuse in the young. However, the problem with the non-drug approach is that

psychotherapy, family therapy, and social or religious reform efforts are too expensive, take too long, or are of questionable effectiveness.

Additionally, while the well-intentioned, science-based efforts have, on balance, helped many people suffering with ADD, the pharmacological treatment of ADD has simply become obsolete.

There is a solution that seeks to bridge the gap between these polarized approaches and draws on the strength of both. Nutritional interventions are safe, simple and effective in almost every patient, particularly when combined with some form of counseling. Ultimately, ADD will probably be shown to be primarily a “neurobiological thing.” However, interventions with nutritional strategies are faster, safer, devoid of side effects, promote health, and ultimately are cheaper. Those interventions are already well-studied and allow parents or patients to get results and completely avoid the dangerous administration of drugs.

Now, before we go any further, it is important to consider exactly what Attention Deficit Disorder (ADD) really is. Actually, it is a “syndrome,” characterized by distractibility, restlessness, impulsiveness, intrusiveness, talkativeness, rebelliousness, absent-mindedness, recklessness,

and generally defined by parents, teachers, and other family members as “pain-in-the-neckness.” However, a behavioral description and diagnosis does not necessarily mean that anyone actually understands the underlying cause very well. That underlying etiology came to light only a few years ago, when enough advances in gastroenterology, nutritional science, immunology, biopsychiatry, and neurology could be compiled to finally understand this problem. At the biochemical level, there are imbalances in brain chemistry caused by the usual combinations of factors, which account for many modern-era disabilities. Exposure to environmental, toxins, nutritional deficiencies, food or air-borne allergies, stress of a high-paced lifestyle, gastrointestinal damage, free radical injury, and genetic vulnerabilities, all combine to cause changes in the nervous system that underlie the behavioral problems listed above.

Now that we have a good understanding as to what causes ADD, we can design rational interventions at many levels. Combining these interventions makes the treatment of the disorder simple and inexpensive, and many alternatives are available to people with differing economic resources or lifestyles.

As can be assumed from the factors that cause ADD, rational treatments will involve a “mind-body,” rather than a “disease-era,” approach. Medicine is struggling with rapidly changing paradigms, and the older disease model, which had great success with pharmaceutical treatments and surgery, is giving way to the newer mind/body approach that uses psychotherapy, nutritional science, and other holistic technologies. When something works well and large numbers of people become accustomed to doing things a certain way, it is difficult to make changes, even when better methods come along. Since drugs have worked so effectively, that time-worn path is very hard to turn off. That is why potentially harmful drugs continue to be the accepted way to treat ADD, even though that technology is now obsolete.

Anyone who has taken a stimulant to cram for exams knows that “uppers” help to focus on the task at hand, and follow it through to completion. Stimulants can turn the most neurotic, procrastinating, hand-wringing worry-wart into a focused dynamo. Unfortunately, the stimulants that are used to treat ADD are a class of chemicals called “amphetamine-like substances,” one of the most dangerous types of medications ever discovered. They are classified by the Diagnostic and Statistical Manual of the American Psychiatric Association as addictive substances. Those of us who are old enough remember the adage of the early 1970’s, “Speed kills.” That over two million children are now being prescribed a deadly and brain injurious drug for a relatively minor psychological nuisance, when safer, rational methods are being largely ignored, will, I believe, become one of the greatest tragedies in the history of medicine.

Amphetamine addicts have called the most popular amphetamine-like drug which is used to treat ADD the “cognac of speed”. It has the notoriety of providing one of the best highs of all the chemicals in its class. Unfortunately, like all amphetamines, it replaces dopamine, the natural amphetamine in the brain, leaving its victims temporarily depleted in this essential brain substance. Like all drugs, it creates more free radicals, which injure healthy tissues and cell membranes. It interferes with growth and development and injures the lining of the GI tract.

But most of all, amphetamine-like substances are inexpensive and symptomatically effective. They are a quick fix for a problem that may take a little time and effort to get to the bottom of. Naturally, this approach has great appeal for our “quick fix,” modern-era culture. These dangerous chemicals are likely to get a lot more popular before enough people come to their senses and realize that amphetamines are out-dated.

This information is not new. For years, a controversy has raged about the use of these dangerous chemicals to treat the most vulnerable members of society, our children. Most sensible and ethical people know there’s something very

wrong about getting millions of people, especially children, hooked on “uppers.”

ADD is indeed mostly a biochemical problem, probably caused by a deficiency in dopamine, a natural, “feel-good” brain chemical (or neurotransmitter). Also, there are usually other nutritional deficiencies which complicate the dopamine imbalance. Some of the dopamine that brain cells make activates the frontal lobes, the part of the brain just over the eyes. In evolutionary terms, this was also the last part of the human brain to develop and is one of the first parts to lose its functions when there is a generalized stress or injury to the central nervous system. Because this recent brain structure has not had the benefit of millions of extra years of “road testing” that the older, more rugged parts of the brain have had, it is more vulnerable to modern-era stress, neuro-toxins, and nutritional deficiencies.

