

March 1997 Issue | Robert Hedaya, M.D.

<http://jeffreybland.com/knowledgebase/march-1997-issue-robert-hedaya-m-d/>

[DOWNLOAD AUDIO](#) |

Welcome to *Functional Medicine Update* for March, 1997. I want to remind you this is the month to make your final plans to attend the Fourth International Symposium on Functional Medicine, in Aspen, Colorado. Give us a call and get your reservation in.

This month on *Functional Medicine Update* our focus is on problems related to the brain. On Side 2 our Clinician of the Month, Dr. Robert Hedaya, an expert in this area, tell us more about his personal experience as a psychiatrist focusing on biological psychiatry.

If we ask what were the greatest medical advances seen in 1996, we might get a number of different opinions from different individuals. Here is what the January 1997 issue of *Health* magazine listed as the 10 greatest medical advances in 1996. I was proud to see that many of what they consider the greatest medical advances were things we have been discussing for the last couple of years. It gives me confidence we are staying ahead of the curve in keeping you abreast of the some of the latest developments.

Advance No. 5. Next is heart disease, and they talk about the B-vitamin breakthrough, the recognition that folate and B12 and pyridoxine, B6, can help protect against homocystinemia, elevated levels of homocysteine, which is a contributor to atherosclerosis. You long-standing *PMU* subscribers know we have discussed this for the better part of 12 years. What is hailed as a major breakthrough for 1996 was a major breakthrough for 1986 for *PMU* subscribers, and you have, we hope, been able to help your patients for 10 years before the advent of this revelation.

Advance No. 6. In diabetes, the breakthroughs were new drugs, ways of measuring glucose control more effectively using glyco-hemoglobin and other noninvasive techniques, and dietary regulation of insulin needs using new types of diet therapies. Again, for years on *PMU* we have been discussing glycemic index, glycemic control, glycosylated hemoglobin, and glycosylated albumin as markers for glucose control.

Advance No. 7. Next is arthritis. Weight-lifting lifts pain, and the breakthrough here was that osteoarthritis is improved by weight training and regular exercise, and sedentary lifestyles are not a good idea for people who have joint pain. We've been talking about this for an extended period of time, discussing the appropriate types of physical therapy, range-of-motion activities, the important "use-it-or-lose-it" concept pertaining to osteoarthritis, appropriate exercise, spinal biomechanics, and proper alignment. We have regarded osteoarthritis as not just a wear-and-tear disorder, but a mal-alignment situation and one involved with unequal pressure and force distributed across the skeleton, as well as

inflammation, which, again, comes back to proper physical therapy.

Advance No. 8. This breakthrough has to do with hearing. In this area, the major things we have talked about in *PMU* include hearing impairment in children as a consequence of recurrent serious otitis media, middle ear infections, the relationship to food allergies, and the food elimination diet. We are trying to help the clinician and, ultimately, the parents of children with this condition, recognize that it is not just a consequence of an antibiotic deficiency; that other co-variables might contribute to immunochemical activation that produces the infection and inflammation.

Advance No. 9. The next great breakthrough the *Health* article described was the modification of menopausal symptoms with soy. Do the soy isoflavones genistein and daidzein and their influence on estrogen receptors and estrogen metabolism sound familiar? The *Health* article notes that 20 to 90 mg of isoflavones a day have been demonstrated to increase bone density by as much as 2.2 percent in 6 months in the spines of women who have been tested. Again, this is an area we discussed at some length over the last several years in *PMU*. It is a breakthrough, but it is no surprise to us.

Advance No. 10. In the area of bypass surgery, they talk about the new microsurgery techniques that make it unnecessary to open the chest. Again, our approach to bypass surgery in *PMU* over the years has been that there are nonsurgical ways to increase vascular flow and reduce plaque, resulting in resorption, applying the Dean Ornish concepts, antioxidants, chelation therapy where appropriate, and other types of exercise and nutrient intervention to increase the flow of blood and reduce plaque and coronary occlusion.

