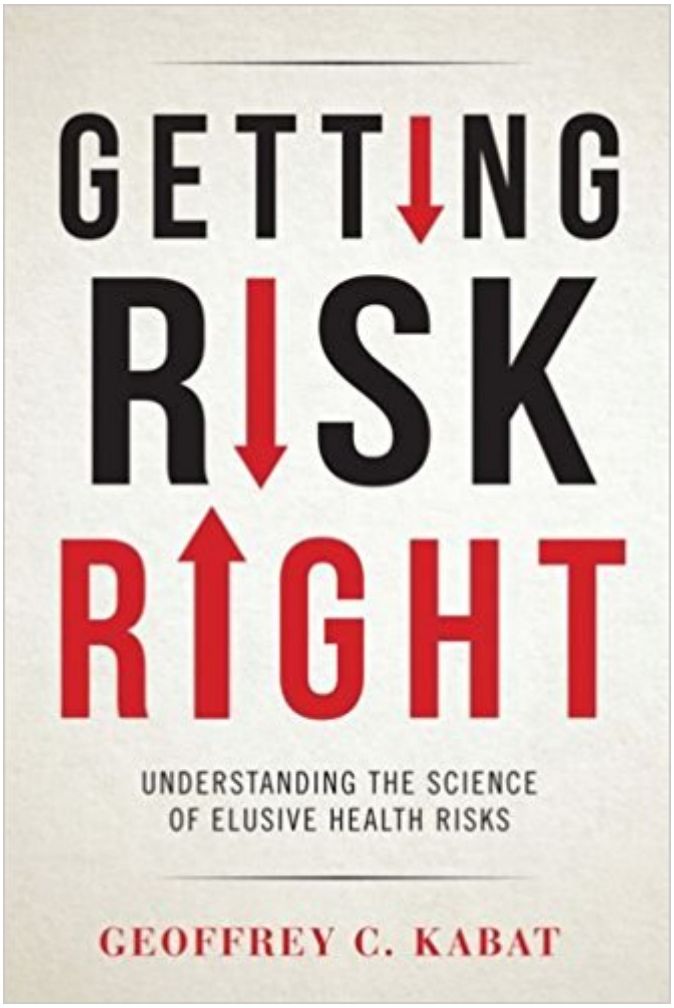
Getting Risk Right: Understanding The Science Of Elusive Health Risks



Synopsis

Do cell phones cause brain cancer? Does BPA threaten our health? How safe are certain dietary supplements, especially those containing exotic herbs or small amounts of toxic substances? Is the HPV vaccine safe? We depend on science and medicine as never before, yet there is widespread misinformation and confusion, amplified by the media, regarding what influences our health. In Getting Risk Right, Geoffrey C. Kabat shows how science worksÃ¢â ¬â ¢and sometimes doesn'tÃ¢â ¬â ¢and what separates these two very different outcomes.Kabat seeks to help us distinguish between claims that are supported by solid science and those that are the result of poorly designed or misinterpreted studies. By exploring different examples, he explains why certain risks are worth worrying about, while others are not. He emphasizes the variable quality of research in contested areas of health risks, as well as the professional, political, and methodological factors that can distort the research process. Drawing on recent systematic critiques of biomedical research and on insights from behavioral psychology, Getting Risk Right examines factors both internal and external to the science that can influence what results get attention and how questionable results can be used to support a particular narrative concerning an alleged public health threat. In this book, Kabat provides a much-needed antidote to what has been called "an epidemic of false claims."

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Customer Reviews

Geoffrey Kabat's vital, wide-ranging book cannot have arrived at a more fortuitous time. As individuals and societies, we are constantly asked to gauge risksÃ¢â ¬â ¢and we often do so

