

# Nutrition and Mental Illness

Billie J. Sahley, Ph.D., C.N.C.

Many diseases as well as mental illness are the result of the wrong balance of essential nutrients in the body. Adjusting the diet, eliminating junk foods, and ingesting large doses of essential vitamins, minerals, trace metals, amino acids, and polyunsaturated fats can achieve correction of the chemical imbalances of disease. This was first termed "megavitamin therapy" by Drs. Humphrey Osmond and Abram Hoffer in 1952. It has evolved into orthomolecular medicine. Orthomolecular was coined by Linus Pauling, and means supplying the body cells with the right mixture of nutrients. Orthomolecular therapy is both corrective and preventative. The orthomolecular therapy is primarily used in the treatment of psychiatric disorders, but the scope of treatable disorders had broadened to many conditions to include stress, schizophrenia, autism, hyperactivity, arthritis, colds, allergy, digestive, anxiety, and depression. Treatment focuses on adequate nutrients, and this is the distinguishing characteristic of orthomolecular medicine.

Vitamin and mineral supplements contain no drugs, only nutrients. Orthomolecular therapy is not highly regarded among practicing physicians because some of the orthomolecular therapies take months to achieve the best results. The public no longer wants a quick fix therapy with adverse side effects. Orthodox treatments for headaches, depression, insomnia, for example, are painkillers, antidepressants or electric shock therapy, and sleeping pills. But while all are effective, none are curative. Orthomolecular therapy cures patients by correcting body chemistry imbalances. These treatments have no long-term or adverse side effects.

Orthomolecular doctors and therapists have expanded their use of special diets in the past ten years. The discovery that artificial colorings, preservatives, and food additives can cause "brain" allergies in adults and children resulting in hyperactivity has resulted in the use of more natural diets. Additionally, normal patients as well as mentally ill patients may have an allergy to one or more foods that modern society serves constantly. Some of the most likely foods include milk, eggs, beef, wheat, citrus, and corn products. Orthomolecular medicine teaches doctors and patients an awareness of their reactions to the environment and their individual needs.

The classical deficiency symptoms of vitamin deficiencies are rarely seen today in technologically advanced nations. These syndromes remain the main theme of professors of biochemistry who teach medical students, and yet most physicians would fail to recognize them. These deficiency states arise from monotonous diets with very few varieties of food. One deficiency may be predominant but many more are present. A person with a Vitamin B3 or niacin deficiency is dependent on a good diet, and may have ample quantities of every nutrient except niacin because he requires so much. Some schizophrenics have a pure deficiency (dependency) state. Sub clinical vitamin and mineral deficiencies produce a variety of signs and symptoms that can mimic a wide variety of medical and psychiatric syndromes that may be due to other diseases such as infections, immune deficiencies, etc. Doctors confronted with these syndromes consider them to be manifestations of these diseases. When patients fail to respond to treatment, these doctors tend to give them up as psychiatric. Many

physicians do not think of any possible connection to nutritional problems.

Nutritional deficiencies affect all cells including the brain and all organs of the body. The whole body suffers when the cells are operating at subnormal levels. General or systemic symptoms include fatigue, inertia, tension, and generalized pain and muscle irritability. Additionally, an organ operating at subnormal efficiency will add signs and symptoms unique to that organ. In finding the cause of discomfort, physicians should remember that in the absence of readily recognized diseases such as hyperthyroidism and infection, the presence of fatigue, anxiety and depression should suggest a thorough search for nutritional factors. This is especially true when the major symptoms develop after severe and prolonged stress. If patients stay for a period of time in the hospital, this stress is common before, during and after surgery. This is more commonly seen following gastrointestinal complications, severe weight loss, chronic infection, cancer, and other debilitating diseases.

Lucretius wrote over 2,000 years ago, "What is one man's meat is another man's poison." This is especially true of foods. Careful allergy testing, desensitization, rotation of foods over a four day period, food elimination diets and periods of fasting are useful tools for the orthomolecular therapist. Susceptibility to allergies and exposure to additives and preservatives as part of a nutritionally deficient diet contribute to any person becoming vulnerable to the stresses of everyday life. With proper diet, the need for large doses of nutrients to restore health is reduced.