We have done a pretty good job, based on the 10 greatest medical advances of 1996, in keeping ahead of the curve, talking about most of these topics for the last 5 to 10 years in *PMU/FMU*.

Two individuals who have had a great intellectual impact on me, apart from my own father, an individual who is always searching for knowledge and not taking the standard intellectual fare without scrutiny, were Linus and Ava Helen Pauling, both of whom questioned authority and became authorities in their own right. A recent article about the life of Linus Pauling focused specifically on his questioning of authority and how he ultimately became an authority on a great many topics. For example, he described the structure and nature of the chemical bond, and the structure of molecules and hybrid orbital theory that led to the birth of modern organic chemistry.

He conducted x-ray defraction studies into macromolecular structure, into the proteins and nucleic acids. He pushed Watson and Crick to the double-stranded helix concept (for which Pauling himself would no doubt have won the Nobel Prize had his son not shared information about the x-ray defraction patterns Pauling had found on DNA which led Watson and Crick to come up with the double-stranded helical configuration which they published in *Nature Magazine*). He introduced the field of immunology and, with Delbrook, the binding of antibody/antigens. He conducted anesthetic drug work and was the first person to talk about spatial modeling of anesthetic drugs with receptor sites that results in anesthesia. More recently, we could cite Pauling's orthomolecular medicine and vitamin C concepts.

All of these advances, obviously, occurred against the dominant theme of the time, and all had to do with questioning authority. Along with his wife, who was the social advocate who pushed him in his nuclear test ban treaty advocacy, Dr. Pauling had many occasions during his career to question authority. They were a couple who were forged out of questioning authority. For his work with Ava Helen, Dr. Pauling

won a second Nobel Prize, for peace.

When I was at the Pauling Institute, Dr. Pauling gave me a wonderful photograph of himself, Albert Schweitzer, and Albert Einstein around the dinner table at the Schweitzer compound in Africa, during which they were discussing how they would mobilize scientists to take a position against atmospheric testing of nuclear weapons. It was not a politically popular position at that time, and Pauling ended up losing some government grants and his ability to travel internationally by having his visa denied, so one might ask how people who question authority become authorities.

The author of this article states that when you look at the various things Pauling did, you first recognize him as a brilliant man; second, he had a strength of conviction; third, he was extraordinarily charismatic and articulate about his ideas and willing to present them with force; and fourth, he assembled some of the great minds around him, people who took up the banner and were willing to fight the fight with him because they saw it as legitimate, reasonable, and understandable, something they could identify with.

The Paulings' experience results in our recognizing that, rather than resisting authority, sometimes questioning concepts and *a priori* assumptions is a valuable exercise. It doesn't mean that prevalent thoughts or attitudes or beliefs are wrong; in fact, many times questioning brings us back and reinforces our original conclusion, but by doing so, we dust off ideas, create new opportunities for innovation, and perhaps become more clear about our thoughts. One becomes a good learner by having to teach the material. Questioning information often forces us to become teachers and learn at a level we might not have otherwise. We try to incorporate that standard within *FMU*, frequently questioning to explore assumptions. Certainly, that's what we're going to be doing this month with molecular medicine of the brain

An appropriate place to start a discussion called Molecular Medicine of the Brain is with cerebral palsy. Not many years ago CP was considered a disorder caused by birth trauma and ischemic effects during delivery. I often heard the simplistic explanation that the umbilical cord was wrapped around the child's neck, or that some kind of asphyxiation created an ischemic or anoxic problem that resulted in cerebral palsy. Many families with members who have cerebral palsy have shared this view of its etiology. Now we are beginning to recognize that birthing problems may certainly contribute, but like so many conditions that have a functional nature (and certainly CP is a functional/neurological condition), there are covariables and other mitigating factors, one of which seems to be related to magnesium status.

INTERVIEW TRANSCRIPT

Clinician of the Month:

Robert Hedaya, M.D.

