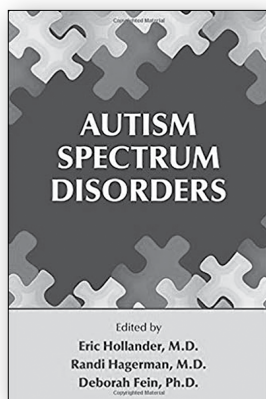


BOOK REVIEWS

Autism Spectrum Disorders



Edited by Eric Hollander, Randi Hagerman,
and Deborah Fein; Washington, DC;
American Psychiatric Association
Publishing; 2019;
ISBN 978-1-61537-052-8; pp 360;
\$61 (paperback).

First described by Kanner and Asperger in the 1940s, autism spectrum disorders (ASDs) is a group of neurodevelopmental disorders characterized by persistent deficits in social interaction and communication, and restricted, repetitive patterns of behavior, interests, or activities. This group of disorders has received more attention lately, and it almost looks like the prevalence of ASDs has been increasing. However, “the recent upward trend in rates of *prevalence* cannot be attributed directly to an increase in the *incidence* of the disorder or to an epidemic of autism.... good evidence indicates that changes in diagnostic criteria and practices, policies for special education, service availability, and awareness of ASDs in both the lay and the professional public may be responsible

for increasing prevalence over time. It is also noteworthy that the rise in number of children diagnosed occurred concurrently in many countries in the 1990s, when services for children with ASDs also expanded significantly” (p 27).

With the estimated prevalence of 0.7% (representing well over 2 million individuals in the United States) and increased demands for costly services for individuals with ASDs, there is an increased need for a better understanding of ASDs and the development of effective treatments and management strategies.

The *Autism Spectrum Disorders* volume edited by Drs. Eric Hollander, Randi Hagerman, and Deborah Fein presents the current state-of-the-art summary of available information about ASDs. The book consists of 12 chapters addressing epidemiology; genomics and epigenomics; environmental toxicity and immune dysregulation; psychiatric assessment and pharmacologic treatment; pediatric and neurologic assessment and targeted treatments; cognitive assessment; behavioral treatments; the DIR (Developmental, Individual Difference, Relationship-Based) model—a parent-mediated approach to interdisciplinary assessment and comprehensive intervention; autism interventions in schools; language, communications, and occupational therapy interventions; complementary and integrative approaches; and transcranial

magnetic stimulation (TMS) and noninvasive brain stimulation.

The first 3 chapters addressing epidemiology, genetics, and environmental toxicity and immune dysregulation are fairly complex, dense, and not really clinically useful. I mentioned the main conclusion of the epidemiology of ASDs. The main message regarding genetics is that ASD is categorized by highly heterogeneous clinical phenotypes and genotypes and that “hundreds of genes are estimated to contribute to ASD, resulting in a unifying spectrum of phenotypes, including language and social deficits with varying subphenotypes” (p 49). The third chapter notes that numerous studies reported various immune dysregulations in individuals with ASDs, and that this dysregulation may be the result of an exposure to organic pollutants (eg, polychlorinated biphenyls [PCB]), which could interfere with normal immune and neural development.

The chapter on psychiatric assessment and pharmacologic treatment emphasizes the American Academy of Pediatrics’ recommendations that all children should be screened for ASD at age 18 and 24 months in addition to regular developmental surveillance. The elements of such evaluation are similar to regular psychiatric evaluation, with an emphasis on social communication, social interaction, and restrictive and repetitive behavioral patterns. The part on pharmacologic treatment discusses the use of selective serotonin reuptake inhibitors (mostly fluoxetine), atypical antipsychotics

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(risperidone, aripiprazole), mood stabilizers, stimulants, and various experimental approaches (eg, oxytocin and vasopressin, memantine, amantadine).

According to the chapter on cognitive assessment, “Understanding the cognitive level and profile of the individual being assessed, no matter what the age, is crucial for providing the therapy and support that will help the individual to fulfill his or her potential and enjoy meaningful vocational and social activities. The huge range of cognitive ability in the autism spectrum, from severe intellectual impairment to very superior intelligence, and the changes that can be seen over time in cognitive and adaptive skills make characterization of each individual imperative” (p 191).

