

The Importance of Nutritional Treatment

By Nancy Mullan, MD

During the last third of the twentieth century, several groups were competing for dominance in the treatment of psychiatric disorders. For more than fifty years, psychoanalysis, developed by Sigmund Freud, had held that place. Now, however, the limits of early psychoanalysis had been reached. By the mid-1960s, behaviorists, cognitive psychologists, learning theorists, and proponents of pharmacologic therapies had come into prominence in respected academic settings. Freud himself had predicted that biologic treatments would replace the “talking cure.” By the end of the twentieth century, psycho-pharmacology dominated the treatment of mental disorders.

Pharmaceuticals were the biologic treatment of choice of the mainstream for psychiatric syndromes. Autism and ADD/ADHD have traditionally been considered psychiatric disorders and were treated by child psychiatrists. Initially autism was thought to be psychological as were all of the other psychiatric syndromes. But as psychiatric syndromes came to be seen as organic brain disorders instead of psychological phenomena, autism spectrum disorders were also viewed as disorders of the brain, and the search began for a pharmacologic cure for autism.

Few academicians, professors of psychiatry at prestigious universities, knew or cared that also during the 1960s, Abram Hoffer, MD, PhD, was conducting the first double-blind controlled studies of very high doses of niacin, vitamin B-3, for the treatment of psychotic thought disorder. Hoffer’s nutritional therapies received the same lack of regard from mainstream

medicine that biomedical treatments today face, even though the cures were sometimes dramatic. Many patients with profound disorders experienced a degree of healing unheard of in mainstream practice, while generally avoiding the bizarre and often permanent side effects associated with long-term drug treatment. When Hoffer’s work was acknowledged at all, the response was that the patients had had a spontaneous remission, or that they had been misdiagnosed and had not had schizophrenia in the first place. Most frequently, his nutritional treatments were just ignored.

There is no question that pharmacologic therapies can reduce the symptoms of thought, mood, and behavior disorder quickly. They keep patients comfortable and, for the most part, out of the hospital. With the advent of the first anti-psychotic medications in 1953, the major tranquilizers, patients came streaming out of the wards of state mental hospitals where they had been housed, sometimes for most of their lives. The most seriously affected, usually without money or family, were most often found in the streets or in shelters, shifting the burden for their care from the state to the individual themselves, private charitable organizations, and local municipalities. These individuals’ problems had not been solved. They had become quieter and easier to manage with medication, but very few were returned to society as functioning members.

The major problem with pharmacologic therapy is its side effects. Side effects are dose related and can be horrendous. Hoffer, whose work has been with the most difficult of all mental disorders to treat, schizophrenia and other psychotic thought



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After coming to Los Angeles, Dr. Mullan joined the medical staff at Cedars-Sinai Medical Center and was a clinical instructor at the University of California at Los Angeles School of Medicine. She became an attending physician at Providence-Saint Joseph Medical Center in Burbank where she pursued her long-standing interest in psychosomatic medicine. In 1988 she matriculated at the Psychoanalytic Center of California from which she earned Psychoanalytic Certification. In 1989 she began to practice nutritional medicine. In 1995 she taught in the Department of Family Medicine at the University of Southern California School of Medicine in Los Angeles. In 1997 she joined the American College for the Advancement of Medicine.

Currently, Dr. Mullan is practicing nutritional medicine and psychiatry in Burbank, California, treating children on the autism spectrum and adults with physiologically-based emotional disorders.

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Dr. Mullan and her assistants

disorders, asserts that pharmacotherapy essentially changes a schizophrenic psychosis into a tranquilizer psychosis. He describes this iatrogenic psychosis as being “Characterized by psychological and physical changes. Usually the visions and/or voices are reduced in frequency and intensity, but sometimes they are induced. Patients become apathetic and disinterested. They find it difficult to remember, and find it almost impossible to learn. They certainly cannot continue any educational career. On the physical side, they develop tremors, often tardive dyskinesia, hormone changes, frigidity or impotence and weight gain.... Patients prefer to be free of the side effects even if it means becoming psychotic again. As a result, parenteral [injected] drugs [became] very popular....”