I want to take the introductory comments I proposed on Side 1 and move to our Clinician of the Month, who will speak from real clinical experience and expertise related to biological psychiatry. We could not be better served than to have as our clinician this month, Dr. Robert Hedaya, a psychiatrist who received his B.A. in psychology and his M.D. at the State University of New York at Buffalo, interned at Georgetown University Medical School and the NIMH, and has done extraordinary post-graduate work in

integrative hypnotherapy, electro-convulsive therapy, clinical endocrinology, and advanced neuroscience. He is an adjunct professor of psychiatry at Georgetown University Hospital, and in private practice.

He has also recently written a book titled *Understanding Biological Psychiatry*, which struck me as an insightful and well written integrative work, published in 1996 by Norton & Company. The contents of this book include foundations of biological psychiatry, the core concepts in this field, how it relates to major psychiatric disorders, medical mimics of mental disorders, practical consideration in the use of medications and the psychotropic medications, and an extensive bibliography. I was impressed by the scholarship, the style of thinking, and the vast integration of different information. Dr. Hedaya, it is really a pleasure to have you as our Clinician of the Month.

JB: Let me start off by asking how a very busy clinician/teacher finds time to sit down and write a 300-plus-page book, expressing the contemporary aspects of biological psychiatry.

RH: Jeff, that's a good question. I've often wondered the same thing myself. Basically, I took time off from my practice; my wife was very supportive, and my kids were very supportive. The ideas in my book have been coming together from the beginning of my psychiatric training. What I noticed at that time was that most of the psychiatric trainees were picking one field to specialize in -- Freudian analysis, cognitive therapy, or something like that. But people had a lot of difficulty handling the discrepancies between the systems of belief, so they picked one, and that reduced their anxiety. They became super-specialists from the beginning. I resisted that and have always tried to integrate as many perspectives as possible. Eventually, I started giving workshops and one day sat down with my mentor, who was looking at an outline of my workshop. He said the material would make a great book, which I had never thought of. Then I embarked on that task, which was a lot bigger than I thought it would be.

JB: As with all books, yours is a reflection of the world view of the author. I was particularly struck by the integration in the discussion on the biology of schizophrenia, because I believe that is an interesting area of controversy within medicine, and I think you did this treatment as well as I've ever seen it. Could you give a summary of your view of schizophreniform disorders and how you approach them in the book?

RH: As with all things, you are always going to be looking at the balance between the genes and the environment. I think it is the same thing in schizophrenia. You look at biological factors, psychological factors, and social factors. It seems pretty clear now that the biological factors are related to abnormal neural development, usually occurring in the second trimester of pregnancy. There are a lot of data to support that. Then that seems to cause abnormalities in what we call sensory gating, meaning the ability to filter information and inability to make proper associations in the brain, dysregulation of neurotransmitters, and impairment of reward systems in the brain. So you have that core biological vulnerability.

Then you have the impact of psychological factors related to upbringing and family environment. You have difficulty, obviously, learning things. Learning opportunities are diminished because of the impairment in working memory and cognitive processing. Then, clearly, social factors play into that -- life stresses and inadequate family support and occupational skills. All of these things come together. I think the most fascinating thing is that if you have identical twins who have exactly the same gene composition, as far as we know, you don't have 100 percent concordance. You may have 60 percent of

the twins who will have schizophrenia and the other 40 per

JB: One thing I've seen in the past is the continued debate, or discussion, within the psychiatric field, about the validity of the Abram Hoffer, Humphry Osmond methylation theory for schizophrenia. Have you had any experience in looking at that concept and its application in this variegated category that we call schizophrenia?

RH: Actually, no. I've done some reading about it, but I've not had any personal experience with that.

