Calcium Hunger

The popular press recently has seized on the idea that calcium is important to human health. A feature article entitled “Calcium Takes Its Place as a Superstar of Nutrients” appeared in the New York Times in October 1998, and a week earlier, Newsweek ran a five-page advertising supplement, “Calcium Made Headlines This Year.”

This book brings together the behavioral, physiological, and neuroendocrine regulation of calcium and introduces an understanding of how the brain orchestrates whole-body demands for calcium. The approach is that behavior, in addition to physiology, serves bodily maintenance. The book links basic and clinical literature surrounding calcium homeostasis, as a wide variety of clinical syndromes are tied to calcium metabolism. Because calcium is so important during life stages particular to women, the book emphasizes the relevance of calcium to women’s health, although this emphasis is not exclusive: calcium is fundamental to both sexes.

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BEHAVIORAL AND BIOLOGICAL REGULATION

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This book is dedicated to Dick Denton and Paul Rozin.
Contents

Preface and Acknowledgments  
page ix

Introduction  
1 Behavioral Regulation of the Internal Milieu  
2 Behavioral and Gustatory Regulation of Calcium  
3 Gender Differences in Calcium Regulation  
4 Neural Endocrine Regulation of Calcium Ingestion  
5 Nutritional Issues, Bodily Health, and Calcium Regulation over the Life Cycle  

Conclusion  

Appendix  
Notes  
References  
Index
Preface and Acknowledgments

The origin of this book is my long-term interest in the regulation of minerals in the body. A primary research topic in my work has been sodium appetite. That research interest culminated in a book titled *Sodium Hunger: The Search for a Salty Taste* (Schulkin, 1991). Since then, my research interest in mineral homeostasis has shifted to calcium and the existence and mechanisms of calcium appetite. Much more is known about the mechanisms of sodium appetite than those of calcium appetite, but, if anything, that has only heightened my interest.

My excitement for this field can be traced back to the influences of a number of colleagues who have enriched my life. Many of them I have mentioned in previous books. Here I begin by mentioning two, and dedicating the book to them. They are Paul Rozin and Dick Denton.

I came to the University of Pennsylvania as a graduate student more than 20 years ago, in part because of Paul Rozin’s research on thiamine deficiency. The experiments were simple and elegant; he did classic work on behavioral avoidance to diets deficient in thiamine. But he did a lot more than that. He was fun to be with, and he loved the culture of ideas. He could always engage. I can vividly remember running up the stairs to his office with my list of questions to ask him.

Dick Denton has always, to my mind, been the paragon of the statesman scientist: one who builds institutions (e.g., the Howard Florey Institute of Experimental Medicine at the University of Melbourne), who enjoys a rich life in which science is an entry to the larger world. Dick and I would sometimes meet at my apartment in New York City and take walks and talk. On the science side, I have always felt that no one is more knowledgeable or has thought more constructively than Dick Denton on the biological basis of sodium and phosphate hunger. Some 15 years ago in a café somewhere in New York City we talked about doing research on calcium appetite along the lines used for sodium appetite.

A conference on “Calcium Regulation over the Life Cycle” in 1998 helped to solidify and expand my thinking on calcium regulation. At that conference, Robert Heaney, working in the field for more than 30 years, always
PREFACE AND ACKNOWLEDGMENTS

with a broad-based approach and unafraid, was a great inspiration for his knowledge and devotion to the task of understanding calcium regulation.

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Finally, my family and friends have been a great joy, and our new son Nicky has joined our family to enrich our lives.