Hoffer describes what he calls the tranquilizer dilemma. He recognizes that pharmacologic agents for psychotic thought disorders do make patients better. But they also make normal people sick, so that as the patient begins to recover, the closer they get to normal, the more likely the drug is to make them sick. The natural psychosis has been converted into a tranquilizer psychosis. Psychiatrists often lower the dose

of the offending pharmaceutical, start a new medication, or eventually remove the medication entirely. Patients feel better as they start to be relieved of the tranquilizer psychosis, but the original psychosis emerges once again, and medication is re-started. The patient goes back and forth between the two states and never progresses out of the disability.

Hoffer points out the sharp contrast between this situation and patients who have been treated nutritionally. “Drugs have the advantage that they work quickly and the major disadvantage that they induce the iatrogenic psychosis. Orthomolecular [nutritional] therapy has the disadvantage that it works more slowly, but the advantage that it does not replace one psychosis with another. As it is often important, and sometimes critical, for the patient to improve during early treatment, the solution is to take advantage of both regimens. A combination of orthomolecular and standard therapy allows patients to respond more quickly. As they begin to improve, the drug is slowly withdrawn while maintaining the nutrients.... Finally the drug is completely withdrawn, or the amount of the drug is so low that there are no side effects. The

orthomolecular therapy keeps the patient well.”

Hoffer considers the patient well “When they are free of symptoms and signs, and getting on well with their family and community. They are doing what they would have done had they not become ill, and they are...working and paying income tax. Few orthodox tranquilized patients can earn enough money to owe income tax.” He further states that, “Each new schizophrenic patient, whether left untreated or treated by drugs alone, will cost society two million dollars over their lifetime. A patient who has recovered will cost society nothing and will, on the contrary, be a contributor. The savings can be enormous.”

The savings in human suffering are even greater. The patient with a thought, mood, or behavior disorder has an intense longing to function normally. The disorder can totally destroy their lives as they have known it. Parents of children affected with autism and ADD/ADHD also experience this longing, and some have sacrificed a great deal in order to bring normal function about. Autism is considered a childhood psychosis. The major tranquilizer, Risperdal, a later version of the early anti-psychotics with fewer side effects, is the only FDA approved medication for autism, although many anti-depressants and other medications have also been used. In the hope of finding a more acceptable solution to the problems of autism and ADD/ADHD than medications—which are not satisfactory as they do not make the patient really normal—parents are using biomedical approaches that are directly derived from Hoffer’s recommendations.

Brilliant and hardworking, Hoffer continued his research and only later was joined by others. The recommendations for treatment expanded. The use of four-day water fasts and elimination diets led to the discovery that certain foods or other ingested substances caused cerebral allergy, brain symptoms that disappeared when the allergenic stimulators were eliminated. Gluten and casein alone were found to be responsible for one in twenty-five cases of psychotic thought disorder. Vitamin deficiencies were corrected. Identification and treatment of vitamin dependency was accomplished. Amino acid and essential fatty acid deficiencies were addressed, as

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were mineral deficiencies. Toxic reactions to heavy metals were identified and treated. An Orthomolecular Psychiatric Society was formed and a *Journal of Orthomolecular Psychiatry* published. The foundation for the biomedical treatment of psychiatric/neurologic disorders, including autism and ADD/ADHD, was being laid.

Carl C. Pfeiffer, MD, deserves particular mention. His attention was drawn to the fact that certain individuals had high histamine levels in their blood, and others low. He called the high histamine patients histadelics, and the low, histapenics. He characterized the morphologic, symptomatic, and biochemical aspects of both groups. He defined the nutritional support that would benefit the two differing types. The metabolism of histamine involves methylation, the transfer of a methyl group, a molecule with one carbon and three hydrogen atoms. Methylation is currently recognized as a central process in neurologic function and is being intensively studied. Methylation is important for focus and attention, the silencing of DNA that should not be expressing, neurotransmitter formation and deactivation, and the proper function of the cell membrane of the neuron, among other things.

Pfeiffer's work pointed to the importance of the methionine cycle and its function, the production of methyl groups, on neurologic processes. The administration of methyl B-12 by injection has been vital to the function of many patients. His work also supported the possibility that hydroxy B-12 might be necessary for other patients who could not tolerate many methyl groups. Pfeiffer also characterized certain patients who excreted high quantities of zinc and vitamin B-6 in their urine, and he gave zinc its position as a central element in nutritional protocols intended to enhance neurologic function. He also called attention to the role of blood sugar swings in the production of neurologic/psychiatric symptoms.