Several chapters focus on specific aspects of management. The behavioral treatments chapter discusses applied behavioral analysis, early intensive behavioral intervention, pivotal response treatment, the Early Start Denver Model, and treatment outcomes and their prediction. As noted in the chapter on school-based intervention, we

know that this type of intervention is important for individuals with ASDs; however, we lack research data on it, and do not provide good training for intervening school staff and peers. The chapter on complementary and integrative approaches reflects the frustration or desperation that families have with the lack of effective treatments for ASDs, as “Families commonly use complementary and integrative medicine (CIM) in an effort to improve outcomes for their children with autism spectrum disorder” (p 307). Actually, according to some surveys, up to 95% of families use CIM for their child, and the main reasons cited for CIM use have been concerns about medication safety and adverse effects. The table in this chapter lists >50 potential biomedical CIM treatments. The chapter reviews some of these, including melatonin, omega-3 fatty acids, methyl B₁₂, sulforaphane, pancreatic digestive enzymes and probiotics, micronutrients, vitamins, diet, immune therapies, hyperbaric oxygen treatment, massage, meditation, exercise, environmental/sensorimotor enrichment, music

therapy, animal-assisted/equine therapy, and neurofeedback. A few of them have “significant promise for treating ASD or ASD-associated symptoms.”

The last chapter deals with the use of TMS. Again, it is difficult to imagine an immediate clinical application of TMS for ASD, as “There is no single brain target for [repetitive] TMS in ASD; indeed, it is somewhat difficult to find a brain region that neuroimaging research has not implicated in the pathophysiology of ASD” (p 333). One may ask why then is an entire chapter devoted to TMS for ASD?

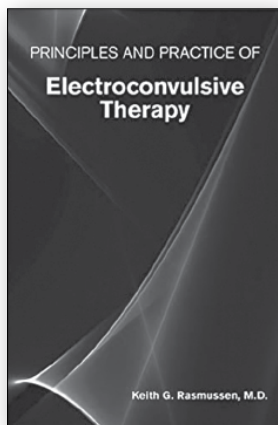
Autism Spectrum Disorders is an interesting book in search of an audience. It is basically a series of scholarly, detailed review articles that may be appreciated by some. However, its clinical utility is a bit questionable. Nevertheless, people running ASD treatment programs will appreciate it as a resource book.

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DISCLOSURE: Dr. Balon is a member of the American Psychiatric Association Publishing editorial board.

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Principles and Practice of Electroconvulsive Therapy



By Keith G. Rasmussen; Washington, DC;
American Psychiatric Publishing; 2019;
978-1-61537-241-6; pp 322;
\$60 (paperback).

Electroconvulsive therapy (ECT) is unquestionably the most effective treatment modality used in psychiatry. Most psychiatrists feel that because they know a little bit about ECT, or at least know when to refer for this form of treatment, that they do not need to know much more. When I received this book, I thought, “Three hundred pages about electroconvulsive therapy? That seems a lot of reading in this world of shorter and shorter guides to various forms of treatment, especially about something as simple as ECT.” Nevertheless, I started to read and soon found that I was mistaken, both about there being too much information about ECT and the simplicity of ECT. The book was much more interesting than I expected.

Dr. Keith G. Rasmussen’s *Principles and Practice of Electro-*

convulsive Therapy consists of 10 chapters: 1) Introduction to ECT; 2) Patient Selection for ECT; 3) Patient Education and Informed Consent for ECT; 4) The Pre-ECT Medical Workup; 5) Anesthesia for ECT; 6) ECT Technique, Part I: Managing the Individual Treatment; 7) ECT Technique, Part II: Managing the Course of Treatments; 8) Preventing Relapse after ECT: Maintenance ECT and Pharmacotherapy; 9) Cognitive Effects of ECT; and 10) ECT Versus Other Neuropsychiatric Treatments. The chapters are well written, comprehensive and well referenced (the book includes 46 pages of references).

The first chapter is fairly standard coverage of what ECT is, its history, and the fact that we all know that we do not know how ECT works. The second chapter is another standard discussion of patient selection/indications for ECT, and it provides a solid review of the evidence of ECT’s efficacy in various indications. It includes a useful table summarizing factors favoring the use of ECT in depressed patients, and factors weighing against the use of ECT in these patients.