The concept that food affects the mind is foreign to many people. The brain is perhaps the most delicate organ of the body. Sometimes the brain consumes as much as thirty percent of all energy that is derived from food. Allergies to foods can upset levels of hormones and other key chemicals in the brain, resulting in symptoms from anxiety to depression to schizophrenia. The allergic patient whose mental symptoms are so severe could be labeled "mentally ill" or even schizophrenic.

Allergies generally run in families and so does cerebral allergies. The allergic diseases have many presenting symptoms including history of infantile colic, infantile eczema, malabsorption syndrome (celiac disease), history of asthma, rashes, or hay fever, favorite daily foods, excessive daily mood swings, frequent rapid colds, seasonal allergies, relief of symptoms with fasting, intolerance to foods such as milk, wheat, egg, beef, corn, sugar, and/or chocolate. Food intolerance, lack of absorption of food, and relief with fasting are key pointers to the food-allergic person. These patients have low blood histamine level, a rapid pulse, and food idiosyncrasies expressed as strong likes and dislikes. The foods that the person craves are often the offending foods, so that the patient is like an addict, eating the offending food to obtain a psychological high. The patient with cerebral allergies usually has extreme mood swings occurring within a single day. These moods may be mania or deep depression, often corresponding with ingestion of foods. Disperceptions, paranoia, and abnormal thinking may be woven into low or high moods. A change in diet by changing to an entirely new food item or fasting for twenty-four hours may bring relief from cerebral allergy symptoms.

Several vitamins are known for their effectiveness in reducing allergy symptoms. Probably the most effective are vitamins C and B6. Patients on adequate doses of vitamin C will have less allergic symptoms. Vitamin B6 should be given to the point of dream recall. The minerals, calcium, potassium, zinc, and manganese are needed in plentiful supply in the patient's diet. The patient must abstain from the offending foods for several months. Then the patient starts reintroduction of the offending foods on a four-day rotation basis, in which each food is eaten only once every four days. The cause of compulsive and ritualistic behavior, impaired speech development, and mood and behavioral changes may be in a hidden sensitivity to one's daily bread. Some people cannot digest wheat, rye, and other cereal grains. This condition is known as celiac disease. The food may go through the gut undigested. Recent studies have shown that celiac disease may be responsible for many cases of "schizophrenia." Data is accumulating that links various psychiatric disturbances with malabsorption caused by cereal grains. Recognizing wheat-gluten or cereal sensitivity is often difficult as classical symptoms are often absent. Whenever celiac disease is suspected, a special diet should be undertaken for a trial period. Weeks or months may be required before a marked improvement appears after wheat, rye, oats, barley and milk are removed from the diet. Reintroduction of these grains into the diet usually produces a relapse in months, days or even hours. In this case, the daily bread is not a blessing.

Histamine is an important brain chemical and is involved in many reactions, including those in pain and allergies. In one study done at the Brain Bio Center, fifty percent of schizophrenic patients have a low blood histamine levels and this is called histapenia. Histapenia patients have low histamine levels and there tissues are loaded with copper. Both of these factors may produce behavioral abnormalities. Schizophrenics may have low levels of zinc and manganese and high levels of copper, mercury, iron, or lead. Mercury and lead are poisons that may produce symptoms that mimic those of "schizophrenia." Supplementation with zinc and manganese helps speed up the excretion of copper. A person who has a high histamine level often has depression, obsession, suicidal thoughts, disperception, and thought disorders. These patients have many similarities to pellagra sufferers. Pellagra sufferers are also high in copper. Deficiency of vitamin B3 or niacin causes copper levels to rise, as does a vitamin C deficiency.

