

Orthomolecular Medicine — Revisited

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Orthomolecular treatment of clinical conditions amounts to only a small percentage of total medical care rendered in North America. Persons with health departures who seek treatment from their physicians are likely to receive a wide variety of drugs. The use of pharmaceutical agents has not only become a reflex for most allopathic physicians, it has become a standard upon which judgements are made about "proper doctoring".

In recent years, however, a concerned citizenry, uneasy, perhaps, about the ready use of powerful drugs, has increasingly sought alternatives to drug therapy for medical disorders. Largely as a result of population pressure; nutritional education, prudent eating, and physical fitness are fast becoming first-line measures within and without the medical fraternity.

Despite this strong trend, however, the toximolecular approach (the use of xenobiotics, substances foreign to the body) remains strong whenever patients consult physicians for illness. Persons with hypertension are usually given antihypertensive drugs. Infected patients usually receive anti-infectious drugs. Hyperactive and attention-deficit children usually receive Ritalin or similar drugs. Peptic ulcer patients nearly always receive Zantac or Tagamet. Neurotic, psychotic, and character-disordered patients usually receive tranquilizers (neuroleptics) of one sort or another.

We are privileged to live at a time when effective medications are available for crisis-care and some longterm conditions. The calcium-channel blocking drugs appear to be clinically effective agents and are helpful in promoting understanding about basic cellular physiology.

Nevertheless, alternative methods of nutritional and Orthomolecular disease management are available. These methods are

employed by Orthomolecular physicians. The components of these treatments include dietary manipulation, nutritional supplementation, herbal remedies, homeopathic treatments, detoxification, hyperbaric oxygen, intravenous chelation, allergy management, attitude adjustment, ecological manipulation, and safe forms of megavitamin therapy. Newer methods of treatment such as ozone therapy, intravenous hydrogen peroxide therapy, magnet therapy, and the like may be utilized but must be considered experimental at this time.

Scientific discovery employs the scientific method and has been responsible for accurate scientific information for hundreds of years. Although double-blind studies are an important part of the scientific endeavor to find the truth, so, too, are observations. The scientific achievements of the 20th century have been based upon the successful descriptive work of the 19th century. Then, too, in a broad sense, science incorporates philosophy. Some point out that science, too, must recognize that experiments once observed by an observer, become changed by the act of observation. The character of scientific procedures places restriction on the relevance of results.

Philosophers of science are obliged to consider not merely nature in isolation, but also the manner in which man, himself, perceives and interprets facts. Recognizing that the problems posed by the interaction of man and nature are complex, we may conclude that all information can be valuable when placed in proper perspective.

Despite the limitations of anecdotes as accepted science, they are quite valuable as a means of communicating to others how some of us get people well. Accordingly, anecdotal reports can be a valuable didactic tool. In this spirit, a number of clinical anecdotes will now be presented. The subject matter is Orthomolecular Medicine.

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Hypertension

A 50-year-old man had a history of elevated blood pressure for at least 10 years. Thorough medical evaluation had disclosed no evident cause for the hypertension. He was not overweight. He had been treated with antihypertensive medications with "moderately good control" of the blood pressure. The gentleman sought Orthomolecular treatment because of medication side effects that he had experienced through the years.

Body chemical analysis identified low levels of most minerals, especially magnesium. He was placed on mineral supplements with particular attention to magnesium. He was also treated with an herbal mixture that had been formulated specifically for hypertension.

Within a 6-month period, without change in diet or exercise, the man was free of prescription medications and his blood pressure remained entirely in the normal range.

Middle-Aged Depression

A 45-year-old executive had become restless during the day. His attention wandered. He couldn't sleep at night and was constipated. His thinking was beset by notions of inferiority and disillusion.

His physicians had treated him with antidepressant drugs for several years with moderately good results. He sought another treatment option.

The man was placed on a program consisting of L-tryptophan at bedtime (1000 mgms.) and L-phenylalanine (1000 mgms.) in the a.m. At noon he took phosphatidyl choline (1200 mgms.) along with supporting vitamins and minerals. Among these were 6 grams of vitamin C and 150 mgms. of niacin daily.

The gentleman remained on this regimen for a year with good results. With good sleep at night and markedly improved bowel pattern, his days were no longer restless and he was able to focus on his work. Furthermore, his thoughts became distinctly "upbeat" and his self-confidence greatly improved.

Teenager with Low Blood Sugar

Suzy was flagging in high school. She had difficulty staying awake in the afternoon despite obtaining 8 hours of sleep at night. She often

awoke in the morning with suboccipital headaches. Suzy described her thoughts as fuzzy or spacey most of the time. Her weight was increasing at an abnormal rate.