hastily or irrationally, with grave consequences. In Getting Risk Right, Kabat provides a crucial framework to think about risks, biases, and judgment. Everyone should read his analysisÃ¢â ¬â ¢at once clear-eyed, thoughtful, and beautifully writtenÃ¢â ¬â ¢to understand the nature of risk. I cannot overstate the importance of this book. (Siddhartha Mukherjee, author of The Emperor of All Maladies)Some risks are real, while others are much feared and speculated about, but of no portent. This important book by Geoffrey Kabat shows how the science of studying risks can lead to major discoveries that can improve the lives of millions by identifying and validating risks that do matter; or can ruin lives by propagating spurious, nonexistent risks in the public mind and in the scientific literature. Getting Risk Right carefully surveys a scientific field that is often the topic of hot debate and offers a balanced presentation. It is a fascinating read. (John Ioannidis, professor of medicine and health research and policy, Stanford University)Zika, Ebola, vaccines, dioxin, radon, black mold, environmental toxins. The media constantly bombards us with stories about unseen agents causing insidious harms. In Getting Risk Right, Geoffrey Kabat uses four case studiesÃ¢â ¬â ¢BPA, cell phones, the HPV vaccine, and dietary supplementsÃ¢â ¬â ¢to teach us not only whether these products are harmful but also how to grade information. Using Kabat's method, readers will be able to determine whether the next media-infused risk is a real one. Filled with cartoons, case histories, literary references, and fascinating asides, Getting Risk Right is the last book you will ever need to read on this subject. (Paul A. Offit, author of Autism's False Prophets)Geoffrey Kabat's writing, as usual, is phenomenally clear and expressive. His logical cadences are both airtight and a pleasure to read. His insights into the workings and mis-workings of science, the sociology of science, and the interplay of personalities and organizations are penetrating and precise, and above all original. (Steven D. Stellman, professor of clinical epidemiology, Columbia University Mailman School of Public Health)What matters most? How can we use scientific findings intelligently to set our public priorities? Through engaging anecdotes, and a clear-eyed analysis of the strengths and weaknesses of scientific work, Getting Risk Right helps us answer those questions. Perhaps more importantly, Dr. Kabat enhances our understanding of how science leads to action, and how we can better use science to inform a more rational and productive public agenda. (Sandro Galea, Dean, Boston University School of Public Health)An important study that teaches how to decipher science and medical news. (Library Journal)It is not easy feat to take complex issues and make them both understandable, easily readable and interesting, but Kabat does just that in Getting Risk Right. For people who are trying to sort through the deluge of conflicting information that we see every day, this book is a must. (Josh Bloom American Council on Science and Health)Kabat writes clearly, but his discussions of association,

causality and toxicology are, at times, a bit technical for the general reader. More intriguing Ã¢â ¬â ¢ and more unique, in my experience Ã¢â ¬â ¢ is his insider's dissection of the psychology of how environmental studies are funded, reported and interpreted by their authors and by various audiences. (Washington Post)Excellent.... A potent antidote to the toxic misinformation polluting our public health discourse. (Reason)This book will provide you with defensive armor against alarmist headlines and it will help you judge the credibility of new studies. Highly recommended. (Harriet Hall, MD Science-Based Medicine)

Geoffrey Kabat is Senior epidemiologist at the Albert Einstein College of Medicine of Yeshiva University and Montefiore Medical Center. He is the author of Hyping Health Risks: Environmental Hazards in Daily Life and the Science of Epidemiology and Getting Risk Right, both with CUP. He also blogs regularly for Forbes magazine.

In an influential paper published in 2005 Dr. John Ioannidis concluded that most published research findings in the medical literature are false. His conclusion that most published findings are false has not been refuted, but neither has the knowledge of this dismal conclusion appeared to have had a beneficial effect on the way that studies in most areas of public health research are conducted, analyzed, interpreted, and reported, either to the scientific community in published journals or to the public in news reports. Empirical estimates have indicated that there may be as many as 20 false published findings for every true published result, and it has become clear that sorting out true causal relationships in the face of the high background rate of false-positive findings is a daunting task, not only for scientific and regulatory bodies, but even more so for the general public.In ÃƒÂ¢Ã â ¬Ã Å“Getting Risk RightÃƒÂ¢Ã â ¬Ã Â•, Geoffrey Kabat explores why it is so difficult for scientists to reach valid conclusions from their investigations, and provides some guidance to readers, both in the scientific community and the lay audience, as to how one can distinguish between a body of scientific evidence that is likely to reflect a true causal relationship and body of evidence that does not support a causal interpretation of a reported association (or correlation).The first three chapters provide an excellent summary of the many pitfalls and biases that can lead even experienced researchers astray in the interpretation and reporting of their studies. Kabat also examines how the complex interaction between the scientific community and society at large (including the media, regulatory bodies, environmental advocacy groups, etc.) complicates the communication of potential health risks to the general public. This is particularly a problem for studies into possible environmental causes of chronic diseases, because of the extremely strong

