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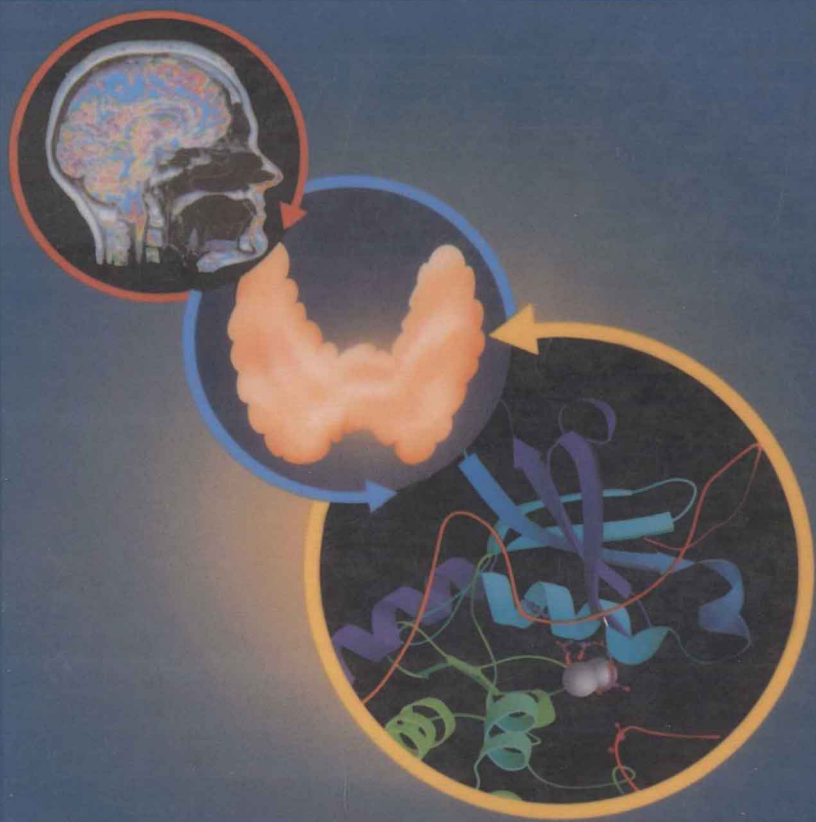
# Manual of Endocrinology and Metabolism

Third Edition

配英汉索引

# 内分泌学和代谢手册

Edited by  
Norman Lavin



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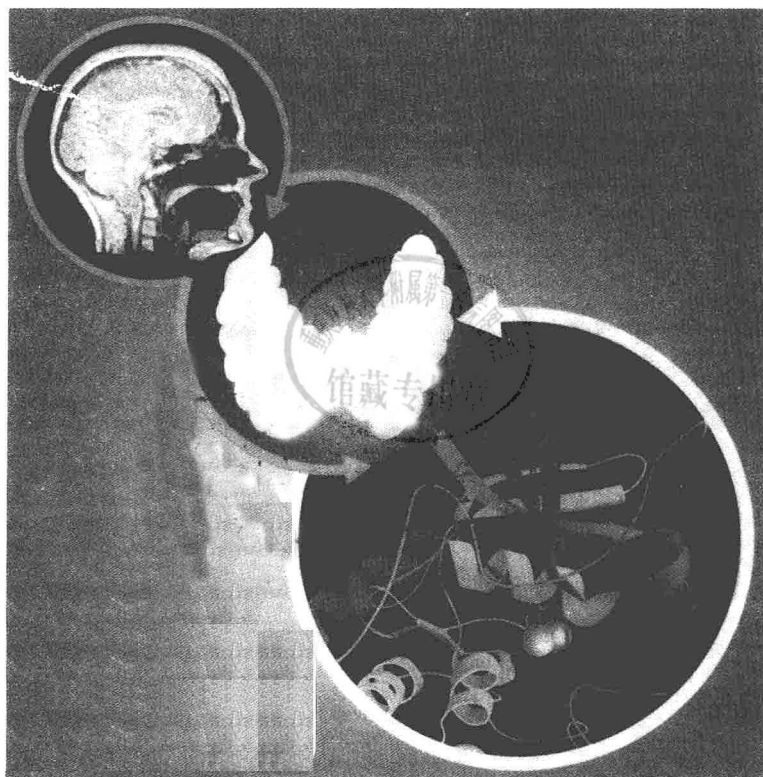
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# Manual of Endocrinology and Metabolism

Third Edition

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10 9 8 7 6 5 4 3 2 1



This book is dedicated to:

My wonderful parents, Lena and Meyer Lavin, and my brother Sheldon—all of whom look from above. I miss you profoundly.

My sons, Arye and Jonah—who charged at the world with full intensity—projecting voices that are robust, witty, elegant, unexpected, and never, ever boring. They serve as silhouettes against the horizon, resonating wisdom while announcing a triumph of body and soul. From them, I have learned a life of loving and a love of life, and to them, I wish continued happiness and dreams fulfilled. I love both of you dearly.

