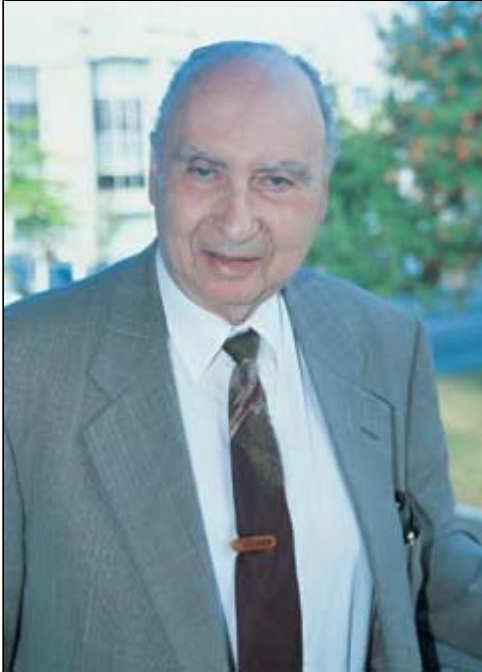


REPORT

Vitamins and Minerals Help Fight Off Diseases of The Mind and The Body
Interview with Abram Hoffer, M.D., Ph.D.

Abram Hoffer, M.D., Ph.D., is an internationally recognized physician, author, medical researcher and pioneer in the use of vitamins and nutrients to treat disease. His research focusing on the use of vitamin megadoses as a schizophrenia treatment in the 1950's led to some startling observations.

Patients suffering from schizophrenic-related psychosis were able to lead normal lives after high-dose vitamin therapy. These schizophrenic patients had failed all conventional treatments, but most of them completely recovered after several months on Dr. Hoffer's therapy.

Dr. Hoffer has spent the past five decades conducting research related to the practice of orthomolecular medicine, which emphasizes the use of nutrients in optimum doses for the treatment of a wide range of diseases. His medical discoveries have been the topic of more than a dozen books and literally hundreds of research papers. Today, in his mid eighties, Dr. Hoffer continues to practice medicine, prescribing orthomolecular regimens to patients in Victoria, British Columbia, Canada. He is also the Editor-in-Chief of the Journal of Orthomolecular Medicine.

Life Extension contacted Dr. Hoffer to ask him about his 50 years of research, and how the medical profession is slowly beginning to accept his once-ignored theories of disease. In the following pages, we see why scores of patients have consulted Dr. Hoffer, and why he advocates this unique vitamin regimen to not only fight off disease,

but to keep the toxins in our everyday surroundings at bay.

Life Extension Foundation: How did you get started with your research into orthomolecular medicine?

Dr. Abram Hoffer: In 1950, I had just finished my general hospital internship, and I was interested in doing some research in psychiatry. I became excited about psychosomatic medicine, which was then very popular. I approached the government of Saskatchewan, and asked them if they had a job for me. After a few months, they said yes. I didn't have any psychiatric training, but the condition was that I would take the training while on the job. My mission was to start a research program in psychiatry.

At that time, we were desperately short of psychiatrists, so the government of Saskatchewan hired a number of psychiatrists to join us. One of these was Humphrey Osmond. He brought with him a student who was a young colleague: Dr. John Smythies. These doctors had been studying mescaline, an alkaloid drug that induces the [hallucinogenic] experiences in normal volunteers, which is present in peyote. They had concluded that the experience was similar to that induced by schizophrenia on normal people. Schizophrenic patients have many of the symptoms that are present in normal people when they take mescaline, or even LSD.

Drs. Osmond and Smythies had also observed that mescaline has a [biochemical] structure similar to adrenaline. They had developed the hypothesis that perhaps in the body of the schizophrenic, there might be a compound somehow related to adrenaline, which had the properties of mescaline. This was a very exciting hypothesis.