The frontal lobes are thought to be involved with many types of neurological processes. One of the most important is the integration of thoughts, feelings, and sensory information and continuously updated feedback about current motor (behavioral) activity. The frontal lobes compile all this information and are instrumental in “choosing” the next task to attain goal completion. So it is little wonder that when dopamine activity is compromised, thus interfering with the frontal lobes, a person can become easily distractible, intrusive, and so on. This is probably why artificial dopamine receptor stimulants, such as amphetamines, are effective at alleviating symptoms. These drugs simply fit into the receptors designed by evolution to be stimulated by our natural amphetamine, dopamine.

Given the risk of amphetamine injury, while at the same time accepting that there are true biochemical reasons for ADD, can we devise a way of restoring biochemical balance without harming people with these disorders?

How can we put back the natural dopamine in a way that is in harmony with our evolutionary physiology? What is the original cause of dopamine deficiency? It could be a dietary deficiency of the necessary nutrients. Essential minerals, amino acids, vitamins, and other important nutrients are disappearing rapidly from our modern-age, processed-food diet. Food is increasingly grown in artificial circumstances, on mineral-depleted soils, using genetically engineered seeds. All people, especially children, are increasingly at risk of major deficiencies of such nutrients in our age.

There are many causes of dopamine deficiency. There may be a genetic, relative inability to convert tyrosine, an amino acid, into dopamine. There may be a deficiency of tyrosine or the B vitamins and minerals needed to convert it into dopamine. These can be ruled out with simple blood tests.

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The cause of the dopamine deficiency could be a “brain allergy,” such as food sensitivity, that puts the immune system on alert and stresses every organ in the body. When the brain is stressed, it uses up stress

hormones, such as dopamine, more rapidly. These feel-good natural hormones are there to modify pain and stress, enhance joy and pleasure, and to affect cognitive functioning such as attentiveness. Most of the time, the allergy has something to do with casein (milk protein) or gluten (wheat protein). Elimination of these offending proteins is an inexpensive intervention and may ultimately be necessary in many people with ADD/ADHD.

Corn, soy, and fermented products using yeast are often implicated. Sometimes an airborne allergen throws the immune system out of kilter. Everyone has a different array of substances which s/he reacts to. Biochemical uniqueness is a central theme to the mind-body, holistic medicine paradigm.

If it is due to the Leaky Gut syndrome (injury to the GI tract) which allows the proteins to leak into the bloodstream — thus challenging the immune system — it can be tested for and treated properly. Plant enzymes that help to break down offending proteins may alleviate some of the burden that is placed on the immune system. The damage to the intestines can also be due to yeast, unhealthy bacteria, or parasites, and the other toxic agents in our food and water. These may have to be removed eventually.

Toxins in the environment can also directly cause brain depletion of neurotransmitters, so these should be identified and avoided. Ultimately, toxins do most of their damage by causing free radicals, generated by the body's attempt to rid itself of poisons. Antioxidants, like Vitamin E, Vitamin C, and any of the three or four dozen others that have been discovered, could help.

The biochemical individuality of each person can be assessed with sophisticated but increasingly less expensive laboratory testing, such as amino acid, serum levels, intracellular mineral deficiencies, food hypersensitivities, and stool testing for parasites and yeast.

Nutritional supplementation will virtually erase symptoms of garden-variety, uncomplicated ADD, and testing is usually not even necessary. These are food product treatments, not drugs, and if there is an excess of one or more supplemented nutrients, the body simply excretes what it does

not need. Megadosing is not necessary for successful nutritional treatment.

Occasionally, complex issues get in the way, and one may need professional guidance from a holistic healthcare practitioner. Figuring out which offending food proteins or chemicals are causing the brain allergy may require complicated diagnostic testing. Thyroid disorders may need to be ruled out. Setting up food elimination and rotation plans and monitoring results often requires professional guidance. High glucose levels inhibit tyrosine uptake in the brain. Therefore carbohydrate and insulin resistance may be factors. Interestingly, aspartame had no relationship to ADD, and is probably a safe alternative for most carbohydrate-intolerant people. Individuals with phenylketonuria, a genetic disorder that prevents the conversion of phenylalanine to tyrosine, should be carefully assessed for tyrosine deficiency if

they have ADD, because they cannot make it from phenylalanine. Family, group, and/or individual psychotherapy to deal with emotional issues, and meditation to enhance attentiveness and mindfulness, can be very helpful. It may take some time and be expensive, but there is no expense that is worth amphetamine injury.

However, it may be decades before medicine advances into a mind-body paradigm, and in the meantime all consumers will have to become their own medical advocates and educate themselves.

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