I found the chapter on patient education and informed consent very useful. It discusses issues such as broaching ECT with a patient (including specific suggestions of what to say); generic templates of ECT descriptions for patients and families; and patient and family education (pros and cons of written brochures

and videos), including a reference to Max Fink’s book for patients and families.¹ Furthermore, this chapter reviews obtaining informed consent, and the capacity to consent to ECT. As Dr. Rasmussen notes, “Capacity can be conceptualized as a set of abilities, including cognitive, emotional, behavioral, and ideational factors, any one of which may interfere with what physicians perceive as needed mental health care” (p 48). Dr. Rasmussen also emphasizes that the ECT clinician will need to be guided by local laws and hospital policies. He also suggests that an “ECT consent form can easily cover no more than the front side of one standard piece of paper, with a place for signatures by the patient and the physician” (p 50). These examples highlight how detailed and practical this book is.

The chapter on pre-ECT workup is again very clinically useful, going into interesting details, such as that patients with glaucoma should have their intraocular pressure checked before an ECT course if it has not been checked recently. The chapter on ECT anesthesia is similarly detailed and educational for anyone who does not know much about this topic.

The 2 chapters on ECT technique include useful tables—one on the steps to take for conducting an ECT treatment, and another on the tasks of the psychiatrist managing a course of ECT treatments—as well as useful illustrations (electrode placements; EEG artifacts). Dr. Rasmussen also discusses concomitant use of various medications during the course of ECT, and issues such as whether to start a new medication during the course of ECT, cognitive monitoring, and

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monitoring of other adverse effects. The chapter on preventing relapse not only covers maintenance ECT, but also maintenance pharmacotherapy after index ECT. Dr. Rasmussen notes that virtually all post-ECT patients will be treated with some form of maintenance pharmacotherapy, even if maintenance ECT is also used.

The discussion on the cognitive effects of ECT is quite detailed and touches on issues such as work and school performance and driving vehicles (patients should not drive for at least 24 hours after a treatment). The final part of this chapter emphasizes that ECT does not cause brain damage and reviews all evidence supporting this statement.

The last chapter discusses the efficacy of ECT vs other neuromodulation treatments, such as transcranial magnetic stimulation (which is weak and not good for acute treatment), magnetic seizure therapy (why did it disappear in spite positive results?), transcranial direct current stimulation, focal electrically administered therapy, focal electrically administered seizure therapy, vagus nerve stimulation (“it has not exactly taken the psychiatric community by storm” [p 251]), and deep brain stimulation. As Dr. Rasmussen writes at the end, “As it now stands, ECT is the most effective neuropsychiatric treatment modality, better for more clinical circumstances than

medications or any one of the above-listed neuromodulatory alternatives being investigated” (p 254).

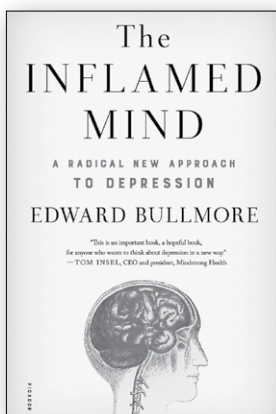
This is an excellent compendium of everything the psychiatrist who is practicing ECT or plans to practice ECT needs to know. It is very well written, useful, and well referenced—a definite buy for anyone interested in administering ECT, or teaching about it. I enjoyed reading this book much more than I expected.

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REFERENCE

1. Fink M. *Electroconvulsive therapy: a guide for professionals and their patients*. New York, NY: Oxford University Press, Inc.; 2010.

The Inflamed Mind: A Radical New Approach to Depression



By Edward Bullmore; New York, New York: Picador (Macmillan Publishing Group, LLC); 2019; ISBN 978-1-250-31814-5; pp 240; \$28 (hardcover).