In 1950, there was no treatment for schizophrenia. Insulin coma [therapy] was disappearing; electric shock treatment was being used, but even when the results were good, they were always temporary, and you'd have to repeat it. Eventually it wouldn't work anymore. We were hopeless. Half our patients in the mental hospital were chronic schizophrenics, and we had no treatment, no drugs, nothing.

So, we decided to look at this hypothesis very carefully. I began to study all the known hallucinogens of that day. There weren't that many. One day, when I was jotting down the formula of these compounds, it suddenly struck me. They were all indoles. An indole is a chemical with a double ring. This made it much easier. If I tell the best biochemist in the world to search the schizophrenic body for a compound that causes schizophrenia, he'll think you're nuts. Of the 50,000 compounds or more, how many psychiatrists are willing to spend their whole lifetime chasing one, when they haven't got a lead? But when you're talking about indoles, you bring it down to about five or six [compounds], which makes it a lot easier.



Also, Dr. Osmond had observed oxidized adrenaline [in his research]. When some of their asthmatic patients took this discolored adrenaline, they also had some [of the same] reactions that they would get from mescaline.

LEF: That's adrenochrome, right?

Hoffer: That's right, but we didn't know it then. It turned out that, on our team, was a professor who had done his Ph.D. on adrenochrome. As we were talking about this [oxidized] compound, he told us what it was. We jotted down the structure of adrenochrome, and sure enough, it's an indole. So we said, "Now we have the right hypothesis. Let's search the human body for a compound which is an indole, which is derived from adrenaline, and which has the properties of mescaline." That was called the "adrenochrome hypothesis." That's what really started our research off.

We couldn't leave it at that, because we weren't interested in the hypothesis.

We wanted a treatment. And I knew at that time that the odds against us being correct were maybe a thousand to one. But we said we had to do something. So, we whittled down three characteristics. We said, first of all, it would have to be present in the body. Secondly, we said it must be a hallucinogen. And, thirdly, we said if we can somehow prevent the body from making it, maybe we would have a therapy.

I had taken my Ph.D. at the University of Minnesota in vitamins. And so, in 1950, I knew the vitamins as of that day. There was one vitamin, in particular, called B3 or niacin, which is a methyl acceptor; it picks up methyl groups. We felt that if we could prevent the body from making enough adrenaline by binding the methyl groups, we would prevent the methylation of noradrenaline to adrenaline, and therefore we could decrease the production of adrenochrome. We knew that niacin was very safe, so we decided to try niacin to see if it might help. We also knew that vitamin C tended to stabilize adrenalin. So, we felt if we also gave our patients vitamin C, we would cut down on the oxidation of adrenalin to adrenochrome.

Then, we got hold of some vitamins. I wrote to Merck & Company-they were the leaders in the field of vitamins at that time-and said, "This is what we're trying to do, and we're desperately poor, please, could you send us some of the vitamins?" And I listed the ones I wanted. To my amazement, two weeks later, I got a 50 pound drum of niacin, a 50 pound barrel of niacinamide and a 50 pound barrel of vitamin C.



By 1960, a large number of American psychiatrists had joined us, and by 1970, I think we had a collective experience of over 100,000 schizophrenic patients treated. The results were really good. They weren't perfect-we've never claimed that-but they were certainly an awfully lot better than what you get today by simply taking drugs.

So then, we had to make them up into 500-milligram tablets because we had concluded that the tablets then available on the market were no good. These commercial vitamins were only 100 mg in potency and they were so full of fillers that it would make people sick. Now, we had the idea let's try niacin. We also felt we'd have to give a lot because if it had been active in small quantities, someone else might have reported it [in another study].

I can recall the first patient who I treated. This was a young woman who was the head secretary of a major corporation in our city. She became psychotic, and was admitted to a hospital. She was given shock treatments; she appeared to recover, and went back to work. She had a recurrence the following Christmas, and had another one the third Christmas. By this time, I was at the hospital, and when she came in [the third] time, she was under my care. She said she had failed to respond to at least three series of ECT [electro shock therapy]. I decided she would be a good subject to test on niacin. So, I started her on niacin, 1 gram taken three times a day after meals, and also the same amount of vitamin C.

