Book Reviews

Syndrome X: The Complete Nutritional Program to Prevent and Reverse Insulin Resistance
Jack Challem, Burton Berkson, M.D., Melissa Diane Smith
Broadway Books, NY, 2000
hardcover, 250 pages

I have math anxiety, and you can thank the "New Math" for that. In elementary school, we were taught a completely different system of arithmetic every single year. As an innocent product of this confusion, I was still counting on my fingers in sixth grade. Sure, the class brainiacs could do problems in base seven, and took pride in doing homework that parents (and even older brothers) could not comprehend. The flip side was that the rest of us did not know even our basic multiplication tables, or what hillbilly scholar Jethro Clampett called "ciphering." I probably had more ability with imaginary numbers than with the real ones. I understood the binary system and Venn diagrams, yet routinely bungled even simple long division. That's the "New Math" for you. As musical satirist (and former Harvard math professor) Tom Lehrer says, "The important thing is to understand what you are doing rather than to get the right answer." So we ended up with a lot of fairly useless knowledge and virtually no practical ability in getting the job done.

This closely resembles modern medicine. In math, "X" generally indicates an unknown quantity. But there is nothing unknown about the quantity of Americans that die annually due to diseases discussed in *Syndrome X*: cardiovascular disease, diabetes, obesity and cancer. The total is astounding: over 1.6 million dead. Per year. This actually exceeds the number of all American soldiers killed in all the wars we have ever fought, put together.

Pharmacological medicine has failed to stem this grim tide. What's worse, drug medicine has become a major killer in its own right. *Syndrome X* makes no bones about it, citing a 1998 JAMA study reporting that "106,000 hospitalized patients die annually because of adverse drug reactions and 2,216,000 other hospitalized patients have serious but nonfatal drug reactions. Adverse drug reactions could rank as the fourth leading cause of death, after heart disease, cancer, and stroke." (p. 55)

The extent to which physicians doggedly employ pharmaceuticals indicates the extent to which they are unfamiliar with a safe and effective alternative already right at hand: preventive and therapeutic nutrition. When their ever-sick patients trustingly line up for still more drug prescriptions, surely the blind have been led by the blind.

I value *Syndrome X*'s appropriate and unhesitating criticism of drug-and-cut medicine. However, the book's outstanding feature is its straightforward what-you-can-do-about-it approach, complete with both preventive and therapeutic diet plans. I like practical, do-it-yourself advice that is clearly presented, well organized, and reference-filled. And I especially like books that recommend high doses of vitamins and low doses of sugar.

Syndrome X is such a book. It is based to a considerable degree on the pioneering work of Surgeon-Captain Thomas L. Cleave of the British Royal Navy. Half a century ago, Dr. Cleave stood virtually alone as he made one of the first strong scientific cases showing that sugar causes diabetes and a variety of other serious diseases. His classic book, *The Saccharine Disease* (all about sugar, not the artificial sweetener, and reviewed at http://www.doctoryourself.com/morebooks.html) was among the first to rigorously condemn modern man's gross over consumption of refined carbohydrates. While dietitians (with the full support of the food processing industry) have relentlessly denied any such connection, time and research have proven Cleave right

Syndrome X is written for those fed up with chronic illness. It wastes no words, promptly zeroing in on insulin resistance

as a major cause of life-wrecking obesity, fatigue, and adult-onset (Type II) diabetes. Heart disease, still our number one killer, is presented by the authors for what it truly is: a nutritional disease that must be prevented with nutrition and cured by nutrition. Although it is by no means the book's emphasis, cancer's roots in malnutrition are also presented.

Everybody knows that reducing their intake of dietary fat is a good idea. *Syndrome X* presses further, urging people to cut down on, or better yet cut out, refined carbohydrates. To the extent that this means sugar and processed, useless white flour, I could not agree more. But *Syndrome X* also promotes the somewhat controversial Robert C. Atkins dietary ideal of a relatively high intake of animal protein. Animal rights issues aside, I think this is not necessary, nor even a good idea. American diets are already high-protein, many of us eating three or more times the amount of protein we actually require. Long term heavy protein use overloads the kidneys and contributes to early membership in the dialysis-for-lunch bunch. (Williams, SR, (1993) "Aging Western Kidney" in: *Nutrition and Diet Therapy, Seventh Edition,* p. 668.)

