

Book Reviews

Micronutrients: Metabolic Tuning-Prevention-Therapy

by Uwe Grober

MedPharm Scientific Publishers
Stuttgart, Germany, 2009, 478 pages.

*What are little boys made of?
Snips and snails, and puppy-dogs' tails,
That's what little boys are made of.
What are little girls made of?
Sugar and spice, and everything nice,
That's what little girls are made of.*

Actually, we are made of oxygen, nitrogen and other minerals from the atmosphere and oceans. These essential elements are combined in a large variety of molecules which are found naturally in the living body. They include the amino acids and proteins, the fats, the sugars and a whole slew of other essential compounds that have been termed "orthomolecular" by Linus Pauling. But these compounds that nature created for the living bodies are only a fraction of all the possible compounds that can be made. Those not made by nature are called xenobiotics; the body can tolerate some of them, which have only mild to moderate poisonous effects, but cannot live with most of them because they are so toxic. So this little children's poem is correct, since everything listed is a natural ingredient. Over millions of years, life has learned to use those compounds that are essential—such chromium, iron, and zinc—and eliminated toxic substances that are harmful such as mercury and lead.

Therefore, in order to grow, mature, stave off disease and maintain health, we need to provide our bodies with those essential nutrients which are used as substrates to construct other substances. One compound, nicotinamide adenine dinucleotide (NAD) is involved in at least 200 different reactions in the body and also is used as a substrate for three dif-

ferent pathways. Life has specialized from simple one cell organisms—which can make almost everything they need, provided they are given water and oxygen and an environment in which to grow—to very complex organisms (like us) who have lost the capacity to make many amino acids and all the vitamins. In losing the need to synthesize everything, so much energy was released that movement and, eventually, modern humankind could evolve. Plants are so busy making what they need they have little energy left to move about and develop brains.

What I have written above is not exotic science and is well recognized by anyone who has studied what life is. We probably have identified all of the essential nutrients but we have not yet made sure that everyone ingests these elements that are available. All the modern nutritional studies report that modern diets do not contain enough of these essential nutrients. The only group who appears not to know this is the pharmaceutical industry. If it does know this it, the industry certainly acts as if it does not, and it promotes the view that their dangerous and toxic xenobiotic products are all one needs to prevent and cure disease. So, it is very useful and helpful to have essential information contained in *Micronutrients: Metabolic Tuning-Prevention-Therapy* by Uwe Grober. Forewords were written by Bruce N. Ames, by Gerhard Uhlenbruck, and myself.

In my opinion, this is a very good book and I endorse it as a very valuable addition to all orthomolecular libraries. It covers all vitamins, both water and fat soluble, some accessory nutrients, minerals including trace elements, fatty acids and amino acids. The second half of this book discusses both prevention and treatment for a large number of diseases. We have the information. Why do we not have companies whose main concern is the health and welfare of the public rather than the size of their annual distribution of

money to their shareholders? There would be an enormous saving of money since none would have to be spent looking for the pot of gold at the end of the rainbow and more could be spent really looking at the health of the people. It has been said that big pharma does not want to do basic research as it might interfere with their own patents. We need governments which are not fearful of the patent system. We need companies that will work with the information available in this book.

–Abram Hoffer, M.D., Ph.D.

**Practicing Medicine Without a License?
The Story of the Linus Pauling
Therapy for Heart Disease**

by Owen Fonorow with Sally Snyder Jewell
Lulu.com, 2008. Paperback, 230 pages.

In 1973, I first learned of Linus Pauling's interest in ascorbate. Mostly due to his well-publicized advocacy, I, like so many others, started taking vitamin C: a whopping 500 mg per day. Now I take 15,000 mg or more daily, and vastly more if needed. My relatives think I am nuts. I don't care. I very rarely need to see a doctor; it was 12 years since my last visit. My recent physical confirmed an especially low risk for cardiovascular disease. To me, this is good evidence that Dr. Pauling was right.

Personal experiences are sometimes more compelling when not our own. Owen Fonorow's book, *Practicing Medicine Without a License*, is full of how-I-beat-cardiovascular-disease case stories from people of all ages, in all walks of life. All of them used the "Pauling Therapy." This is generally taken to mean an absolute minimum of 6 g of vitamin C and 2 to 6 g L-lysine per day. These are usually accompanied with other supplements such as proline, omega-3 oils, magnesium, CoQ

10, and vitamins E, D and B-complex. Those so doing consistently reported dramatic improvement in cardiovascular problems. While so-called "evidence based medicine" winces at anecdotes, one cannot read this collection without being impressed. If the testimonial writers are all just making it up, they must be the best actors in the world.

