

## Exclusive interview with the developer of NADH, a therapeutic coenzyme with a variety of important uses

By Karolyn A. Gazella

After hearing about the amazing, far-reaching benefits of the coenzyme nicotinamide adenine dinucleotide (NADH), I was extremely interested in interviewing the developer. I enjoyed my visit with Dr. Birkmayer very much. I'm sure his caring sincere nature has contributed to his great success.

In 1993, Austrian researcher and clinician Professor Georg D. Birkmayer, M.D., Ph.D., developed the only stable oral form of NADH. Dr. Birkmayer's discovery was so innovative he was awarded a worldwide patent. His product, which has been studied extensively in Europe, is now available in the United States as a nutritional supplement.

Organized research and clinical evaluations have shown NADH to be effective for the following:

- Dementia of the Alzheimer type
- Parkinson's Disease
- Chronic fatigue syndrome
- Depression
- Enhancement of athletic endurance
- Protection against side effects of AZT (an AIDS medication)
- Immune stimulation

Dr. Birkmayer is the director of the Birkmayer Institute for Parkinson's Therapy in Vienna, Austria. He is the author of more than 100 scientific articles, a professor at the University of Graz in Austria, a visiting professor at the University of Beijing, and the Secretary General of the International Academy of Tumor Marker Oncology.

*KG: I understand your father, Walther Birkmayer, M.D., has studied brain injury and Parkinson's extensively?*

Dr. B: My father discovered the anti-Parkinson's effect on L-dopa. He was an expert on Parkinson's and saw patients from all over the world. Many of his patients were the so-called burned out cases in which Sinamet (the classical Parkinson's medication) did not work. He has received four honorary doctorates from leading European institutions in recognition of his outstanding lifetime contributions.

*KG: When did NADH enter the picture?*

Dr. B: I was at the University of Munich when my father was doing much of his work. When I returned home, I discussed NADH with him because I knew the critical enzymes involved in his research required NADH to be effective.

*KG: How did you begin your studies regarding NADH?*

Dr. B: We knew the substance was very unstable and would degrade in the blood, so we first used NADH intravenously. The effect was remarkable. Patients who could not get up from their chairs were walking within an hour of two without any help. To a certain extent, we were lucky, because if it wouldn't have worked with the first patient, then we may have said it doesn't work and stopped the research. But my father was always lucky. So we started working with our patients and giving them the treatment. But there was the problem that once they were released from the clinic, they couldn't get the injection.

*KG: Is that when you began trying to stabilize the material into a tablet form?*

Dr. B: Yes. NADH is very unstable and reacts with other compounds. The patent we developed is of historical

significance because the tablet form of NADH provides the same benefits as the intravenous. In order for the tableted form to work, it has to be enteric-coated so it doesn't degrade in the stomach. The enteric-coating allows it to reach the intestine, cross the mucosa, and go into the blood stream.

*KG: Besides the enteric-coating, what else did you do to stabilize the product?*

Dr. B: Our patented process uses a very specific concentration of natural stabilizers like vitamins C and E in a critical ratio. It is this patented formula that has been studied so extensively. In fact, clinical trials using the same product for chronic fatigue syndrome are presently underway in the United States at Georgetown University Medical Center.

*KG: Does NADH have a specific affinity to brain tissue or other tissues within the body?*

Dr. B: No. It is actually one of the key substances within our body. Every living cell needs NADH to survive. Without NADH, you cannot produce energy. NADH is a coenzyme that works with important enzymes in the body. In a certain sense, enzymes can be compared with the motor in a car, which needs a spark to trigger the gasoline explosion so the car can run. The spark is the coenzyme and NADH is the spark for energy production within the cell.

*KG: Does NADH actually penetrate the cell membrane?*

Dr. B: Yes. It actually gets inside the cell. The NADH goes into the mitochondria, which is the energy-producing part of the cell. It also goes into the nucleus of the cell, where certain repair systems are in place. The more NADH you have, the better these repair systems function. If our cellular DNA is damaged and we cannot repair it, the genetic material is altered. Genetic damage is the biochemical basis for a number of chronic diseases such as cancer, rheumatoid arthritis, immuno-deficiencies, and arteriosclerosis.

*KG: Is that why NADH is called the energizing coenzyme?*

Dr. B: It is the only compound where you can clearly demonstrate that it increases energy production on the cellular level. It has a number of important effects because of this energy production. It reduces withdrawal symptoms from alcohol. It helps AIDS patients who are taking AZT because it reduces the toxicity of the medication. It has also been shown to help with depression. We believe depression is a deficiency or lack of adrenaline and dopa. Most Parkinson's

patients suffer from severe depression. When they take NADH, their depression symptoms are alleviated. We then gave NADH to younger depressed patients without Parkinson's and it worked on all of them.

*KG: Does it have any antiaging effects?*

Dr. B: I believe aging is a loss of energy. And this is reflected in a loss of NADH. We analyzed blood from babies and mothers and found that the babies had an average of 30 percent more NADH in their red blood cells than their mothers. We know that the decline in NADH levels is very gradual.

*KG: Because it stimulates energy, does NADH have any negative effects on the adrenal glands?*

Dr. B: Absolutely not. In fact, it actually helps the adrenal glands. An example is people experiencing panic attacks. We know this is a deficiency in adrenaline. These people respond very well to NADH.

*KG: What dosage do you recommend?*

Dr. B: For people over the age of 50, 2.5 mg daily. For someone experiencing a particular health condition such as Parkinson's or depression, 5 mg daily. For people under age 50, 2.5 mg every other day. It should be taken in the morning on an empty stomach.

*KG: Is NADH safe?*

Dr. B: Extremely safe. Just to give you some idea, we gave dogs 300 to 500 tablets daily for six months. There were no deaths, no signs of toxicity, no side effects, and no adverse effects. What they did observe was that the males were nicer to

the females, whatever that means.

*KG: Who should use NADH?*

Dr. B: Anyone with the conditions discussed or a family history of the conditions discussed. More importantly, people wanting to prevent disease. It is what we call optimizing your health. That is where NADH can do the most good. The annual cost for caring for Alzheimer's patients in the United States is 80 billion dollars each year; however, this is just a small part of the healthcare crisis. If you can, by taking NADH, prevent chronic diseases like cancer and improve your health, we'd save a lot more money. I think the message is that by taking NADH you will be healthier and you won't get frequent infections, and you will have optimum health.

*KG: Thank you Dr. Birkmayer and congratulations on this phenomenal discovery. I know it will help many people throughout the world.*