LEF: Did you titrate it up, or did you just start it three times a day?

Hoffer: I just did it [three times a day]. I kept her on it for a month, and I thought I began to see some improvement. She had been extremely paranoid and delusional.

Gradually, the delusion began to disappear, and after two months, I discharged her from the hospital. I saw her again as an outpatient. She remained well, but about a year or two later, on her own, she stopped taking her vitamins. Her sister brought her in, and said, "My sister is sick again." So, I yelled at her, put her back on the same vitamins, and she made another recovery. She did this about three or four times. Finally, after she had been well for about five years, she came to me again, and said, "Dr. Hoffer, do you think I can now go off [the vitamins] without having to go back on?" I said, "Let's try." So, she went off the vitamins, and she stayed well thereafter. She went back to her job as the senior secretary at this large firm.

LEF: What took place that caused her to be able to go off of her vitamins?

Hoffer: I would say about 20% to 30% [of those who have] been well off can go off it. I don't understand it either. But that's an observation. Schizophrenia is a disease like diabetes where you have to take [the proper therapy] forever. It's not like an infection. If you have an infection, you take antibiotics for ten days, and it's gone.

So we then ran eight patients in an open pilot study, and all eight recovered. At that time, we were getting quite excited. So, then we ran the first double-blind, controlled experiments in the history of psychiatry.¹ We divided 30 patients into three groups; niacin, placebo and niacinamide. Niacinamide is the other form of [vitamin] B3, but we put that in because it doesn't flush [episodic redness of the face and neck] the patients. [Otherwise], the nursing staff would assume that every patient who flushed was on niacin, and every patient who didn't flush was on placebo. It was what we called a "blind control."

Editor's Note: In studies, "control" groups include patients who are given non-therapeutic interventions to be compared with the product being tested. The "dummy" intervention is included as a control to ensure that the outcome was caused by the effect of the therapeutic intervention, and not by other means. For example, aspirin might be given to a group of patients with a headache, and an antacid is given to a "control" group of patients, who also have headaches. The likely outcome is that more patients in the "intervention" group (those who took the aspirin) will report relief than those in the "control" group. In that way, investigators can conclude that it was the aspirin that provided the effect, not the antacid.

In a "blinded" study, the patients, the investigators, or sometimes both (double-blind study) do not know whether a patient is receiving the therapy or the "dummy" intervention. In this way, scientists can ensure that the results of the study are not affected by the so-called "placebo effect." In some cases, a placebo, which has no pharmacological action but is used as a control in scientific research, can create therapeutic effects through the power of suggestion. For example, a patient might be given a sugar pill and told that it is a non-steroidal anti-inflammatory drug (NSAID) that will ease inflammatory pain. In some cases, the pain may actually subside because the patient believed the dummy pill was actually an NSAID.

Continued on Page 2 of 2

[Back to the Magazine Forum](#)

REPORT

Vitamins and Minerals Help Fight Off Diseases of The Mind and The Body Interview with Abram Hoffer, M.D., Ph.D.

Hoffer: We ran it for two years, and then we did a blind follow-up. We had a follow-up team that would call the patients in every three months to see how they were doing, and at the end of the two years, we wanted to see what had happened. We found that for the patients on placebo, there was a 35% recovery rate, which is what you would expect from acute schizophrenic patients. The other two groups had about an 80% recovery rate. These results were very encouraging, so we ran another study, and another. Eventually, I did about six double-blind, controlled experiments in Saskatchewan between 1953 and 1960, and they were all confirmatory.¹⁻³ Also, by this time, I was developing a good deal of clinical experience because I was also treating other patients who didn't fit into our study.

By 1960, a large number of American psychiatrists had joined us, and by 1970, I think we had a collective experience of over 100,000 schizophrenic patients treated. The results were really good. They weren't perfect—we've never claimed that—but they were certainly an awfully lot better than what you get today by simply taking drugs.

