

Depression and Brain Dysfunction

edited by Frank G. Gilliam, M.D., M.P.H.; Andres M. Kanner, M.D.; and Yvette I. Sheline, M.D. Informa Healthcare/Taylor & Francis, Abingdon, England, 2006, 298 pages, \$179.95.

Depression is the leading cause of disability in the United States, and worldwide it accounts for more of the disease burden than any other illness but heart disease. However, in contrast to many other common chronic illnesses, this disease has yet to be characterized thoroughly by the elucidation of evidence-based mechanisms for its existence and treatment.

Depression and Brain Dysfunction includes 20 authors who contribute to 12 chapters associated with about a dozen color plates. The chapters are well-written, with a congruence of style, and they are replete with over a thousand references, many quite recent.

This text is divided into 2 sections that are well-integrated. The first addresses fundamentals of depression, including classification schemes and recent research on neurotransmitter dysregulation, hypothalamus-pituitary-adrenal axis abnormalities, and cellular resistance. Highlighted are recent advances in structural and functional neuroimaging. The second, and more powerful, section focuses on the manifestation of depression in many common illnesses that may serve as useful models to help study clinical and biochemical facets of this disease.

Chapter 1 acquaints the reader with the phenomenology or psychopathology of depression, covering its history and including Biblical references, descriptions of the actual experience contrasted with moods and emotions, the Beck cognitive model, categories, and dimensions, as well as current classification schemes. A short discussion of transcultural psychiatry, including problems in diagnosis, ends the chapter.

The next 3 chapters develop the concepts of the basic neurobiology of depression and structural changes of brain function. These chapters include a review of neural anatomy, neurotransmitter pathways, and current biochemical models of depression. Results from functional positron emission tomography and single photon emission computed tomography imaging in secondary depressions are linked to these underlying models.

The first section concludes with a detailed description of the clinical implications of a genetically epilepsy-prone rat model and affective disorders.

The latter half of the text provides a detailed analysis of the epidemiology and impact of depression when it occurs in conjunction with an underlying chronic neurologic condition such as stroke, Parkinson's disease, or Alzheimer's disease, to name a few. Practicing clinicians will find these chapters particularly useful for patient care.

Salient clinical questions, such as whether depression increases the risk of cardiac arrhythmias or the risk and severity of diabetes mellitus, are addressed. In addition, each chapter analyzes relevant diagnostic dilemmas and reviews evidence for specific treatment recommendations. Electroconvulsive therapy is not mentioned, due to a paucity of studies in these subgroups. However, more about this robust treatment might have been included in the first part of the book.

Depression and Brain Dysfunction offers an impressive and comprehensive discourse on the many components of depression, from its origins to current biochemical models and clinical practice. I believe that this text will be of value to readers from both clinical and research areas.

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