Edward Bullmore, Professor of Psychiatry at the University of Cambridge, argues at the end of his book that our treatment of depression is in crisis, as no new treatments have been developed over the last 30 years. There are also far fewer new drugs for depression in the research and development pipeline than there were 30 years ago. He notes that the old business model of antidepressant drug discovery collapsed in 2010. Big pharmaceutical companies are exiting the whole area of mental health. Dr. Bullmore cites a conversation he had with his boss at GlaxoSmithKline (GSK). He asked his

boss whether GSK would ever reinvest in depression and psychiatry. His boss answered, “I’d never say never. But if we were going to... go back there... it would have... to be completely different. What we’re not going to do is stop, wait a bit, and then start doing exactly the same thing we did before all over again. So don’t ask me for tens of millions to jump back into old-school phase 2 because that’s not going to happen any time soon. First, you’ve got to be able to tell me how it’s going to be different next time” (p 196).

Available treatments—mainly selective serotonin reuptake inhibitors (SSRIs)—have been considered panacea. However, “There can be no more talks of panacea. We will need to leave behind the idea that depression is all one thing, in much the same way we no longer think of cancer as one

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multiheaded monster disease but as a collection of thousands of different kinds of diseases" (p 196). The new generation of antidepressants will probably be personalized and hopefully accompanied by biomarkers used to guide our treatment.

The main focus of Dr. Bullmore's book is to introduce the idea of one such new treatment pathway and a new concept of depression that explains this new treatment approach. Dr. Bullmore skillfully argues that depression is not a disease of the mind. He rejects the Cartesian dualism, which is "the foundational bedrock of Western scientific medicine" (p 10). For him, depression is a disease of an "inflamed brain" or "inflamed mind" responding to inflammation signals from the rest of the body. He argues that the blood-brain barrier is not impenetrable and that cytokines can send signals about inflammation to the brain. And what does the "inflamed mind" or inflammation-informed mind look like? Very much like a "depressed brain."

However, Dr. Bullmore also recognizes the fact that although depression is associated with biomarkers of inflammation, it does not prove that the relationship between inflammation and depression is causal. Thus, we need to have a better understanding of this relationship. This relationship could also be circular rather than linear (p 156).

The text moves from an explanation of neuroimmunology, the way the immune system guards our organism from attacks from the outside, what happens in various immunologic diseases (eg, rheumatoid

arthritis), to suggestions that drugs targeted against cytokines (anti-cytokines) could have potent antidepressant effects (especially for patients with inflammatory diseases). Another fascinating fact is that there is an anti-inflammatory reflex mediated by the vagus nerve: vagus nerve sensory fibers have cytokine receptors, and when a change of inflammatory status (high cytokines) is detected, the vagus nerve sends a signal to the spleen, reflectively acting on macrophages and thus decreasing cytokines. The vagus is acting homeostatically. Interestingly, electrical stimulation of the vagus reduces blood cytokine levels with subsequent fewer painful joint symptoms in rheumatoid arthritis. As we know, vagal nerve stimulation is approved for resistant depression (though the effect is weak at the best).

This book is filled with numerous examples of the undisputable link between depression and inflammation. For instance, one study found "children who were not depressed, but were slightly inflamed at the age of nine, were significantly more likely to be depressed 10 years later as 18-year olds" (p 12), "depressed patients who are also inflamed are less likely to respond well to treatment with conventional antidepressant drugs" (p 18), and some individuals become depressed when given interferons. Inflammation can also reduce the amount of serotonin released into synapses and basically counteracts SSRIs. Some patients with so-called treatment-resistant depression who do not respond well to antidepressants are particularly likely to be inflamed (p 143). On the

other hand, some anti-inflammatory medications such as what Humera has for rheumatoid arthritis (an anti-tumor-necrosis factor [TNF] drugs) can cause an immediate high during infusion administration and should be explored for possible treatment of depression. Dr. Bullmore recommends that "natural immune reaction could be leveraged as a biological machine for discovering and manufacturing drugs. Instead of using robots to screen vast numbers of candidate drugs that might or might not work, mice could be used quickly to make antibodies that would certainly and selectively disable human TNF" (p 64). He also argues for repurposing various old drugs and examining their possible antidepressant effects.