LEF: Have you been able to apply this to bipolar patients or other types of psychiatric problems?

Hoffer: Yes, we have. This was, later on, called Orthomolecular Psychiatry by Linus Pauling [American chemist and researcher], who published his very important paper in *Science* in 1968.⁴ For a long time, I didn't believe that depression would really respond, but I began to see a large number of people who were bipolar or depressed.

LEF: I understand as your research continued, you also made some discoveries by accident in regard to this approach to treating certain cancers.

Hoffer: It wasn't our discovery. We just confirmed what Linus Pauling had reported. The first observation happened in 1960. A retired professor who was psychotic was admitted to our ward, and I discovered he had cancer of the lung. He was terribly psychotic, and he was declared to be terminal. At that time, we were examining the urine for a chemical factor that has since been discovered to be crypto pyrole. I was looking for psychotic people, and normal people [for a planned trial]. When he came in, and was psychotic and had cancer, we ran [several tests on] him, and we thought we had a huge quantity of this product in his urine. So, I wanted to start him on niacin because I wanted to treat his psychosis, and I didn't think it would do anything to his cancer.

So, I started him on niacin-1 gram taken three times per day with vitamin C-on Friday. The following Monday, he was mentally normal. It wasn't really schizophrenia he had. He was in a delirium, and he recovered very quickly. Then, I said to him, "I want you to stay on these two vitamins as long as you can," not expecting it would do very much for [his cancer]. He was supposed to have died within a month or two, but he remained well for another 30 months. When he died, we couldn't get an autopsy because he died at a different hospital. But as far as I can tell, the tumor was completely gone 12 months after he started on this approach. On an x-ray, they couldn't see the tumor anymore. This was one observation.

I had another observation in 1986; a woman who had a terminal cancer of the head of the pancreas, and she, too, made a complete recovery, and lived for 20 years.

LEF: Were there other treatments used as well, or was this the primary treatment?

Hoffer: By this time, it was a fairly comprehensive treatment because we had concluded by then that one or two vitamins wouldn't be adequate; that this was a major nutritional problem that required a more comprehensive approach. By this time, Linus Pauling had published his very important book on cancer and vitamin C5-13 [additional citations noted]. So, having read what he and [Ewan] Cameron had written, and in my own few observations, I decided that I would do the same. Because I was well known as an expert in the field of nutrition, cancer patients who were told by their doctors that there was nothing more they could do, would demand that they come and see me.

So, I began to see more and more patients. And after seeing five that first year—and some of them did remarkably well—it gradually began to increase. Eventually, I was seeing up to 150 cancer cases a year. It's not a cure. Every one of my patients also had the usual treatment, which consisted of either surgery, chemotherapy, radiation or some combination. But when the vitamin program was grafted onto that, they certainly felt much better, and, according to my data, they also lived a lot longer.

LEF: Should these vitamins be taken in combination, or do they have their own unique value when they're taken individually?

Hoffer: Each vitamin has its own unique value. It depends a lot on the patient; it depends on their condition, it depends how old they are.

LEF: Do you find that they need a multivitamin, so that they get all the basic nutrients to work together with the megadosages of the other vitamins that they're using for treatment?

Hoffer: I think one should do that. One should use a good, comprehensive approach, using the essential vitamins and minerals. Not all, because a lot of the vitamins we get from our food. But the B vitamins are the most important, I think [as well as] vitamin E, vitamin C, and maybe some of the others depending on what condition you're treating. For example, I've treated a few cases of Huntington's disease. I think that's a double dependency of vitamin E and niacin. And when I put the patients on 4000 [international] units of vitamin E and 3 grams a day of niacin, they were the ones whom I saw got well. And this is a disease from which there is apparently no treatment.

LEF: When you say "vitamin E," it has a whole new meaning to us these days because there are a few different components we've discovered now besides alpha-tocopherol. Which kind were you using?