This may not have been a worry for high-risk, short-lived cave men. These original eaters of the Paleolithic Diet that (along with the Mediterranean and Atkins diets) forms the basis of the book's "Anti-X" diet, probably had enough trouble finding anything to eat. Certainly their diet was very low in sugar. It was probably low in all carbohydrates. For that matter, it was probably low in everything. Ancient hunters were not awash in meat. They were opportunistic and ate what they could get and were lucky to get it. Ever notice how skinny cheetahs are? Nine out of ten cheetah attacks fail to bring down a gazelle. I doubt if humans fared all that much better than could a 50-mile-per-hour sprinting set of claws.

As written, *Syndrome X* is not pleasant bedtime reading for vegetarians. Since my sympathy has been in the meatless camp for so long (my now-adult children were raised vegetarian), I think a virtually-vegetarian version of the book might be a particularly good idea. It is also quite possible that the reader can make the necessary adjustments. For instance, nuts and especially seeds are encouraged in the "Anti-X" diet, and they are very good protein sources as long as they are well-chewed. The authors also correctly point out the special value of omega-3 "fish oils" which may, to many people's surprise, be obtained from green leafy vegetables and even walnuts (p. 94). For near-vegetarians, the book's support of eggs and low-fat dairy should go down easy. But I must say that, as a big fan of oriental cuisine, the how-to-eat-at-restaurants (Chapter 8) recommendation of having Chinese food with no rice was, for me at least, approaching the impossible.

Lest the wrong impression endure, I wish to praise *Syndrome X*'s relentless sugar-bashing. Those carbos should go, and without a farewell kiss. But I remain a complex-carbo kind of guy, and I have something of an organic brown rice, macrobiotic streak in me. Whole grains, oatmeal, sweet potatoes and especially legumes (lentils and beans) are high on my list but middle-to-low on the Anti-X diet plan (p. 86). The book's constant stress on whole, high-fiber, unprocessed foods is in general excellent. It is the protein-carbohydrate issue where I disagree.

And now for some unequivocal praise. Chapters 12 through 15 are superb discussions of the value of vitamins E, C, minerals, and other important nutrients, respectively. Recommendations of 400 to 800 IU of vitamin E and 2,000 to 4,000 mg of vitamin C are right after my own heart (and very good for yours). I have never seen a better guide to purchasing vitamin E than will be found on pages 181-183. Chromium (up to 1,000 mcg) and magnesium, zinc, selenium, manganese and even newcomer vanadium are all discussed, and discussed well. Coenzyme Q10, the vitamin C-help-

ing flavonoids, and a number of herbs are considered in brief. Alpha lipoic acid supplementation is singled out for detailed consideration in Chapter 11, a chapter that taught me a great deal. Exercise suggestions, recipes, resources, and guidelines for customizing the diet for your particular needs round out the book.

Syndrome X has a personal "talking to you" style that I enjoy very much. It is easy to read and nonetheless backed up with over 100 scientific studies. It is well designed and user friendly, with many summaries and boxes to highlight key information.

I may still have some residual math anxiety, but I have no hesitation in recommending *Syndrome X*. No, I am not going to stop advocating near-vegetarianism, because I do believe it to be the very best of diets. But, unlike the proponents of the New Math, I do not care a fig as to exactly how you get the right result as long as you do in fact get it. *Syndrome X*'s essential message is close enough for me: improve your diet and you will improve your life. That's an answer we can all agree on.

–Andrew W. Saul, Ph.D.
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Principal Author Jack Challem Responds

I appreciate the overall kind review of our *Syndrome X* book (the first of three popular books published with this title). The diet plan we describe in *Syndrome X* is not really an Atkins-style plan. Ours is protein rich, not high protein–an important distinction. It emphasizes animal protein, fish, and vegetables, while de-emphasizing sugar- and grain-based carbohydrates. With all due respect, considerable anthropological evidence (published papers by Loren Cordain and S. Boyd Eaton) indicates that there have been no fully vegetarian societies. The majority of Paleolithic and modern Stone Age societies were animal protein dominant, a few were vegetarian dominant (but not anywhere close to 100 percent), and a few were relatively evenly divided in the amounts of animal and plant foods.