Pfeiffer's premature death ended his prolific contributions and was a grave loss to early orthomolecular psychiatry. However, Dr. William Walsh carried on his work. He founded the Pfeiffer Treatment Center that used concepts and treatments directly derived from Pfeiffer's protocols. Dr. Walsh was present at the early Defeat Autism Now! meetings and directly communicated the ideas and protocols of Hoffer, Pfeiffer, and other orthomolecular clinicians to the emerging specialists in the biomedical treatment of autism and ADD/ADHD. Walsh called particular attention to reduced heavy metal excretion secondary to reduced production of metallothionein, an important heavy metal detox antioxidant, in the etiology of ASD. He conveyed a great deal of information about copper and zinc, their proper ratio in the body, their role in metal detoxification, and the role of high copper levels in producing depression and other psychiatric symptoms.

The Nobel Laureate, Linus Pauling, also deserves mention. He gave the developing field of nutritional medicine the name orthomolecular, meaning right molecule. He discerned that the right molecules supplied to the body's biochemistry would generate right function and promote well-being. He was a proponent of high doses of ascorbic acid and described its antioxidant, antiviral, and antitoxic properties. Pauling's involvement with nutritional therapies ultimately led to his fall from grace with the mainstream, but he maintained his important role in orthomolecular circles.

There are lesser and greater psychiatric disorders that may involve a lesser or greater degree of intervention. The less able a patient is to understand what is being recommended and give consent to the intervention, the more difficult the intervention becomes. While a patient is in a psychiatric hospital, nutritional intervention is impossible (e.g., these hospitals will never do a gf/cf diet, the vending machines are full of unhealthful items, and the staff

simply is opposed to vitamin or nutritional support). At home, the patient may not want to change his diet to avoid gluten, casein, or other allergenic substances. He may refuse to take supplements or not be able to understand why an intervention that gives him transitory symptoms is still a good idea. The patient and his caregiver will get no support whatever from mainstream personnel, who will only want to be sure that medications are being taken. It will be very uphill work for the caregiver. Patients who are in touch with reality can take care of themselves and have chosen nutritional intervention have much greater possibility for recovery.

Diet is foundational. A symptom which is being caused by a food or a substance the patient is ingesting will not resolve until that substance is removed. The foods chosen should have nutritional value, be organic, be free of chemicals, additives, preservatives, and other pollutants, and be eaten in the least processed form possible. Double handfuls of nutritional supplements can be negated by poor food choice or quality. High glycemic index foods should be avoided as blood sugar fluctuations are a common cause of psychiatric symptoms of all varieties, especially in the bipolar individual.

The environment inside of the patient's gastrointestinal (GI) tract should be normalized. There should be optimal quantities of beneficial flora, and he or she should be free of pathogenic bacteria, yeast overgrowth, and parasites. The patient may need digestive enzymes, probiotics, or other GI environment support. Seventy percent of the immune system is located in the GI tract, which harbors over 400 species of bacteria and other organisms. It is the perfect setting for immune system suppression and the seeding of systemic infection of all varieties. The gut-brain connection has been widely acknowledged: abnormalities in the GI tract environment may cause abnormalities in thinking, mood, energy levels, or behavior.

The role of pathogenic bacteria in

producing abnormal behavior is just starting to be appreciated. Significant numbers of children on the autism spectrum have been diagnosed with PANDAS, Pediatric Autoimmune Neuropsychiatric Disorder Associated with Streptococcus. Others have symptoms that are similar to PANDAS but which do not quite fit the stringent diagnostic criteria. PANDAS is caused by antibodies that the body produces to combat streptococcal infection attacking the brain. It produces significant behavioral symptoms, such as obsessions, compulsions, and weird stereotyped behavior. To make an official diagnosis, group A beta hemolytic streptococcus needs to be cultured from a site of infection in the child's body and other diagnostic criteria must be met. In practice, many children will be found to have one or several strains of strep in their body, particularly in the stool, and will have moderate behaviors characteristic of PANDAS.