Possibly the most significant discovery in the nutritional treatment of mental illness is that many depressed and mentally ill people are deficient in vitamin B6 and zinc. But this deficiency is not simply corrected by eating more foods rich in zinc and B6. The abnormal production of a group of chemicals called pyrroles robs the body of the essential nutrients, vitamin B6 and zinc. A patient with a high level of pyrroles in the urine needs more vitamin B6 and zinc. Some symptoms of pyrroluria include: intolerance to some protein foods, alcohol or drugs, definite breath and body odor, morning nausea and constipation, poor dream recall, crowded upper front teeth, white spots on nails, pale skin that does not tolerate sunlight, frequent upper abdominal pain, frequent head colds and infections, stretch marks in the skin, and irregular menstrual cycle or impotency. Mental retardation can result from chronic vitamin B6 and zinc deficiency as well as hyperactivity, epilepsy, and delinquency. Effective treatment is done with extra vitamin B6 and zinc. The adult dosage is thirty milligrams of elemental zinc twice per day. The dosage of vitamin B6 is titrated to the individual for dream recall, but not to exceed 500 milligrams per day.

Senility can be described as a mental disease in which the brain cells cease to function properly. This results in a deficit in

memory and mental capability. One in four over seventy-five, and one in seven over sixty-five are classified as senile. In fact, a third of all hospital beds are filled with geriatric patients. And the problem is increasing. Several theories exist as to the cause of memory loss. One involves coding through lipoproteins, fat-containing proteins in the brain. In fact, every cell in our brain contains special kinds of fat. This can be synthesized only from the essential fatty acids, linolenic and linolenic acid. Synthesis of these is made easier by the intake of cold-water fatty fish, high in eicosapentaenoic acid (EPA), or in evening primrose oil, high in gamma-linolenic acid. Another theory is based on coding through RNA, the messenger part of the cell responsible for building new cells. Most of the brain cells are replaced within twenty-four hours, so the clue to memory must be transmitted to the new cell. Foods high in RNA, like fish, have been shown to boost mental activity and memory. Zinc and most importantly manganese help senile dementia. Another hypothesis is the nerve cells do not receive enough blood. Most people by the age of fifty have some degree of arteriosclerosis and atherosclerosis. To keep the cells running, oxygen and the necessary nutrients are required. Vitamins are also involved in the process of oxygen and energy metabolism. The most important vitamins are B1 (thiamine) and B3 (niacin) and the antioxidant nutrients, vitamins C, E and selenium. Vitamin B1 deficiency has long been known to result in brain damage. Nicotinic acid or niacin is crucial for oxygen utilization. Other memory boosters include the B vitamins. The nutrient, choline probably works by increasing the level of acetylcholine. Choline is effective in improving short-term and long-term memory, but doses of ten grams per day are required, but the effects are not long lasting. Since the 1950's the treatment of mental illness with drugs has become the major therapeutic tool of psychiatrists. Drugs such as the major tranquilizers should be used as temporary crutches until the biochemical imbalances are slowly corrected by nutritional therapy. Antipsychotic drugs, if continued at high doses for months, may produce tardive dyskinesia. Manganese in doses of 50 milligram per day is helpful to counter the voluntary motion causing incomplete or partial movement in a patient with tardive dyskinesia.

Another problem is multiple drug interactions. Many psychiatric patients take multiple drugs such as antipsychotic, anti-depressant, minor tranquilizers and a hypnotic. This adds up to a potentially dangerous constellation of pharmacological interactions. Specific nutrients combined with an adequate diagnosis and diet is the first step toward more effective and tolerable treatments. Orthomolecular physicians recognize that a large part of the psychiatric patients are ill due to physical factors, not due to any organ dysfunction. The usual tests do not show any pathology. These physical factors are changes in metabolism or nutrition or both. They might be seen as humoral factors or as a third category of illness. These patients' symptoms clear when they are treated successfully, and very little psychotherapy is required. Orthomolecular therapists know nutrient requirements vary, and each person has a unique need for proteins, fats, carbohydrates and micronutrients, but nearly every nonorthomolecular professional grossly underestimates the wide range of variation. Drugs are different from nutrients; drugs shotgun chemicals in the brain. Nutrients are slower in action, so the patient improves slowly, but steadily toward normality. Drugs are foreign to the body's biochemistry, and therefore produce side effects. Nutrients are part of the body, so side effects are minimal and seldom lethal.

***This article is not intended to give medical advice or replace the services of a physician. It is for educational purposes only.***

Copyright of MMRC Health Educator Reports is the property of M.M.R.C., Ltd. Co. and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.