Because of her symptoms along with a positive family history of diabetes mellitus, a 6-hour glucose tolerance test was ordered. The values were:

Fasting	62 mg present
1/2 hour	80 mg present
1 hour	76 mg present
2 hours	74 mg present
3 hours	64 mg present
4 hours	34 mg present
5 hours	48 mg present
6 hours	58 mg present

The glucose tolerance curve was abnormal (low, flat curve with abnormally low 4-hour nadir). The diagnosis of low blood sugar was established.

Suzy was placed on a microalgae supplement and treated with glucose tolerance factor derived from yeast. She was instructed in proper diet and commenced eating fish, shellfish, vegetables, whole grains, and some fresh fruits. In between meals she snacked on soy cheese, tofu and brown rice wafers, seeds, or nuts.

She promptly ceased gaining weight and soon was losing weight at the rate of 1-2 pounds per week. She became more alert, lost her afternoon somnolence and had no further headaches. Whenever she ate sweets or missed meals she noted a return of "brain fog". After 6 months, however, she was able to consume an occasional sweet without adverse effects.

Jekyll-and-Hyde Child (Mood Swings)

A 4-year-old boy was incorrigible. The mother called him a Jekyll and Hyde. One day he was an angel — cooperative — the next, a devil — destructive. At his worst he stuck out at others, threw things, held his breath, and was defiant to everyone. Sleep habits were very poor. He either prowled all night or rocked back and forth "incessantly".

Laboratory testing of hair showed high levels of lead and cadmium. Blood mineral analysis indicated low levels of calcium, magnesium, and zinc and corroborated an excess of lead. No evident source of heavy

metals was able to be found in the environment.

Supplements of calcium, magnesium, and zinc were administered. Vitamin C, administered by means of a buffered, neutral pH powder, was increased in dosage gradually to bowel tolerance. The lad was able to consume 5 grams daily. Other supporting vitamins were also taken.

A prompt improvement in the youth's behaviour occurred. Fewer bad days were noted and on those days the boy was able to be dealt with by his parents whereas previously there was no control. As time passed, the mood swings abated.

Six months after the institution of treatment, follow up tests showed improved levels of calcium, magnesium and zinc. Lead excess was found again but the levels of lead were only half of the original levels. Cadmium was not found to be excessive at this time.

Continued supplementation was carried out. The source of heavy metal excess was never found but the boy's behaviour was steady at a good level as long as he took his supplements.

Teen-Age Menstrual Cramps

An 18-year-old girl came to me to placate her mother. The girl had no particular complaints except severe menstrual cramps. She did, however, admit to poor eating habits and irritability one week before each menstrual period. Her mother added that her daughter was indecisive, hypersensitive, chronically fatigued and insecure. All her symptoms were improved, the mother noted, whenever the teenager consumed a good breakfast.

Nutritional laboratory testing documented abnormally low levels of vitamin A and deficits of many minerals including iron.

When appropriate nutrient supplements were taken she lost her irritable nature. She herself agreed that life was better. Her menses became much more comfortable. She became amenable to dietary counselling whereas previously she had eaten as she wished according to no particular guidelines, often skipping meals.

Depression

A 38-year-old woman felt that the world was closing in on her. Although happily married with 2 children, she had become progressively

depressed over the past few years. She performed her household chores in a perfunctory manner and engaged in her sexual marital obligations with no enthusiasm, to say the least. She dragged through each day and offered little in the way of conversation with her family. She preferred to be alone. In an attempt to lift her spirits she consumed copious quantities of coffee on a daily basis.

Laboratory testing revealed multiple abnormalities of body chemistry. Deficit minerals included calcium, magnesium, manganese, chromium, and cobalt. Levels of vitamin B₁₂ and folic acid were depressed and vitamin B₁ was also low.

Treatment was commenced with intravenous vitamin C, 12 1/2 grams, with added calcium, magnesium, B complex, and B₁₂. Intravenous treatments were rendered daily for 5 days then 3 times the next week, and gradually less thereafter. Oral supplements of B complex, B₁ and minerals were taken.

The response to treatment was prompt and gratifying. The woman "came alive". Her energy returned. Gradually she reduced her consumption of coffee and eventually was able to function very well with no dietary source of caffeine. She became a responsive family member. Her sexual interest and responsivity grew as she became less and less depressed.

From time to time, whenever the "pressures of life" became too great for her, a booster treatment consisting of intravenous vitamin C, B vitamins, and minerals was necessary. For the most part, however, the previously depressed woman was happy and fulfilled.

Panic-Anxiety

A 14-year-old boy was overcome by nervousness and panic attacks. His parents withdrew him from school because he could not face the demands of the school day. He had seen a number of psychiatrists and had been treated with Navane, Haldol, and Mellaril. The mother disliked the side effects of the drugs and desired an Orthomolecular approach to treatment.

