

List of Contributors	x
Foreword	xiv
<i>Robert Sapolsky</i>	
Preface	xvi
Acknowledgments	xix
List of Abbreviations	xx
Part I Basics of the Stress Response	1
1 The Basics of the Stress Response: A Historical Context and Introduction	3
<i>Kenneth J. Thiel and Michael N. Dretsch</i>	
2 Central Nervous System Regulation of the Hypothalamic–Pituitary–Adrenal Axis Stress Response	29
<i>James P. Herman</i>	
3 Corticosteroid Receptor Involvement in the Stress Response	47
<i>E. Ronald de Kloet, Roel H. DeRijk, and Onno C. Meijer</i>	
4 Nongenomic Cellular Actions of Corticosteroids in the Brain	76
<i>Marian Joëls, Femke Groeneweg, and Henk Karst</i>	
5 Stress Effects on the Brain: Intracellular Signaling Cascades, Epigenetic Mechanisms, and Implications for Behavior	95
<i>Johannes M. H. M. Reul, Andrew Collins, and María Gutiérrez-Mecinas</i>	
6 Mechanisms of Glucocorticoid Receptor Regulation of Gene Expression	113
<i>Alyson B. Scoltock and John A. Cidlowski</i>	

Part II	Stress Influences on Brain Plasticity and Cognition	135
7	Stress and Adult Neurogenesis <i>Timothy J. Schoenfeld and Elizabeth Gould</i>	137
8	Neurobiological Basis of the Complex Effects of Stress on Memory and Synaptic Plasticity <i>Phillip R. Zoladz, Collin R. Park, and David M. Diamond</i>	157
9	Acute Glucocorticoids Interact with Arousal State in Regulating Long-term Memory Formation <i>Patrizia Campolongo and Benno Roozendaal</i>	179
10	Chronic Stress Effects on Corticolimbic Morphology <i>Cara L. Wellman</i>	201
11	Effects of Chronic Stress on Memory and Neuroplasticity: Animal Studies <i>Carmen Sandi</i>	230
12	Stress and Glucocorticoid Effects on Learning and Memory: Human Studies <i>Marie-France Marin and Sonia J. Lupien</i>	248
Part III	Stress Effects Across the Life Span	267
13	Adolescence and Stress: From Hypothalamic–Pituitary– Adrenal Function to Brain Development <i>Russell D. Romeo and Ilia N. Karatsoreos</i>	269
14	Effect of Early Environment and Separation Animal Models on Neurobiological Development <i>Allison Jane Fulford</i>	285
15	Clinical Implications of Childhood Stress <i>Linda J. Luecken, Danielle S. Roubinov, and Catherine Purdom</i>	304
16	Chronic Stress and Hippocampus Vulnerability to Functional Changes and Health in the Adult <i>Cheryl D. Conrad</i>	324
17	Stress and Aging: A Question of Resilience with Implications for Disease <i>Erik B. Bloss, John H. Morrison, and Bruce S. McEwen</i>	349
Part IV	Stress Involvement in Anxiety, Posttraumatic Stress Disorder, and Depression	367
18	Social Stress Effects on Defensive Behavior and Anxiety <i>Brandon L. Pearson, D. Caroline Blanchard, and Robert J. Blanchard</i>	369

19	Stress and Animal Models of Posttraumatic Stress Disorder <i>Hagit Cohen, Gal Richter-Levin, and Joseph Zohar</i>	388
20	What Can Fear Conditioning Tell Us About Posttraumatic Stress Disorder? <i>Jacek Dębiec and Joseph E. LeDoux</i>	410
21	Stress and Glucocorticoid Effects on Memory: Implications for Anxiety Disorders <i>Dominique J.-F. de Quervain</i>	426
22	Stress and Human Neuroimaging Studies <i>J. Douglas Bremner</i>	446
23	Chronic Stress and Depression <i>Eberhard Fuchs and Gabriele Flügge</i>	463
24	How Can Stress Alter Emotional Balance Through Its Interaction with the Serotonergic System? <i>Raymond Mongeau, Michel Hamon, and Laurence Lanfumey</i>	480
25	Stress, Prefrontal Cortex Asymmetry, and Depression <i>Ron M. Sullivan and François Laplante</i>	505
	Part V Stress, Coping, Predisposition, and Sex Differences	525
26	Chronic Stress and Sex Differences on Cognition: Animal Studies <i>Victoria N. Luine</i>	527
27	Effects of Stress on Learning and Memory: Evidence for Sex Differences in Humans <i>Oliver T. Wolf</i>	545
28	Influence of Diet on Stress Response and Behavior <i>Efthymia Kitraki</i>	560
29	Influence of Appraisal and Coping Following Extreme Stress <i>Miranda Olff</i>	578
	Name Index	597
	Subject Index	664