

Brain Stimulation in Psychiatric Treatment

edited by Sarah H. Lisanby, M.D. In book series: Review of Psychiatry, vol 23, no. 1. American Psychiatric Publishing, Inc., Washington, D.C., 2004, 153 pages, \$34.95 (paper).

Dr. Lisanby has produced a gem of a review on a very timely topic, namely, somatic treatments that involve electrical stimulation targeting the brain. Psychiatrists know about electroconvulsive therapy (ECT), but may not be aware of several newer brain stimulation methods. The alphabet soup list of treatments includes TMS (transcranial magnetic stimulation), MST (magnetic seizure therapy), DBS (deep brain stimulation), and VNS (vagal nerve stimulation). These treatments differ in what stimulus is applied (electrical or magnetic pulses), the site to which it is applied (the scalp, deep brain structures, or a cranial nerve), and whether the stimulus is intended to evoke a seizure. Each of these has been used to treat depression, and that is the primary focus of this volume. The book is especially timely given the U.S. Food and Drug Administration's approval of VNS in July 2005 for treatment-resistant depression.

The chapter authors are well selected and, in several cases, have more experience with the technique described than any other center. They write clearly and in a well-organized fashion, save for occasional duplication of content. The data are presented at a level of detail adequate for the reader to draw his or her own opinions, but extraneous details are omitted so that most chapters are reasonably concise. Each chapter begins with a brief but excellent introduction to the subject material. Several chapters have exceptionally good introductory material that itself would recommend the book.

In my mind, the most compelling virtue of this book is its balance. The authors achieve the remarkable feat of conveying their enthusiasm for the potentials of the technique they address while being very candid about the limitations of the evidence in its current state. To give one example, some centers have proceeded to trials of MST. Yet Dr. Lisanby, who has generated much of the pertinent data, writes that even after MST delivery parameters are optimized, "[I]t will be necessary to compare MST with conventional antidepressant treatments in randomized clinical trials to establish efficacy" (p. 88). The book's tough-minded, evidence-based approach is delightfully encapsulated by Dr. Harold Sackeim's comment about the common but erroneous assumption that an effective treatment implies something about pathophysiology: "[N]o one has experienced major depression because he or she has been 'seizure deficient,' yet ECT is our most effective short-term antidepressant" (p. 104). This book does a truly fine job of presenting the evidence while identifying the key limitations of existing data.

Given the realities of publication, any book will be somewhat out of date. The authors and others are studying newer methods of brain stimulation than those discussed, and additional data are available on the methods discussed. However, I believe anyone who wants to learn about newer methods would benefit substantially by starting with the careful introduction and background material presented in this volume. Additionally, every chapter has a number of references since 2001.

In summary, I highly recommend this book, not only to psychiatrists or others interested in brain stimulation, but also as a model to reviewers of new treatments in any field.

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Introduction to Psychoneuroimmunology

by Jorge H. Daruna, M.D. Elsevier Academic Press, Burlington, Mass., 2004, 280 pages, \$69.95.

Psychoneuroimmunology is a daunting term burdened with the riddles of 3 separate fields, each of which is quite difficult to get your arms around. In this evenly written, highly informative monograph, Dr. Jorge Daruna tames a nearly impossible task masterfully. He carefully explains somatic management of complex social and environmental stressors without getting lost in the details, keeping always clear the relevance of the seemingly endless minutiae. This is an area of research that is rapidly growing but not quite out of toddlerhood, so that the most complex levels of molecular interplay still need to be learned. There is no easy bottom line yet, not like in the penicillin story. It's very exciting to see a book that can present the state of the art comprehensively and comprehensibly so that a student could be inspired, and not frightened, by the challenges ahead. Hopefully, someone who learns from this book will help to complete our understanding of the complex interactions that govern relationships between the psyche, neuronal pathways, and immune functions.

How can all this be wrapped into a concise 12-chapter text? Thankfully, some details were omitted, such as the term *docosahexenoic* (or *docosahexaenoic*, for some) acid. It isn't named, maybe to protect the reader from overkill. It is discussed, though, in the context of the eicosanoids, which are explained clearly as being derived from omega-3 and omega-6 fatty acids. (Now that's food for thought.) Examples of their essential psychiatric and immunologic functions are clearly presented, without elaborating on all the biochemical events. The brief discussions certainly tempt the palette, prompting the reader to head off to Google or PubMed for more information.

The introductory goals of this text were set out to meet the needs of the classroom, where students in any health care field would find this course interesting, rewarding, and essential to their future work. The course is pertinent to medicine, psychology, social work, nursing, public health, and other fields. With only basic biology as a background, most readers will be able to work through these chapters with the aid of the included, well-prepared glossary. Even with an introductory tone, it remains a high-level text so that the advanced medical student or practitioner in need of a refresher will find plenty of highly valuable information. It is not, however, going to satisfy the needs of an advanced researcher in the field of psychoneuroimmunology except as a source for quick definitions or as a teaching tool. We all need to understand these relationships so that we can inform our patients, clients, and public—the body's responses to stress start with healthy nutrition and a sound psyche. Dr. Daruna shows us the whole picture, bringing together the interrelationships between psychiatry, endocrinology, stress responses, immune functions, common diseases (infectious, allergic, cancer, autoimmune), sleep, exercise, diet, and even the role of religion. This is an inspiring work, an introduction that excites the reader to want more. That's the best any teacher could ask.

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