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Neurobiological and Psychiatric Consequences of Child Abuse and Neglect

ABSTRACT: *The effects of early-life trauma and its consequences for the treatment of depression are reviewed. The prevalence and clinical sequelae of early sexual and physical abuse, neglect and parental loss are described. An overview of preclinical studies that help guide clinical research and practice is presented. Human clinical studies on the neurobiological consequences of early trauma are summarized. Moderating factors, such as genetic variation and sex differences, are discussed. The few current treatment outcome studies relevant to this research area are described. Guidance for the management of patients with depression and a history of child abuse and neglect are provided. Most patients who have experienced early traumatic experiences are likely best treated with a combination of psychotherapy and pharmacotherapy. This review is dedicated to the memory of Seymour Levine who pioneered the field of early experience research and to a considerable extent inspired the clinical studies described in this review.* © *2010 Wiley Periodicals, Inc.* Dev Psychobiol 52: 671–690, 2010.

Keywords: *stress; trauma; development; psychopathology; treatment*

INTRODUCTION

Our understanding of the importance of early-life trauma and its impact on vulnerability to psychiatric disorders in adults has increased in recent years. Early-life trauma predisposes individuals to develop a number of psychiatric syndromes, particularly mood and anxiety disorders, and is therefore a significant public health problem. It is important to elucidate the specific mechanisms by which early-life trauma increases risk for adult psychopathology and how to develop more effective and specific treatments, both psychotherapeutic and pharmacological, for those who have experienced early trauma.

This review is dedicated to the memory of Seymour Levine, who is the founding father of the concept of Early Experience and its impact on behavior and physiological regulation. In the 1950s and 1960s, Seymour Levine pioneered studies in developmental psychobiology by evaluating the effects of early experimental manipulations, such as postnatal handling of laboratory animals, on later behavior and adaptation. He documented the lasting effects of early experience on endocrine, immune, and central nervous systems. His work provided the evidence that early handling induces improved development outcomes and promotes stress resilience. He also discovered important sex differences in the effects of early experience. While these studies should not be considered early stress studies, they have provided the first proof of principle that early experience does shape behavior and physiology of systems relevant to stress. Our clinical

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