BIBLIOGRAPHY

1. Altman S. Questioning authority, becoming authority: the life of Linus Pauling. *Persp Biol Med.* 1996;40(1):93-99.
2. Barinaga M. Neuroscientists seek answers to brain function and disease. *Science.* 1996;274:1612-1613.
3. Chen I, Franklin D, Garrison J. The 10 greatest medical advances of 1996. *Health.* 1997;11(1):92-97.
4. Clark LC, Combs GF, Turnbull BW, et al. Effects of selenium supplementation for cancer prevention in patients with carcinoma of the skin. *JAMA.* 1996;276(24):1957-1963.
5. Colditz GA. Selenium and cancer prevention. *JAMA.* 1996;276(24):1984-1985.
6. Freedman A. Taste for zinc. *Lancet.* 1996;348(9041):1592.
7. Friedman A, Kaufer D, Shemer J, Hendler I, Soreq H, Tur-Kaspa I. Pyridostigmine brain penetration under stress enhances neuronal excitability and induces early immediate transcriptional response. *Nature Med.* 1996;2(12):1382-1385.
8. Golub MS, Takeuchi PT, Keen CL, Hendrickx AG, Gershwin ME. Activity and attention in zinc-deprived adolescent monkeys. *Am J Clin Nutr.* 1996;64:908-915.
9. Hanin I. The Gulf War, stress and a leaky blood-brain barrier. *Nature Med.* 1996;2(12):1307-1308.
10. Koch R. Tyrosine supplementation for phenylketonuria treatment. *Am J Clin Nutr.* 1996;64(6):974-975.
11. La Rue A, Koehler KM, Wayne SJ, Chiulli SJ, Haaland KY, Garry PJ. Nutritional status and cognitive functioning in a normally aging sample: a 6-y reassessment. *Am J Clin Nutr.* 1997;65:20-29.
12. Lonsdale D. Recurrent febrile lymphadenopathy treated with large doses of vitamin B1: report of two cases. *Dev Pharmacol Ther.* 1980;1:254-264.
13. Nelson KB. Magnesium sulfate and risk of cerebral palsy in very low-birth-weight infants. *JAMA.* 1996;276(22):1843-1844.
14. Packer L, Tritschler HJ, Wessel K. Neuroprotection by the metabolic antioxidant *α*-lipoic acid. *Free Rad Biol Med.* 1997;22(1/2):359-378.
15. Perlmutter D. Parkinson's disease - new perspectives. *Townsend Lett.* 1997;162:48-50.
16. Schendel DE, Berg CJ, Yeargin-Allsopp, Boyle CA, Decoufle P. Prenatal magnesium sulfate exposure and the risk for cerebral palsy or mental retardation among very low-birth-weight children aged 3 to 5 years. *JAMA.* 1996;276(22):1805-1810.
17. Shoffner JM. Maternal inheritance and the evaluation of oxidative phosphorylation diseases. *Lancet.* 1996;348:(9037):1283-1288.

18. Smythies J. Endogenous neurotoxins relevant to schizophrenia. *J Royal Soc Med.* 1996;89:679-680.
19. Sternberg S. Magnesium may stave off cerebral palsy. *Sci News.* 1996;150:372.
20. Suárez, Herrera MD, Marhuenda E, Pérez-Guerrero C. Effect of hesperidin and neohesperidin dihydrochalcone on central nervous system. *Fitoterapia.* 1996;67:(4):359-363.
21. Swerdlow RH, Parks JK, Miller SW, et al. Origin and functional consequences of the complex I defect in Parkinson's disease. *Ann Neurol.* 1996;40:663-671.
22. van Spronsen FJ, van Dijk T, Smit PA, et al. Large daily fluctuations in plasma tyrosine in treated patients with phenylketonuria. *Am J Clin Nutr.* 1996;64(6):916-921.
23. van Vreeswijk C, Sompolinsky H. Chaos in neuronal networks with balanced excitatory and inhibitory activity. *Science.* 1996;274(5293):1724-1726.
24. Youdim MB, Riederer P. Understanding Parkinson's disease. *Sci Amer.* 1997;276(1):52-59.

p>