

Megavitamins

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Introduction

A few weeks ago a physician had his secretary call me to find out what megavitamins he should order for his patient. The next day when the physician called himself I explained to him that vitamins were only a part of the treatment called Orthomolecular psychiatry. His suspicion was aroused. "Why can't you just give me a starting dosage? Why are you being so mysterious about the treatment? It can't be that complicated." He was assured that the treatment was not complicated at all, that I would challenge anyone to explain to me in a three-minute telephone conversation the "starting dosage" of Thorazine and how to use Thorazine effectively. I explained to him that if he was interested enough to try the Orthomolecular approach, I was certain that he wanted to do it properly.

Too many physicians have attempted to use megavitamins by giving inadequate doses of a few vitamins to the wrong people for an insufficient amount of time only to achieve the failure that could have been predicted. Unfortunately, they conclude that megavitamin therapy is a fraud rather than recognizing that

they have not really followed the method as practiced by the Orthomolecular psychiatrists. When this is done by an individual practitioner it is sad enough, but when research physicians make the same error, it is inexcusable.

In these two days, the program will outline the practical aspects of the practice of Orthomolecular psychiatry. The proper perspective is necessary for this portion on megavitamins, since so many people feel that the treatment is a thoroughly simplistic approach of "take lots of vitamins and mental health will follow." Vitamins are only part of the treatment. There are exceptions, of course, and we all can sight cases where the addition of only vitamins in large doses was instrumental in achieving a good result, but these are exceptions. In the majority of cases treated, vitamins are only a part of the treatment.

What vitamins are involved? Vitamins are divided into two groups, the water-soluble and the fat-soluble vitamins. From a practical standpoint, the water-soluble vitamins are easily discarded from the body through the kidneys; this makes it unlikely that the water-soluble vitamins are stored in the body. Fat-soluble vitamins, on the other hand, are stored, and there are cases of toxic effects of too large doses of

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fat-soluble vitamins taken over prolonged periods of time. The only fat-soluble vitamin that is used with any regularity in this treatment is vitamin E. The other vitamins, all water soluble, used in large doses are C (ascorbic acid) and the B-complex vitamins. For the beginner, there is always a confusion of terminology, especially with vitamin B3, niacin. Niacin and nicotinic acid are synonymous. The amide form is niacinamide, which is the same as nicotinamide. The other B vitamins used fairly regularly are B6, which is Pyridoxine, and pantothenic acid. B vitamins which may be used are riboflavin (B2), thiamine (B1), folic acid, and cyanocobalamin (B12).

The next important question is, what are the medical conditions that these vitamins may be used to treat? In the early 50's, Drs. Hoffer and Osmond used vitamins to treat schizophrenia. Just as the treatment has changed and expanded from those early days, so have the number of conditions treated changed. Not only is adult schizophrenia treated, but schizophrenia of childhood is also treated.

Anyone who has worked with the psychiatric disorders of childhood begins to recognize that there is a hodgepodge of diagnostic categories that run from learning disorders, hyperactivity, minimal brain disorder, schizophrenia, and autism. Graphically these disorders may be visualized as a continuous wavy line, the peaks indicating each diagnostic category having its own specific criteria on which to base the diagnosis. There will be a few pure cases falling neatly into place, but the majority have mixed features. The result is a diagnostic nightmare, especially for the bewildered parents who, after visiting five physicians, have six diagnoses. This is pertinent to the Orthomolecular physicians since there are some cases of all the diagnostic categories of children that have been mentioned that respond to the Orthomolecular approach. As one leaves the

schizophrenic conditions and the disorders of children, there are other areas treated successfully by this method. Many of the so-called neurotic disorders, including depression, anxiety, even obsessive-compulsive disorders have responded to the Orthomolecular approach. Alcoholics and drug addicts are also treated. In summary, the Orthomolecular treatment has been used with success in schizophrenia in adults and the childhood disorders of autism, schizophrenia, minimal brain dysfunction, learning disorders, and hyperactivity, in some neurotic disorders, especially depression and anxiety, and in alcoholism and drug addiction.

The next question to be answered is, how do you use the vitamins? Dosages sometimes vary between practitioners; what follows is the program I use. The dosage is different depending on the conditions treated and whether you are dealing with an adult or a child. For the discussion of how to use the vitamins, the following categories will be considered separately: adult schizophrenia and drug addiction, the neuroses and alcoholism, and the childhood disorders.