The basic idea in the research and writings of Cordain and Eaton (and in our *Syndrome X* book) is that the Paleolithic hunter-gatherer diet is our evolutionary and genetic baseline, which I believe orthomolecular nutrition should build upon. Based on anthropological data from 229 stone-age cultures, some of which existed well into the 20th century, as well as paleontological evidence, pre-agrarian peoples consumed several times today's officially recommended levels of vitamins and minerals. They consumed more protein and close to a 1:1 ratio of omega-6 to omega-3 fatty acids. (Today, the ratio is approximately 30:1). They did not consume grains, dairy (other than mother's milk during infancy), or pressed oils; with some exceptions, we may be genetically maladapted to these foods. Vegetables and fruit were uncultivated and had a lower sugar content, and occasionally honey was obtained, with great risk of injury.

Unfortunately, many contemporary vegetarians do not eat much in the way of vegetables. They are hooked on breads and pastas and muffins. Grains, even whole grains, and legumes provide relatively large amounts of carbohydrates relative to other nutrients, such as those found in non-starchy or low-starch vegetables. In effect, such foods displace more nutrient-dense foods. Two books published in 2002 explore the health hazards of grains– *Going Against the Grain*, by Melissa Diane Smith (who actually conceived the "Anti-X" diet plan in *Syndrome X*), and *Dangerous Grains*, by James Braly. The health problems go beyond the huge amount of carbs in grains and legumes–lectins seem at least as unhealthy as gluten proteins. Indeed, while agriculture gave rise to more complex cultures, the extensive use of grains led to a range of degenerative diseases, according to paleontological data. There's much more in Smith and Braly's books to cogitate on, such as that whole grains may not be all

that much better than refined grains. It's revolutionary thinking, whether you agree with them or not.

I have had other vegetarians ask me about an "Anti-X" diet plan without animal foods. Apparently, there are a number of vegetarians with insulin resistance, which may stem from the large amounts of carbohydrates in the grains and legumes some vegetarians consume. My feeling is this: if a particular diet is making you sick, that is not the right diet plan for you. Again, the problem may be that some vegetarians who do not really understand nutrition. I think a vegetarian could construct a good diet high in vegetables and low in grain-based carbs. But as I'm sure you're aware, many vegetarians simple avoid animal products rather than how to construct a nutritionally sound vegetarian diet.

In my follow-up book, *The Inflammation Syndrome* (John Wiley and Sons, March, 2003), the diet plan emphasizes fish and vegetables more than chicken. It offers an anti-inflammatory supplement plan as well. One of the links between the two books is that insulin resistance increases levels of inflammation-promoting cytokines. I certainly agree with Andrew Saul that cutting out junk foods loaded with refined carbohydrates, refined fats, and refined sugars, may be the most important step any person could take. Once a person takes this step, it almost doesn't matter what "good" foods he or she eats.

The Modern Nutritional Diseases:
Heart Disease, Stroke, Type-2 Diabetes, Obesity, Cancer
by Alice Ottoboni and Fred Ottoboni
Vincente Books, Inc., Nevada, 2002
Softcover, 218 pages

The modern pandemic of cardiovascular disease, obesity, cancer and, in my opinion, many others, is caused by the corruption of our foods by breaking it into fractions and emphasizing the use of the starchy portions and decreasing the use of protein and lipid fractions. As a result of this chemical manipulation there is a severe shortage of essential nutrients, vitamins and minerals. All the evidence you need is summarized and discussed in this valuable book.

What makes this book so interesting for me is that it is written by scientists who are not involved in the field of nutritional therapy with which I am familiar. They are active in the field of public health and the environment, and judging from the nature of this book, in epidemiology as well. Their reasoning is scientific and they are not afraid to follow where the scientific data leads. They discuss the modern diet, what has been done to our modern food supply and how this change in our foods has led to the epidemic of diseases such as heart disease, stroke, obesity, and cancer. It is no longer possible to take a narrow view and to think of heart disease as something separate from diabetes or stroke because they are all the result of the modern dietary changes in our food. I will not review this book in detail but I hope to stimulate interest in it. It changed my attitude toward nutrition and medicine. I hope this excellent book by the Ottobonis will have a similar impact on its readers.

The Modern Nutritional Diseases will probably not be appreciated by the medical establishment nor reviewed favorably by their journals for it describes the result of a vast global nutritional experiment conducted over the past two centuries, especially over the past fifty years on an unsuspecting population without their informed consent. If it were planned today it could never pass any competent ethics committee. This global experiment was motivated by commercial interests with little regard for what the results might be on the people who were its subjects. The results have not been good. We can credit the current crisis in modern medicine and the associated costs to this experiment.