Hoffer: The alpha-tocopherol. Four grams a day. I worked up to it. I started out with 800 units, and gradually worked it up.

LEF: Can you explain the risks related to the toxicity that exists in our environment, and how vitamin regimens can help ward off that risk?

Hoffer: I think that we are overwhelmed today with a large number of chemicals, which are present in our air, soil, water and in our food. I found that since we can no longer live in a pure world, the best thing we can do is to improve the immune system of the body so that it can deal with these toxic compounds more adequately than it has been doing, and vitamins and minerals are very helpful with that.

LEF: What is your opinion in terms of conventional medicine? Where does it fall short? For instance, why don't government RDAs work, in your opinion, when it comes to nutrition?

Hoffer: I think that the best thing one can do with RDAs is totally abolish them. They were developed many years ago, in 1945 to 1950, because during the war, the American government was very concerned with the health of the American soldier. So, the government went to the few nutritionists who were available, and asked them to figure out how much should be the daily requirement [of nutrients]. And most of the time, they just guessed at it. How could they tell? They didn't have any human studies. They'd run animal studies, but you can't extrapolate from animal studies to human studies. They hadn't done them. So, they tried to make the best guess they could. There was also an economic problem because if you made your RDAs too high, the food companies wouldn't be able to match them. I think the RDAs are a total waste. What we need is a realistic RDA for every disease. As a matter of fact, most nutritionists are paying less attention to them.

LEF: You've dealt with some challenges over the last several decades in terms of getting some of your studies published in major medical journals. But it seems today that a lot of your findings about vitamins and minerals are beginning to gain more acceptance. Is that true?



Hoffer: That's true. What we're up against is the battle of the paradigms. The vitamin paradigm was very simple. It stated that people needed only small amounts, in tiny dosages, only for diseases known as the "vitamin deficiency diseases" like scurvy and pellagra. This was firmly entrenched and had been very useful in helping to isolate these vitamins. But that was engrained in all medical schools and every doctor who learned them. But [I and other similar experts] were outside that paradigm. For example, with niacin, we're using 2000 times the natural RDA, and we're using it for a disease that's not a "vitamin deficiency disease": schizophrenia. Also, we found out that niacin lowered cholesterol levels. And of course, whenever one attacks the old paradigm, you run into a lot of trouble. It takes about 40 to 50 years in medicine for a new idea to get established, if it's a good idea.

LEF: Do you advocate the same type of vitamin megadoses for prevention?

Hoffer: I have had some experience with prevention. And I don't think you need the same high dosages. To do prevention, you'd have to get a large group of people who are, as far as you know, normal. Then, put them on a program, and see what happens. And I have recommended that. If you were to add enough niacinamide to our flour so that every person would get 100 milligrams a day without knowing it, in my opinion, there would be a massive decrease in the incidence of schizophrenia.

LEF: What's next in your plans?

Hoffer: I think my main job now is to stimulate other doctors to get into the field and do the same thing.



I think that the best thing one can do with RDAs is totally abolish them. They were developed many years ago, in 1945 to 1950, because during the war, the American government was very concerned with the health of the American soldier. So, the government went to the few nutritionists who were available, and asked them to figure out how much should be the daily requirement [of nutrients]. And most of the time, they just guessed at it.

Back to the Magazine Forum

All Contents Copyright © 1995-2009 Life Extension Foundation All rights reserved.

LifeExtension®

These statements have not been evaluated by the FDA. These products are not intended to diagnose, treat, cure or prevent any disease. The information provided on this site is for informational purposes only and is not intended as a substitute for advice from your physician or other health care professional or any information contained on or in any product label or packaging. You should not use the information on this site for diagnosis or treatment of any health problem or for prescription of any medication or other treatment. You should consult with a healthcare professional before starting any diet, exercise or supplementation program, before taking any medication, or if you have or suspect you might have a health problem. You should not stop taking any medication without first consulting your physician.