



***Antioxidant Vitamins and Health: Cardiovascular Disease, Cancer, Cataracts, and Aging***, by Claude Fernand Bourgeois, 2003, 306 pages, hardcover, \$72. HNB Publishing, New York.

This book provides a detailed review of scientific research on the potential for the antioxidant vitamins C and E and  $\beta$ -carotene to prevent cardiovascular diseases, cancer, and cataracts and to slow the process of aging. The first 3 chapters provide background on the biochemistry of reactive oxygen and nitrogen species, endogenous and exogenous antioxidant systems, and potential prooxidant activities of vitamins C and E. A discussion of potential prooxidant effects of  $\beta$ -carotene is included in a later chapter on antioxidant vitamins and cancer. The most useful chapters in the book are those that review the available research on the effects of antioxidant vitamins and  $\beta$ -carotene on cardiovascular diseases, cancer, and cataracts. In addition to a short section on the role of reactive oxygen species in causing disease, each chapter includes a detailed review of relevant epidemiologic studies of antioxidant intake and randomized controlled trials of antioxidant supplements. Of particular interest are discussions of the results of the recent SUVIMAX (SUPPLEMENTATION EN VITAMINES ET MINÉRAUX ANTIOXYDANTS) study, a 9-y randomized controlled trial of antioxidant supplements (20 mg zinc/d, 100  $\mu$ g selenium/d, 30 mg vitamin E/d, 120 mg vitamin C/d, and 6 mg  $\beta$ -carotene/d) in 15 000 French men and women.

The chapter on aging and antioxidant vitamins provides extensive discussions of genetic, free radical, and mitochondrial theories of aging but offers little evidence that antioxidant vitamins or  $\beta$ -carotene increases longevity or slows age-related functional declines. Given the book's title, the author's reason for including a chapter on dietary phenols and polyphenols is unclear. In the final chapter, the author offers his conclusions, based on the research presented in the preceding chapters, on the potential for antioxidant vitamins,  $\beta$ -carotene, and polyphenols to prevent chronic diseases and slow aging.

Missing from the book is an organized discussion of the advantages and shortcomings of available biomarkers of in vivo oxidative damage. Such a discussion would have been invaluable for assessing the significance of those studies that examined the effects of antioxidants on various biomarkers of oxidative damage to lipids, proteins, and DNA. The mechanistic discussions in the book focus primarily on the potential for antioxidant vitamins and  $\beta$ -carotene to prevent oxidative damage to macromolecules; such damage may increase the risk of chronic disease and accelerate aging. Unfortunately, research addressing antioxidant effects on more subtle changes in cellular redox status and cell signaling pathways that affect inflammation, proliferation, and apoptosis is largely omitted.

With respect to the organization of the book, I would have preferred to read the author's conclusions at the end of each chapter while the details of the research were still fresh in my

mind. However, some readers may appreciate having all of the author's conclusions summarized in one chapter at the end of the book. The book is likely to be of interest to scientists and graduate students conducting or planning research on the effects of antioxidants and oxidative stress on chronic disease risk. Although the author's conclusions are optimistic regarding the potential health benefits of antioxidants, his recommendations are too vague to be of much help to clinicians.

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***Food Fight: the Inside Story of the Food Industry, America's Obesity Crisis, and What We Can Do About It***, by Kelly D Brownell and Katherine Battle Horgen, 2003, 352 pages, hardcover, \$24.95. McGraw-Hill, Columbus, OH.

Obesity now rivals smoking in terms of health care costs and adverse effects on health and well-being, and the rapid rise in the prevalence of obesity over the past 2 decades shows no signs of leveling off. The current and future consequences of the obesity epidemic for national health make *Food Fight* a very timely book. Brownell and Horgen challenge the reader to reexamine the toxic environment in which we live and take note of many of the ways in which we, as a nation, have allowed this environment to encourage overeating and inactivity.

The authors explore the economics of food and make clear that the profit motive of the food industry is not consistent with the current nutritional needs of the nation. Simply stated, increased food consumption means increased profits—but increased food consumption is not consistent with the health needs of our over-nourished population. The authors expose the role of corporations that sell foods that contribute to the obesity epidemic, but they stop short of painting the food companies as nefarious villains. Indeed, the authors seem somewhat sympathetic to the dilemma faced by these corporations and cautiously consider the roles that these food companies could play in solving the obesity problem.

In addition to addressing the economic aspects of our toxic environment, the authors confront the thorny issues of personal choice versus "big brother" public policy interventions. They take a reasoned approach and present strong arguments for viewing the food environment in the same way as we do air and water,

for which public policy intervention is accepted for the common good. Most easily accepted will be changes that affect the environments of children. The picture painted of children subjected to highly seductive, well-coordinated campaigns to entice them to consume high-calorie foods is sobering. These campaigns permeate television and movie programming aimed at children, accounting for hours of advertising, point-of-purchase prompts, and inducements within schools. A full understanding of how children are targeted, along with the stark fact of the recent 300% increase in the prevalence of obesity in children, is likely to leave few Americans unmoved.

*Food Fight* gives a less-detailed accounting of the role that the food industry plays in the obesity epidemic than does another recent book, *Food Politics* (by Marion Nestle, 2002). Also, the issues of food safety and labor practices summarized in *Fast Food Nation* (by Eric Schlosser, 2002) are not considered in *Food Fight*. Instead, *Food Fight* describes the current obesigenic environment and then focuses on solutions in the form of public

action. Recommended actions are summarized in a final section of the book and include taxes on unhealthy foods, limits on food advertising, a national strategic plan to increase physical activity and healthy eating, and research to better understand large-scale efforts to change diet and activity.

The authors quote Gandhi on the progress of social movements: "First they ignore you. Then they laugh at you. Then they fight you. Then you win." If you are in the ignoring or the laughing stage concerning this issue, you need to read this book.

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