Development in the chemistry of foods

is so advanced that very little food today escapes the administration of chemistry. We have the massive consumption of the white, flour, rice, sugar and the extraction of food constituents, which are then recombined to make attractive and tasty products, which have the appearance of food but are food artifacts. The doughnut is a perfect example of what is wrong with our modern diet today. It is made from white flour, soaked and cooked in hot oil then surrounded by sugar. In 1950 about 15 percent of the food consumed was commercially prepared. Today it is about 85 percent. Other changes include the addition of chemicals designed to enhance the commercial properties of the product with little attention paid to the nutritional quality of the complete product.

The impact of this massive dietary change has largely escaped the attention of the medical establishment and even of the nutritional establishment but it has not gone unnoticed. In the 1940s, Cleave published his remarkable findings and described what he called the "Saccharine Disease." He had concluded that a large number of diseases not considered to be related to each other were all symptoms and signs of a much larger disease created by the consumption of refined flours. These included conditions such as coronary disease, constipation and cancer of the colon.

For the past four years I have been hosting medical students who come to my office to learn something about complementary psychiatry. This a program arranged by the local university. I routinely ask them how much nutritional education they have had in their four years. So far, with exception of one medical school in Canada, they have been given one hour over four years. Naturopathic and chiropractic colleges provide much more than that.

In my opinion this is a very valuable book. Medical students should study it in order to be educated in what their medical schools are failing to give them.

–A. Hoffer, M.D., Ph.D.

Optimum Nutrition for the Mind
by Patrick Holford
Judy Piatkus Ltd., London, 2003
Hardcover, 383 pages

What does every cell in our body need for optimum performance? The brain is part of our body and its needs are the same with the exception that the brain is busier than the rest of the body. Even at rest, a one-kilogram brain uses about 25 percent of all the energy being produced at that time. For a long time it was assumed that the cavity in our head did not need to be nourished and for decades psychiatrists were slow to release what was common knowledge among their physician colleagues that nutrition did play a major role. Books such as this one by Patrick Holford properly emphasize what our brains need to become and remain well.

We must have calories, best derived from complex carbohydrates, from "smart" fats including the phospholipids, and from protein which supply the amino acids These are described in Part One. In Part Two foods which can harm the brain are described, along with other foods which are protective and helpful to the brain. It is clear that proper nutrition helps maintain intelligence, memory, and proper mood and prevents the development of thought disorder such as is found in schizophrenic patients. The first half of this book prepares us for the second half: how to cope with the various diseases which arise from malnutrition of the brain.

When I began my psychiatric training the mental diseases were known not to have any relationship to food and nutrition. We believed that the disorders arose from some faulty relationship with parents, or spouses or siblings, or the community. Anyone who thought that food might play a role was considered very eccentric. Many years ago in California a woman demanded that her psychiatrist treat her with niacin.

She appealed to the courts. Her psychiatrist gave as evidence of her insanity that she believed that this vitamin could help her. When I first attended the annual meeting of the American Psychiatric Association held in California in 1952, among the roughly 900 attendees only two physicians with PhDs in biochemistry were present. I was one of them. It is evident we have come a long way. Orthomolecular psychiatry is the culmination of the movement from the idea that the brain needs no nourishment from food chemistry, to the present situation when we realize that most of the serious mental diseases are in fact biochemical anomalies, which can be corrected.

Patrick Holford studied with Carl Pfeiffer many years ago, then returned to England were he founded the Institute For Optimum Nutrition in 1984. Several years ago he invited me to present my views on orthomolecular psychiatry. My wife and I happily went off to London, where Patrick worked me to the bone, looked after us most graciously, and which I enjoyed immensely. It was so rewarding to talk to dedicated students so keen on learning the principles of orthomolecular psychiatry.

In this book he details the treatments that may be used for the schizophrenias, for the mood disorders, for eating disorders, for aging and more. If doctors and other workers were to use the methods so well described in this book and spend a lot less on powerful drugs such as antidepressants and tranquilizers we would all be so much better. But we have a very difficult task since the drug companies with their multi-million-dollar marketing budgets keep their wares continually before us in the medical journals, on television, in newspapers, while those of us who use a more rational therapy do not have the means to brainwash the public. For this reason we need books such as this one.

Read this book and become one of the missionaries to promote more intelligent treatment of the mentally ill through orthomolecular psychiatry and for the physically ill through orthomolecular medicine.

–A. Hoffer, M.D., Ph.D.

Correction: In Book Reviews, *JOM 17.3, 2002, p.179, the name of the author of the review of* The Vitamin E Story, *Andrew W. Saul, was omitted.*