At times, the author admits that there are some "holes" or a lack of supporting facts available for his theory. For instance, there is no solid evidence that some anti-inflammatory drugs, such as aspirin, have antidepressant effects. I also found the argument that some anti-inflammatory drugs prescribed for pain relief may have an antidepressant effect weak, as the confounding variable of pain has not been excluded. Nevertheless, the theory of "mind" or "brain inflammation" being behind depression and the possibility of giving up the Cartesian dualism of mind and brain is fascinating and worth exploring, as is the possible development of anti-inflammatory drugs linked to biomarkers, such as C-reactive protein, as new antidepressants.

At the end, Dr. Bullmore also entertains the idea of inflammation's

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involvement in Alzheimer's disease dementia, and even schizophrenia.

This small book is an easy read and an entertaining and thought-provoking treatise. Only time will tell

us whether its prediction will be realized. Right now, it is great bedtime reading that gives us hope that we may be able to move from the standstill of depression treatment development to

a totally new realm of novel efficacious treatments for depression.

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BOOKS RECEIVED

The following books have been received or otherwise obtained and will be reviewed by selected individuals, the courtesy of the sender is acknowledged by this listing.

The Treacherous Dichotomy: Physical Illness Versus Mental Illness. By Stefan Lerner; Bloomington, Indiana; Archway Publishing; 2018; ISBN 978-1-4808-7208-0; pp 346; \$21.99 (paperback).

Schatzberg's Manual of Clinical Psychopharmacology, Ninth Edition. By Alan F. Schatzberg and Charles DeBattista; Washington, DC; American Psychiatric Publishing; 2019; ISBN 978-1-61537-230-0; pp 811; \$125 (paperback).

Supervision in Psychiatric Practice: Practical Approaches Across Venues and Providers. Edited by Sallie G. De Golia and Kathleen M. Corcoran; Washington, DC; American Psychiatric Publishing; 2019; ISBN 978-1-61537-164-8; pp 435; \$75 (paperback).

Evidence-Based Treatment Approaches for Suicidal Adolescents. Translating Science Into Practice. Edited by Michele Berk; Washington, DC; American Psychiatric Publishing; 2019; ISBN 978-1-61537-163-1; pp 347; \$55 (paperback).

Lifestyle Psychiatry. Edited by Douglas L. Noordsy; Washington, DC; American Psychiatric Publishing; 2019; ISBN 978-1-61537-166-2; pp 394; \$59 (paperback).

The American Psychiatric Association Publishing Textbook of Psychiatry, Seventh Edition. Edited by Laura Weiss Roberts; Washington, DC; American Psychiatric Association Publishing; 2019; ISBN 978-1-61537-150-1; pp 1326; \$275 (hardcover).

The Stressed Years of Their Lives: Helping Your Kid Survive and Thrive During Their College Years. By B. Janet Hibbs and Anthony Rostain; New York, New York; St. Martin Press; 2019; ISBN 978-1-250-11313-9; pp 322; \$28.99 (hardcover).

Handbook of Mentalizing in Mental Health Practice, Second Edition. Edited by Anthony W. Bateman and Peter Fonagy; Washington, DC; American Psychiatric Association Publishing; 2019; ISBN 978-1-61537-140-2; pp 446; \$82 (paperback).

Applications of Good Psychiatric Management for Borderline Personality Disorder: A Practical Guide. Edited by Lois W. Choi-Kain and John G. Gunderson; Washington, DC; American Psychiatric Association Publishing; 2019; ISBN 978-1-61537-225-6; pp 386; \$72 (paperback).

Intervening Early in Psychosis: A Team Approach. Edited by Kate V. Hardy, Jacob S. Ballon, Douglas L. Noordsy, and Steven Adelsheim; Washington, DC; American Psychiatric Association Publishing; ISBN 978-1-61537-175-4; pp 437; \$68 (paperback).

Bipolar II Disorder: Recognition, Understanding, and Treatment. Edited by Holly A. Swartz and Trisha Suppes; Washington, DC; American Psychiatric Association Publishing; 2019; ISBN 978-1-61537-178-5; pp 301; \$60 (paperback).

Clinical Handbook for the Diagnosis and Treatment of Pediatric Mood Disorders. Edited by Manpreet Kaur Singh; Washington, DC; American Psychiatric Association Publishing; 2019; ISBN 978-1-61537-174-7; pp 577; \$79 (paperback).