

Book Reviews

Every Person's Guide to Antioxidants

John R. Smythies, Rutgers University Press, New Brunswick, N.J.

140 pages, 1998.

We live in an atmosphere of oxygen (21percent), but life began billions of years ago in water with very little free oxygen.

Living cells remained anaerobic until life discovered chlorophyll, and slowly more and more oxygen accumulated in the water and in the air. This provided another source of energy and was advantageous. New life forms that could take better advantage of the oxygen evolved, but for every evolutionary advantage there may be a major disadvantage when the original conditions to which life adapted change. For example, losing the ability to make vitamin C in our bodies was a major advantage as long as our diet contained liberal amounts of vitamin C. When we moved away from this abundant source of vitamin C it became a major disadvantage but the changes are usually irreversible. As the oxygen began to accumulate it became more toxic to life. Oxygen tends to combine with organic molecules forming oxidized derivatives and in the process forms free radicals. These are small, very energetic molecules which attack and combine with other molecules. That is why a cut apple exposed to the air soon turns brown. The brown pigments are the sugars in various stages of oxidation. As long as the apple is covered by the skin there is no contact with the oxygen.

Life would therefore have not been possible until it learned how to use the oxygen for the production of energy and to protect itself against the ravages of the free radicals from the oxygen. It invented antioxidants. These are compounds such as ascorbic acid, vitamin E and glutathione. There has thus been an imperfect balance between the usefulness of oxygen and its potential harm by the production of these free radicals. When the balance favors the production of free radicals, living material

becomes overly concentrated with these disruptive molecules. When it happens to us we become sick. Today it is believed that many diseases are caused by the overproduction of free radicals or by the underproduction of the antioxidants, or by both. The adrenochrome hypothesis of schizophrenia which Humphry Osmond, John Smythies and I proposed in 1954 is an example of the overproduction of free radicals derived from adrenalin which in this case happen to be hallucinogen.

In this book, John Smythies describes in three parts what these free radicals are: how they are formed in Part One; the role of oxidative stress in health and disease in Part Two; and in the last part the safety of the current antioxidants and suggest how they can be used. The two major antioxidants in animals are vitamin C, water soluble, and vitamin E, fat soluble. Each reinforces the others' activity. There are many more present in animal tissue and different ones such as the bioflavonoids present naturally in plant tissue. Some, such as glutathione are made in the body, but others, such as the vitamins, are not. In the second part Smythies presents the evidence that these reactions are related to a large number of serious and chronic diseases. The evidence is large and conclusive. No one with an open mind can read this material and still remain unconvinced. Sixteen studies are reviewed which show a clear link between antioxidants and heart disease.

In the last part Smythies writes, "It can now be taken as a fact that toxic reactive oxygen species play a significant role in many acute and chronic diseases such as inflammation, coronary heart disease, cancer, diabetes, cystic fibrosis, rheumatoid arthritis, Alzheimer's disease, Parkinson's disease and many more. Furthermore they play an important role in many normal bodily processes, such as a control of gene expression, immune responses, control of brain synapses, the action of white blood cells in killing bacteria and others. We now know

quite a lot about the nature of the body's defenses against reactive oxygen species. More than twenty important antioxidant systems in the body have been identified". This is what this excellent little book is all about. If we are going to take personal responsibility for our own health, and if we want to have physicians who understand these important matters, we must learn the subject matter described in this book.

If your physician knows little about antioxidants I suggest you find one who does. Or give him a copy of Smythies' book. It is your contribution to his continuing education for your own health.

Smart Medicine for Healthier Living

J. Zand, A. N. Spreen & J. B. Lavallo.

Avery Publishing Group, 120 Old Broadway, Garden City Park, New York.
657 pages, 1999, US \$21.95.

I enjoy reading books written by friends who are also very good physicians and who can be trusted to promote treatment designed to help people. Al Spreen is such a physician. The other two coauthors are his associates and carry the mantle of trust from Dr. Spreen.

Smart Medicine, like an encyclopedia, is not a book one sits down and reads: it contains far too much information. To review it I read substantial portions and sampled various portions. A good sampling technique will give the flavor of any book. What I sampled I liked, and I think readers will too.

Part One can be read in full since it covers the elements of health care. Conventional medicine and outlines of other forms of therapy such as homeopathy, acupuncture, aromatherapy, herbal medicine and the importance of diet and nutrition are discussed. Part Two, the major portion, discusses a large number of common conditions or diseases starting with Abscess and ending with Yeast Infection. I looked up Raynaud's disease because I am interested in it, high blood pressure because

a member of my family has been advised that she has it, and schizophrenia. Each condition is thoroughly described under the following headings: (1) its description, (2) conventional treatment, (3) diet guidelines, (4) nutritional supplements, (5) herbal therapy, (6) general recommendations and (7) prevention. Where other therapy has been used, such as homeopathy, it is described for that disease as well.

Raynaud's disease is covered very well, probably more thoroughly than one would find in most medical textbooks. This is one condition for which there is no good treatment and therefore many different approaches are used. I do question the authors' statement that niacin should not be given when patients have gout. This is not based upon well established clinical data. I have given niacin to gouty patients and it has made them neither better nor worse. One of my patients had both gout and arthritis. The niacin kept his arthritis in control but he still continued to have recurrent episodes of gout. The reported contraindication may be based more on hypothesis than fact. Niacin may increase uric acid levels slightly, but probably never more than a few milligrams and clinically, for gout, it is innocuous. High blood pressure is described equally thoroughly under the same heading. Any physician following these guidelines for treating these conditions will do a much better job than if s/he depended only on the usual clinical descriptions in medical texts or in pharmacopoeias.

I wish I had had this book when I was a medical student. I did not find anything on schizophrenia but I really did not expect to. I looked because, since this is my favorite disease, I always look. It is relatively rare, affecting only about 1-2 percent of the population. The average physician may see only one or two per year.

In Part Three a number of important and simple procedures are described, for example, how to take your temperature and

the Heimlich maneuver. Diets are given more attention, and allergic patients will appreciate the discussion of the elimination and the rotation diets. Women should read the instructions on breast self examination.

All in all, this is a valuable book to have in one's home and office. I wish the medical schools would provide this type of information to their medical students.

**Immunopower: Full Spectrum
Nutritional Protection.** Patrick Quillin,
PhD, RD, CNS. Nutrition Times Press,
Inc. Tulsa, OK, 169 pages, 1999.

In 1994 I reviewed Patrick Quillin's book "Beating Cancer with Nutrition." That book became a bestseller and rightly so. This more recent book is not as large but packs a real wallop of information about cancer and the optimum nutritional or orthomolecular approach one should follow. It follows the premise that we are all better off if we maintain our immune system in the best possible state of repair.

In several brief chapters Quillin describes the various nutrients that play a role including vitamins, minerals, lipids, accessory factors and botanicals. He makes the important point that there is a major synergism between many of these factors and that using them singly as one would a drug, (i.e. the one- drug-one-disease theory of xenobiotic medicine), is not as helpful as combining many of these factors. Finally he provides some of the clinical data which shows that not only is the use of these nutrients and other factors theoretically correct but they actually work and many cancer patients have been benefitted. The book also provides a long list of references to the literature so that the skeptical reader can go back to the original sources for confirmation of the claims that are made.

Quillin organized the first three major conferences on "Adjuvant Nutrition in Cancer Treatment." These have played a

key role in introducing medicine to the concepts discussed in this book. The rapid development of Complementary and Alternative Medicine (CAM) in the treatment of cancer owes much to Quillin and his colleagues.

—Abram Hoffer, M.D., Ph.D.