interest in the public regarding factors that might have a direct effect on the health and welfare of individuals.Chapters four through seven present detailed case studies of four actual scientific investigations into the environmental causes of disease, two of which resulted in the establishment of firm causal conclusions and two of which, in spite of several decades of research, have only resulted in confusion and continued controversy over whether a causal association exists. Kabat relates these fascinating case studies in order to draw out important characteristics (both of the scientific studies and the way in which they are reported) that differentiate between a body of strong scientific evidence that demonstrates a causal relationship between an exposure and chronic disease risk and a weak body of evidence that may well keep a controversy alive, but holds little promise that continued research will lead to a resolution of the hypothesized exposure-disease association.ÃƒÂ¢Ã â ¬Ã Å“Getting Risk RightÃƒÂ¢Ã â ¬Ã Â• is an excellent book, which should be of interest not only to scientists and science journalists, but also to members of the public who want to increase their ability to make sense out of the frequently confusing, and often contradictory barrage of media reports about potential environmental health hazards. ÃƒÂ¢Ã â ¬Ã Å“Getting Risk RightÃƒÂ¢Ã â ¬Ã Â• makes a valuable contribution on a difficult topic, and I highly recommend it to all readers with an interest in environmental health science.

Professor Kabat has rendered thoughtful service by evaluating, at length, four claimed health risks. Writing such a book is time consuming, requiring careful reading of abundant literature about a chosen topic, to discriminate strong claims from unpersuasive ones.One wonderful epidemiological triumph was discovery of a dietary cause of kidney failures and liver cancers especially within the Balkans via unknowing poisoning of bread. The bread was made of wheat grown in fields which also naturally contained some aristolochia, a wild flowering plant also known as European birthwort. This plant harbors a potent carcinogenic acid. As of 2003, Aristolocohia products were commercially available via the Web marketed as a natural herb, in an amount great enough to poison 100 million people. This hints at the dangers that may lurk within other natural dietary supplements that tend to be given scant regulatory scrutiny. The plant has also been used within European, Chinese, and South American medicine for centuries, with kidney damage finally emerging years after dose.A second health triumph explained by Kabat is reducing incidence of cervical cancer after learning the roles of viruses in promoting this kind of cancer. An inspiring triumph of medical detective work that has saved a great number of lives.In contrast, Kabat chooses two health alarm claims for which supporting evidence is uncompelling. Do cell phones cause brain cancer or can ultra low exposures to synthetic molecules disrupt human endocrine systems? When a tiny environmental dose of

Bisphenol A (BPA) is compared to a harmful dose of synthetic estrogen DES, the latter dose is massively greater, by an astounding nine orders of magnitude. The famous principle of pharmacology, the dose makes the poison, is decisive. It is absurdly implausible that such a tiny environmental dose is harmful. "The endocrine disruption story" (championed by zoologist Theo Colborn in a 1996 book, Our Stolen Future, endorsed by vice president Gore) is a cautionary tale "of what happens when science is hijacked by people who use the power and the prestige of science to scare the public, work the media, and pressure health agencies to pile on the bandwagon and fund work that stands little chance of advancing our knowledge about the complex processes involved in normal development and disease.""There are real problems and there are false problems, that is, problems that, to the best of our knowledge, are not problems at all. Vaccines, genetically modified crops and foods, and cell phones are not threats to our well being. Rather they are among the greatest advances contributing to human welfare. We need to get better at distinguishing false problems from real problems."Kabat authors a column published by Forbes. He celebrates medically useful epidemiology and temperately debunks implausible claims that circulate avidly in the popular press. "It is now widely recognized that much of what is published is either wrong or exaggerated and there there is an epidemic of false claims that gain wide circulation and are not easily dispelled."Society is well served by scientists who can honestly discriminate the quality and uncertainties within health alarms. We can only hope many budding epidemiologists will find Kabat’s work inspirational and contribute equivalent work of their own.

environment (Earthscan Risk in Society) Who's In Your Social Network?: Understanding the Risks Associated with Modern Media and Social Networking and How it Can Impact Your Character and Relationships The Hidden Lives of Owls: The Science and Spirit of Nature's Most Elusive Birds An Elusive Science: The Troubling History of Education Research Quantitative Health Risk Analysis Methods: Modeling the Human Health Impacts of Antibiotics Used in Food Animals (International Series in Operations Research & Management Science) Quantitative Health Risk Analysis Methods: Modeling the Human Health Impacts of Antibiotics Used in Food Animals: 82 (International Series in Operations Research & Management Science) Climate Health Risks in Megacities: Sustainable Management and Strategic Planning VDU Terminal Sickness: Computer Health Risks and How to Protect Yourself and Comply With the DSE Directive and Latest International Safety Standards Radiation Nation: Fallout of Modern Technology - Your Complete Guide to EMF Protection & Safety: The Proven Health Risks of Electromagnetic Radiation (EMF) & What to Do Protect Yourself & Family Vaccine Safety Manual for Concerned Families and Health Practitioners, 2nd Edition: Guide to Immunization Risks and Protection