Mr. Fonorow claims that in his 12 years of communicating with the public, he has "never encountered heart disease in any person who takes more than 10,000 mg of vitamin C daily." The author is in a position to make this statement because he has had considerable experience interacting with people reporting their successful use of vitamin C. His Vitamin C Foundation website has long been, and remains, an excellent internet resource. Among other benefits, it offers the public the complete text of Irwin Stone's classic vitamin C book, *The Healing Factor* for free downloading at <http://www.vitamin-cfoundation.org/stone/>.

Practicing Medicine Without a License is much more than an assemblage of anecdotes. It discusses the failings of the cholesterol-causes-CVD theory; indeed, the book actually opens with Mr. Fonorow's ready admission that he eats bacon and eggs for breakfast. The book neatly traces a good deal of the history of vitamin therapy for heart disease. It also, predictably, provides background on Pauling's own struggles to educate the medical profession, conventional nutritionists, and the media. Pauling quotes and specific dosage tips abound. Literature citations are provided, but a page and a half is not enough. Given the book's unequivocal stance, it would not be amiss to greatly expand the reference section. That may be in the offing: Fonorow writes that this is actually volume one in a planned Pauling series, volume two to be entitled *The Great Suppression*. Or it may not, as the author also writes: "Published clinical

studies run by medicine to test the Pauling Therapy: There have been none.”

A very good reading list is provided, although the “Resources” section may be leaning a bit to the proprietary side. And, there is a small error on p 91. The author cites a 1994 Pauling interview as being printed in JOM (the Journal of Orthomolecular Medicine), but it in fact was published by ION (Institute for Optimum Nutrition).

In some ways, to some readers, *Practicing Medicine Without a License* will prove to be an irritating book, especially to orthodox physicians and dieticians. The book is, above all, a personal statement by the author. It is frequently confrontational, and shamelessly assertive on every page. It has attitude. I like that, and furthermore, I recommend it.

—Reviewed by Andrew W. Saul

Vitamin C: The Real Story. The Remarkable and Controversial Story of Vitamin C
by Steve Hickey, PhD, and Andrew Saul, PhD
Basic Health Publications Inc., CA
2008, 192 pages.

A curious title. Thousands of children take Flintstone multis every day; don't they get enough vitamin C? Many adults take some C when they have a cold and, even without supplements, don't most people eat enough vitamins and minerals in their fruits and veggies? What could be remarkable or controversial about vitamin C? Authors Hickey and Saul think we need to know the truth about vitamin C. Their fascinating book presents some truly remarkable discoveries, introduces us to vitamin C's multiple health-maintaining functions and outlines its health-restoring capabilities, while warning us about vitamin C factoids.

Steve Hickey, PhD and Andrew Saul, PhD present the facts clearly and carefully.

Readers will gradually realize that the vitamin C story has two dimensions. On the bright side, for decades, scientific and medical researchers have documented vitamin research, clinical progress and success. Books and medical journals explain that vital amines, as nutritional substances, are essential for health and healing. Over the past 100 years, a succession of scientific researchers studied the biochemistry of vitamin C and learned that vital amines help to maintain normal metabolism. They determined that minimal doses of vitamin C can heal scurvy and sustain life. During decades of follow-up research, scientists discovered that optimum doses of vitamin C have remarkable health-restoring capabilities. Researchers conducted clinical trials, detailed patient recoveries, corroborated findings and wrote journal articles and reference books. However, the vitamin C story also has a disturbing, dark side. Even though decades of research found vitamins safe and effective, millions of patients suffer and deteriorate while professional skeptics devalue the care provided by orthomolecular doctors (who complement standard treatments with therapeutic doses of vitamins). Rather than telling us the facts, certain health professionals dismiss the vitamin C research, ignore the progress reports, minimize vitamin C's health-maintaining functions and disparage health-restoring claims linked to vitamin C. These skeptics use factoids to support their denials, also outlined in this book.

Skeptics cannot rewrite medical history or hide the truth about vitamins. In the early 1900s, biochemists, physicians and researchers discovered that certain nutrients are essential for life. Test rats did not grow or develop unless their diets included vital amines (as vitamins were first described). Medical scientists determined that tiny quantities of vitamins are also necessary for human health. They

linked four diseases to vitamin deficiencies: beriberi to B₁, pellagra to B₃, scurvy to C and rickets to D. The history of medicine records the involvement of Christiaan Eijkman, Gerrit Grijs, Sir Frederick Hopkins and Casimir Funk. Dr. Eijkman and Dr. Hopkins received Nobel prizes for discovering that vitamins are essential for human health. Researchers then searched for the chemical identities of the essential nutrients. Dr. Szent-Gyorgi received a Nobel prize for discovering that vitamin C was ascorbic acid.