My wife, Michele—the moral center of our family—who lifts our hearts because of her great intellectual and emotional knowledge and inexhaustible hope and spiritual wholeness. Her respect for life in all its forms is both gracious and soothing, while her vivid sensuousness and poignant beauty give me a feeling of unbounded exhilarating possibility. To you, I give endless and infinite love.

—*N.L.*



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## PREFACE

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The third edition of the *Manual of Endocrinology and Metabolism* continues the tradition of presenting the most advanced clinical developments in the field of endocrinology. We emphasize evaluation, management, and treatment as well as pathophysiology in a simplified but fairly complete text. Whereas most endocrine books are limited in scope, we focus on the infant and child as well as the adult, allowing the reader selection of relevant chapters as needed for his or her specialty.

The manual details the diagnostic workup for most endocrine disorders while highlighting practical approaches to management and therapeutic options. It blends an array of endocrinologists who present their clinical views in a lucid style, minimizing verbiage and frequent reference to esoteric research. This edition integrates minimal but relevant pathophysiology with practical protocols and outlines for evaluation and treatment.

The target audience is anyone who interacts clinically with an endocrine patient, including board-certified endocrinologists, diabetologists, fellows, house officers, medical students, and nurses. I have retained most of the chapters from previous editions, with a focus on new concepts and treatment programs, including Syndrome X (insulin-resistant syndrome), type 2 diabetes in children, new drugs for both type 1 and type 2 diabetes mellitus, and the latest theories relative to the development of atherogenesis. Because of the close relationship between insulin and heart disease, a new discipline may emerge—namely, endocardiology.

To keep the book streamlined but up-to-date, I have by necessity deleted some chapters while adding some new areas of interest. All other chapters have been rewritten and updated and include selected references. For easy access to information, I have again divided the book into ten parts, arranging closely related subjects into clusters. Part I describes some of the basic sciences of endocrine practice, focusing on hormone-resistant states, genetics, and molecular biology. A new chapter on the molecular endocrine laboratory is also included. Disorders of the hypothalamus and pituitary glands are described in Part II, with a new look at the utilization of growth hormone in children as well as adults. Part III encompasses problems of the adrenal gland, focusing on diagnostic evaluation and clearly outlined treatments. The new molecular basis for understanding congenital adrenal hyperplasia is highlighted. For clearer comprehension, separate chapters on pheochromocytoma and neuroblastoma are included. With the recent major interest in reproductive endocrinology, Part IV addresses the interrelationship of the hormones of the hypothalamus, pituitary, and ovary or testes, from which has evolved a newer approach to diagnosis and therapy of reproductive disorders. Part V encompasses the latest understanding of calcium metabolism, emphasizing immediate as well as long-term treatment.

Thyroid conditions, covered in part VI, are divided into several chapters—from the newborn to the elderly—for easy reference. A separate chapter on thyroid function tests enables the reader to select the appropriate diagnostic method simply and often economically. Part VII incorporates metabolic disorders with an update on hypoglycemia in children and adults, and a major focus on the pathogenesis of atherosclerosis expressed in chapters on obesity and dyslipidemia. I have retained a brief overview of the more common inborn errors of metabolism in Part VIII, with two chapters providing a stepwise method of evaluating these rare disorders.

With the emerging epidemic of type 2 diabetes mellitus in adults and especially children, Part IX contains several chapters that address the etiology and newer approaches to management. Gerald Reaven, who first described this entity in the late 1980s, authors a chapter on Syndrome X. A separate section on Syndrome X in children attempts to link this entity in early childhood to a risk factor for eventual atherogenesis in adulthood. Part X presents special topics in endocrinology, including new chapters on pregnancy and aging, as well as the latest research on hormone-dependent cancers authored by Nobel Laureate Andrew Schally. Protocols for common stimulation and suppression tests are found in Appendix A.



Thus, the *Manual of Endocrinology and Metabolism* reflects the latest diagnostic and therapeutic approaches, written by an array of endocrinologists who represent Nobel laureates, scholars, researchers, and clinicians. Their lucid styles enable the reader to quickly glean pertinent information to aid in enhanced patient care, which is essentially the ultimate goal of the manual.

N.L.



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In preparing the third edition, I thank my colleagues—all of whom are great friends—for their support, expert opinions, criticism, contributions, and guidance. They include Dr. Ben Fass, Dr. Bernard Cohen, and Dr. Al Sils. For superb technical support, I thank Leya Booth and Susan Pines. I am grateful for the exemplary contributions of our distinguished authors.

I thank Barbara Felton and the publishers at Lippincott Williams & Wilkins for their expert guidance throughout this challenging project.

Finally, I thank Miya, my Siberian husky, who is celebrating her tenth birthday and is, I believe, extremely happy to see me finally complete this project.

*N.L.*



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