The lad was "afraid of his shadow". He frequently ran to his parents, wringing his hands, trembling inside, crying or whining

and afraid of some morbid occurrence.

Due to low finances, laboratory investigation was curtailed. He was placed on an Orthomolecular program consisting of niacinamide, vitamin C, pantothenic acid, and vitamin B₆. A substantial multiple vitamin was given, too.

Within 3 months, the parents reported good gains. The boy was now attending school and had begun to participate in some social affairs. Addition of glutamic acid appeared to accelerate the progress.

He has now graduated from high school and holds down a job. His treatment regimen currently consists of a high-potency multiple vitamin each day.

Seizures-Carnosinuria

A 1 1/2-year-old boy sustained a grand mal seizure. There had been no head trauma and there was no known illness and no high fever. CAT scan examination of the brain was normal. The history revealed that the boy was hyperactive with a short attention span. He had required very little sleep since birth. He was considered to eat normally and consumed all foods.

A metabolic investigation was carried out. Abnormal protein metabolism was identified. Levels of the amino acid, cystine, were very low in the blood and urine. Taurine was also low. Two toxic peptides, carnosine and anserine, were considerably elevated.

Treatment was commenced with a diet restricting the dietary sources of carnosine and anserine, predominantly red meat. Careful survey of iron stores was carried out.

Since the enzyme subserving carnosine and anserine is zinc-dependent, he was placed on supplemental zinc. Cystine and taurine were given.

No further seizures occurred. He is now 6-years old. Through the years, the lad became hyperactive or attention deficit when he consumed meat. His intellect is normal. Follow up laboratory testing shows minimal elevation of carnosine and anserine with no other abnormalities.

Reading Disorder

A fourth-grade boy was evaluated due to severe reading problems characterized as

poor comprehension. He was 1 1/2 grade levels behind in reading comprehension. Psychological testing showed depressed verbal score and normal performance score.

Despite an enormous appetite for food, the lad's weight was low for his age and his rate of gain was slow. The stools were described as large and bulky with chronic offensive odour. The dietary history showed a "normal" intake of protein foods, that is, he ate eggs, hamburgers, milk, cheese, and other foods of the culture.

Biochemical testing revealed very low levels of amino acids in the blood and urine. A urine indican test was strongly positive indicative of incomplete digestive proteolysis with absorption of toxic chemicals. Stool samples were sent for detailed exam (Comprehensive Digestive Stool Analysis). Undigested protein fibers were found in the stool along with excessive amounts of undigested fat.

The boy was considered to have a chronic digestive and absorptive disorder. He was placed on nutritional supplements including amino acids and digestive enzymes. Within a few months his school performance advanced. Within a year's time, he was performing at grade level in reading. Moreover, the boy had gained several pounds of weight. He displayed an enhanced level of self-confidence and a heightened self-image that contrasted sharply with his former passive, retiring self.

Discussion

For better or worse, today, the "me" generation has become increasingly aggressive about the pursuit of that which it is convinced is important. Thus we witness progress in civil rights, personal rights, and environmental causes. In some quarters, individuals are willing to spend considerable time and energies in the pursuit of particular diets or exercise regimens.

As the media have become more responsible in conveying information about favourable lifestyles, awareness has been fostered that alternatives in medical care may be desirable. The likelihood is that Orthomolecular Medicine will increasingly be utilized as a primary method of health care, as the potential hazards and high costs of toximolecular medicine become

more apparent to an increasing number of persons.

Hopefully, the physician of the future will first use Orthomolecular concepts to influence his patients to make longterm investments in health. Such a physician may need to utilize pharmaceutical drugs for some persons some of the time. However, when Orthomolecular concepts are initially invoked the longterm use of drugs will grow progressively less as the years go on. In contrast, initial use of pharmaceutical drugs may create dependence upon such drugs for the maintenance of normal behaviour (the tranquilizer syndrome, for example, may create a permanent state of drug dependency and render recovery unlikely).

When physicians come to know the full range of therapeutic options, careful as-

essment of the risk/benefit ratio will indicate the desirability of Orthomolecular Medicine. When sophisticated high-tech diagnosis married with the *selective* use of drug treatment, radiation, and surgery, all on a background of Orthomolecular Medicine, the prospects for truly enlightened patient care became most probable.

References

1. Nourishing Your Child by Ray C. Wunderlich, Jr., M.D., and Dwight K. Kalita, Ph.D., Keats Pub., Inc., New Canaan, CT, 06840, 1984.
2. Common Questions on Schizophrenia and Their Answers by Abram Hoffer, M.D., Ph.D., Keats Pub., Inc., New Canaan, CT, 06840, 1987.
3. Orthomolecular Nutrition by Abram Hoffer, M.D., Ph.D. and Morton Walker, D.P.M., Keats Pub., Inc., New Canaan, CT, 06840, 1978.