Adult Schizophrenia and Drug Addiction

These categories are classed together because it is my belief that the addicts who are benefited from this treatment are schizophrenics. I am not considering the treatment of an acute LSD reaction, but rather the hard drug addict. The observation has been made for a long time that many heroin addicts, when withdrawn from drugs, present a classic schizophrenic picture. It is this group of addicts who are benefited from the Orthomolecular approach. A typical starting dose of vitamins prescribed in this group of adult schizophrenics and addicts is for three times a day, after meals, 1 gram of ascorbic acid, 100 mg pantothenic acid, 200 mg Pyridoxine, 400 international units vitamin E (D-alpha tocopherol), 1 multi B-complex-50, 1 gram of niacin or niacinamide. A special word needs to be mentioned about vitamin B3. If niacin is used, I start with

500 mg, three times a day for three days, and then increase it to 1,000 mg after the third day. In doing this, I find that the patient is usually able to withstand the flush that occurs when niacin is first started. I have preferred niacin over niacinamide because I do not know what the final dose for the patient will be and there is a greater tolerance for large doses of niacin than there is for niacinamide. The subsequent doses are determined by clinical course and physical response. I continue to raise the dosage of niacin until there is no flush; this may be done more rapidly when the patient is under constant supervision in a hospital, or slower if the patient is seen less often in the office setting. The B3 is also raised on subsequent office visits if there is no improvement. The usual maintenance dosage is between 6 and 12 grams, rarely higher. The most notable exception to this is the group of alcoholic schizophrenic patients who seem to need and tolerate dosages sometimes in the 20- to 30-gram level. Ascorbic acid may also be raised, but I seldom go over 6 grams a day. For those who are unfamiliar with the terms of measurement, 1,000 mg equals 1 gram.

There are some specific indications for use of other vitamins. Sometimes I do a B12 and folic acid level; if these are low normal or below normal, these vitamins are used. I prefer to give the B12 by injection, 1,000 mcg up to three times a week; folic acid is usually prescribed at 2 to 3 mg, three times a day. In the United States, we only have the 1 mg size of folic acid. When depression is significant, 1 gram of thiamine (B1) is given three times a day.

The neuroses and alcoholics are considered separately for in these conditions the vitamins take a secondary position in relation to the diet, because it is the hypoglycemia which has resulted, in many instances, in the neurotic symptoms of depression, anxiety, and, in other cases, alcoholism. In case this is misunderstood, it

should be stated in another way - not every neurotic and alcoholic is hypoglycemic, but low blood sugar should be considered as a possible contributory cause to those conditions. In the treatment of hypoglycemia, vitamins are used, especially the B-complex which are involved in the metabolism of glucose. In a simple case of hypoglycemia, I usually prescribe a B-complex-50, 1 gram of C, and vitamin E, 400 units to be taken two to three times a day.

The Dosage of Vitamins in Children

The dosage depends on body weight. For those psychotic conditions or learning disabilities in children of 35 pounds or more, the starting level of niacin or niacinamide is 1 gram daily, ascorbic acid 1 gram daily, B6, 200 to 400 mg, and pantothenic acid 200 to 400 mg a day. If the child is under 35 pounds the B3 and C are started at a lower dosage and increased within two weeks if the vitamins are tolerated without nausea. For those children over 45 pounds, the optimum daily dose is usually around 3 grams of B3 and C.

After this moderately detailed description of the dosage of vitamins, I would warn that I believe that when the vitamins are used to treat an illness, it should be done under the supervision of a qualified physician. If, on the other hand, vitamins are used simply as a nutritional supplement, medical advice is not necessary, since there is enough literature available for an individual to learn what supplements are advisable for his particular needs.

There are some precautions which must be observed in using vitamins as a supplement or as a treatment. For example, the fat-soluble vitamin E should be taken in dosages under 100 international units a day, and with caution, in those who have high blood pressure or a history of rheumatic heart disease. Niacin may cause an elevation of the glucose-tolerance curve which resembles diabetes. It may also cause an elevation of uric acid as seen in gout. Niacinamide does not cause these reactions, so in a history of gout or diabetes I prefer niacinamide. Vitamins

in megadoses should be used with caution if there is a history of gastric or duodenal ulcer. B6 (Pyridoxine) can adversely affect the benefit of L-Dopa given for Parkinsonism.

The above are some of the precautions to be observed, but there are also some side effects. The nonserious side effects from the vitamins mentioned are the flush, sensation of heat, and occasionally itching and headache caused by the niacin. Since these effects usually happen with the small initial dose and diminish or disappear with a larger dose, they rarely require special consideration other than warning the patient what to expect. If it is important for the patient to take niacin and he or she cannot tolerate the flush, an antihistamine may be given before the vitamin is taken. Anyone using the vitamins prescribed should also know that the urine becomes dark yellow in color and it is not significant other than worrying some patients who do not realize that it is to be expected.