After discovering vitamins, clinical researchers wondered if essential nutrients might have clinical applications. If so, they needed clinical trials to determine the optimum doses. Scientific and medical professionals mapped the biochemical pathways and determined which metabolic processes required vitamins as co-factors. They quickly realized that a few milligrams of essential nutrients can sustain health but it took decades to discover that therapeutic doses of vitamins can restore health. Centuries ago mankind faced an epidemic of scurvy. Most people know that thousands of British sailors died during long voyages. In 1795, Dr. James Lind did the first clinical trial and discovered how to heal scurvy. It took many decades before sea captains finally added citrus fruits to ships' stores. British sailors who stayed healthy were then called limeys. What if cancer patients run low on vitamin C today; might these patients develop scurvy-like symptoms? Can megadoses of vitamin C help cancer patients? "Of course not," scoffed the skeptics, while orthomolecular doctors researched and discovered that optimum doses of vitamin C can indeed help cancer patients feel better and live longer. Other doctors discovered that therapeutic doses of vitamin C can help patients recover from life-threatening infections such as polio, pneumonia and AIDS, reduce toxic levels of lead and mercury and neutralize

toxins injected by the bites of venomous snakes and spiders.

Like a Swiss-army knife, vitamin C has multiple capabilities. When we pick up a Swiss-army knife for the first time, we expect to find large and small blades but we may not inspect it carefully. In an emergency, we happily discover that a Swiss-army knife comes with a versatile set of built-in tools: a screwdriver, a tooth pick, a cork screw and a file. After these tiny tools save lives, the word steadily gets out until the public knows that each Swiss army knife comes with life-saving tools. Consider the metabolic capabilities of vitamins as tools for restoring health. In milligram doses, vitamin C enables essential metabolic pathways to sustain life and heal scurvy. If taken in large enough doses when a patient has cancer, an infection or an overload of toxins, vitamin C can heal and restore health. The general public still does not know that vitamin C has lifesaving capabilities but the real story keeps coming out. Meanwhile, certain experts, who should know better than to publish false information, scoff at vitamin C research, forget its biochemistry, ignore its metabolic functions and refuse to prescribe it. Why don't scientific and medical experts study the vitamin C research, review the clinical trials, interview recovered patients and learn that therapeutic doses of vitamin C have proved safe and effective enough to restore health and save lives? How can trusting patients know if our doctors understand and apply the healing capabilities of vitamin C or rely on false factoids to withhold restorative care-by-vitamins? Patients and families, caregivers and health professionals have to read the real story to learn the facts for ourselves.

Vitamin C: The Real Story reminds us that a hundred years after the discovery of vitamin C, mankind is still researching vitamin biochemistry and developing medical applications. We understand that vital

amines, trace minerals, amino and fatty acids, hormones and many other nutrients are essential for sustaining life. We are still learning that optimum doses of vitamins can restore health. Orthomolecular health professionals know that vitamin C and other nutritional supplements, if given in the right doses, can help patients recover and live well. They routinely prescribe supplements and adjust the doses to suit each patient's diagnosis and biochemical individuality. Readers of this book will learn to distinguish the facts about vitamin C from factoids. Patients can ask their doctors about vitamin research, optimal doses and patient recoveries. Readers are cautioned to take care with their health. Anyone can read this book to learn the basic facts about vitamin C and then study its clinical applications: therapeutic doses of vitamin C can restore health when taken as recommended by qualified medical professionals who understand its biochemistry and know when to prescribe vitamin C as a complementary and restorative treatment.

–Review by Robert Sealey, BSc*

A Short Vitamin C Reading List

The Cancer Breakthrough: A Nutritional Approach for Doctors and Patients by Dr. S. Hickey & Dr. H. Roberts, 2007.

Healing Cancer: Complementary Vitamin & Drug Treatments by Abram Hoffer, PhD, MD, with Linus Pauling, PhD, 2004, CCNM Press.

Orthomolecular Medicine for Everyone Megavitamin Therapeutics for Families and Physicians by Abram Hoffer, MD, PhD and Andrew Saul, PhD, 2008, Basic Health.

Vitamin C, Infectious Diseases & Toxins: Curing the Incurable, by Thomas Levy, MD, JD, 2002, Xlibris Corp.

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www.searpubl.ca