On June 15, 2004, the Institute of Medicine issued a report titled, *The Infectious Etiology of Chronic Diseases*, in which was made the surprising claim that most cases of schizophrenia are caused by infections and other environmental events occurring in genetically susceptible individuals. An association between infection with the HSV2 virus and higher rates of this psychotic disorder was noted. Increased levels of antibodies to *Toxoplasma gondii* were found in individuals with recent onset schizophrenia. To normalize behavior in these cases, the infection must be eliminated.

In order for psychiatric/neurologic disorder to be treated nutritionally, the body should be supported with appropriate levels of vitamins, minerals, and amino acids. This varies tremendously from individual to individual. These levels are monitored through biochemical testing of blood and urine. Essential fatty acid levels should be optimized. In particular, adequate types and quantities of B-12 and folic acid should be present.

Hormone balance is also critical to optimal psychological function. Thyroid hormone is a central metabolic regulator well known as a cause of depression, anxiety, and many other symptoms when unbalanced. Measurement of thyroid stimulating hormone (TSH) alone is a totally inadequate

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indicator of thyroid function. Measurement of TSH, free T3 and free T4 is somewhat better, but it is important to have other information also. Reverse T3 is an inactive form of thyroid hormone that may prevent the active form from functioning. It is important to know its level also, to check thyroid antibodies and perhaps to examine the gland with ultrasound. The diagnosis of abnormal thyroid function should not be a casual affair diagnostically speaking; it requires a minimum of six blood values to absolutely make that determination. Normalizing thyroid function is critical to feeling well. It must be carried out thoughtfully and thoroughly.

Thyroid and adrenal functions potentiate each other. If adrenal gland function is low, there is strain on the thyroid. If appropriate thyroid support gives the patient symptoms, the adrenal gland must be treated first, and the thyroid addressed again later. The adrenal glands are the body's first line of defense against stress. They produce cortisol, a stress hormone with important functions. Adrenal stressors include chemical toxins, allergies, infections and psychological stress, among other things. High glycemic index foods, foods that increase blood sugar levels rapidly and then let them drop, are a stressor to the adrenal glands. Cortisol is the hormone which must be secreted to prevent that blood sugar drop. Patients with hypoglycemia are not able to produce enough cortisol quickly enough to keep their blood sugar levels steady. Patients with postural hypotension, dizziness upon coming to an upright position quickly, are experiencing a blood pressure drop that indicates that their adrenal function is impaired. Adrenal hormones regulate blood pressure also.

In addition to thyroid and adrenal

hormones working together, the thyroid hormone is synergistic with estrogen. Thyroid and estrogen potentiate each other. Beyond that, estrogen has an impact on neurotransmitter levels. Estrogen synergizes serotonin. So when estrogen levels drop during menopause, the activity of thyroid hormone is diminished, adrenal gland function is reduced, and serotonergic activity is lessened. At menopause, the woman's supply of sex hormones no longer comes from the ovary. It comes from the adrenal glands. If the adrenal glands are overtaxed and cannot produce those hormones, the patient experiences a significant decline in well-being. For optimal psychological function, hormones should be balanced using bioidentical, as opposed to synthetic, hormones, and the underlying adrenal stressors be addressed. Antidepressants may help to relieve the symptoms of hormonal decline, but they are palliation as opposed to treatment.

The following bibliography lists books that are helpful in the further elaboration of these intertwined processes. All of the material quoted earlier from Abram Hoffer came from the introduction to *Natural Healing for Schizophrenia and Other Common Mental Disorders*.

Bibliography

Bock, Kenneth, MD, Stauth, Cameron. *Healing the New Childhood Epidemics*. Ballantine Books. New York. 2001.

Edelman, E. *Natural Healing for Schizophrenia and Other Common Mental Disorders*. Borage Books. Eugene, OR, 1998.

Hoffer, Abram, MD, PhD. *Orthomolecular Medicine for Physicians*. Keats, New Caanan, CT, 1987.

Hoffer, Abram, MD, PhD. *Orthomolecular Treatment for Schizophrenia*. Keats Publishing. Los Angeles, CA, 1999.

Larson, Joan Matthews, PhD. *Depression-Free, Naturally*. Ballantine Publishing Group, New York, 1999.

Ross, Julia. *The Mood Cure*, Penguin Group. New York, 2002.

Vhiet, Elizabeth Lee, MD, *Women, Weight and Hormones*, M. Evens and Company, New York, 2001.