One of the most common side effects of B3 is nausea and vomiting. Some Orthomolecular psychiatrists suggest pushing the niacin to a point of vomiting which might indicate the tolerance of the body and then reducing it to a lower dosage. The vomiting which occurs is a persistent vomiting over several hours. If this occurs after a small, insufficient dose of niacin, then it is best to switch to niacinamide and vice versa. Management of persistent vomiting should include a history to make certain that vitamins are taken after meals. If a history is obtained that the nausea and vomiting are most often present on awakening, the last dose of vitamins should be taken late in the afternoon. The use of inositol, 500 mg, taken with the vitamins is effective sometimes in alleviating the nausea and vomiting. Also to be considered is a change of brand of the vitamin, since at times the excipients, the material which holds the active vitamin material together in pill form, are the cause of the nausea. Another possibility in

management is the use of long-acting or sustained release vitamins. There have been a few reports of gastrointestinal ulcers occurring during megavitamin therapy.

There are also reports of abnormal liver tests when niacin is used in large doses. While most of the time there is no evidence by physical examination that the liver is malfunctioning, I have had one case of a child that became jaundiced on each of two trials with vitamins. Other reported side effects are blurring of vision, which may be as a result of edema or fluid getting into the optic nerve. Sometimes a dark discoloration of the skin occurs, especially in the folds of the neck and arm, due to a fungus. This happens with niacin and not niacinamide. The discoloration responds to changing from niacin to niacinamide and the use of an abrasive wash cloth. Cases of water retention have also been seen, causing swelling of the extremities. A very few people respond to large doses of niacinamide by becoming depressed, and some respond to large doses of thiamine with an uncomfortable agitation. A common side effect of vitamin C is diarrhea and excessive urination. All of these side effects are related to the dose and the vitamin and change when a change is made in the dosage or vitamin given.

Much has been written about the need to balance the B vitamins, but I find that using a high potency B-complex seems to be enough to avoid relative deficiencies. However, on occasion, I see signs of a vitamin B2 (riboflavin) deficiency manifested by the typical cracked corners of the mouth.

When one discusses side effects, it is most often thought of in terms of negative side effects. In observing the treatment of thousands of patients with large doses of vitamins, I have been impressed with some positive side effects or bonuses of the treatment which I had not expected. In a true sense these should not be classed as "side effects" but as actions of the vitamins. We are all aware of the use of vitamin C in the common cold. There have been several studies done with the announced

intention of disproving Dr. Pauling's claims. However, most of the studies found that either the incidence of colds were decreased and/or the severity and number of sick days were decreased. Many women who have suffered with severe menstrual cramps are amazed with the absence of pain, especially on large doses of Pyridoxine. Persistent diseases of the skin have cleared. Vague, long-standing aches and pains have disappeared. This may be as much the result of diets as of the vitamins. It is obvious that when the psychiatrist begins to treat a patient to provide the optimum environment for the nervous system, he is also changing the environment of the rest of the cells of the body. While most of the time this seems to be for the improvement of the individual, negative side effects can and do occur. This is another reason why large doses of vitamins used to treat disease should not be a self-prescribed treatment.

In using vitamins the physician should be aware of some of the practical matters of vitamin manufacture. Most tablets are at least 50 percent excipients. These are the materials that hold the active vitamin material together. One of the best excipients from the standpoint of effectiveness and low cost is starch or sugar. For the Orthomolecular treatment, which may involve 30 to 60 tablets a day in a person who has been advised to be on a low-carbohydrate diet, this would be too much sugar. Also, Dr. Ben Feingold has implicated food coloring and flavoring in hyperactivity in children, so it is especially important that vitamins for children and probably for adults do not have artificial

coloring and additives. The ideal vitamin would be the pure powder, but the problem with that is the taste, which is frequently unpalatable, and the inexact measurement. The best solution is the use of vitamin tablets in large dosage which are sugar, starch free and have no artificial coloring or flavoring. Technical departments of vitamin manufacturers usually supply this information to interested physicians on request

Now, if that physician who asked me over the phone to tell him what vitamins to give his patient hears this or reads it, I hope he understands as you do that the use of vitamins in the treatment of psychiatric conditions is only part of the Orthomolecular treatment and takes knowledge, skill, and experience, and just as other medical treatment it will have a greater chance of being successful if managed by the experienced and careful physician.

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