

Life Cycle Nutrition

An Evidence-Based Approach

Editors

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Dedication

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Preface

Life Cycle Nutrition: An Evidence-Based Approach provides a unique learning experience, a unique reference, and a unique start for graduate students learning about nutrition throughout the life cycle. It also provides a comprehensive reference for those of us already in practice. The book stands alone in its interwoven coverage of public health nutrition, with subjects as diverse as media influences on eating, skipping breakfast, sociodemographic moderators of dietary intake, tobacco use and nutritional status, and clinical nutrition; it includes a wide array of diverse topics, including parenteral nutrition and biochemical monitoring in neonates, inborn errors of metabolism, and cancer. Contemporary issues such as fruit juice consumption, nutritional needs of athletes, and dietary supplements as ergogenic aids are addressed across the life cycle as well as by using a multidisciplinary approach. This book gives students current knowledge, helps them evaluate emerging knowledge, and prepares them to uncover new knowledge for the public, their clients, and themselves as they journey together throughout the life cycle.

The book is divided into two sections. The first chapter covers epidemiologic research—how to do it and a review of landmark studies in children and adults. With this foundation students then journey through infancy, childhood, and adulthood. Along the way, knowledge and knowledge gaps, problems and solutions, and challenges and opportunities are presented and students learn to make a positive difference.

This section brings us from infancy to adolescence and covers virtually every topic imaginable. Chapter 2 gives students insight into the growth, development of normal infants, along with some of their nutrition “issues” such as food safety and the effect of early diet on health outcomes. As outlined in Chapter 3, toddlers have different issues as they begin to explore their world and express food preferences; food habits begin to be formed and are influenced by caregiver behaviors. Chapter 4 emphasizes that

school-aged children have different needs and are influenced by a wide variety of outside forces, including role models and television and other media. Although caregivers have a large influence, these children begin to make their own food choices and may be grazers or picky eaters. Adolescents, discussed in Chapter 4, are an understudied group with many nutrition issues; they, too, are influenced by media but also by their peers. Adolescents also make many of their own food choices and may skip breakfast or consume fast food and added sugars, often in the form of sweetened beverages. Poor food choices contribute to rising obesity and the appearance of nutrition-related chronic diseases formerly seen only in adults, such as metabolic syndrome and type 2 diabetes. As students learn about nutritional needs of infants, children, and adolescents, they also learn how to help these groups improve their nutritional status.

Chapters 5 through 8 discuss special nutrition considerations of infants, children, and adolescents. Eating disorders, failure to thrive, food allergies, and the nutrition needs of children with disabilities are all covered in these chapters. Highlighted are pediatric vegetarianism, childhood obesity, and dietary needs of athletes. Very specialized topics, such as inborn errors of metabolism and nutrition support of the neonate, are also included.

Section 2 covers adults. Chapters 9 to 11 include information on chronic nutrition-related diseases, such as coronary heart disease, hypertension, diabetes, kidney disease, cancer, osteoporosis, HIV/AIDS, and obesity. Evidence analysis for evidence-based practice in these diseases is included, as are prevention strategies. Chapter 11 is devoted to physical activity and weight management issues. Chapters 12 and 13 are dedicated to nutritional issues of the elderly; all topics ranging from special nutritional needs to nutritional problems, from activities of daily living to polypharmacy, and from risks of malnutrition to nutrition intervention are included in these chapters. Chapters 14 and 15 discuss

professionalism and ethical issues, the final preparation for students to join us as colleagues.

This book has many exciting features that not only enhance its usefulness as a teaching tool but also pave the way in developing future clinicians and scientists at the cutting edge of nutritional sciences:

Evidence-Based Practice: This section contains articles where readers can transform the written word into a peer-reviewed study or clinical trial. I tell my students that I don't want to know their opinion, I want to know their informed opinion. But how do they shape these opinions? Only by reading about evidence-based studies and medicine and by conducting studies themselves can students learn the importance of evidence-based practice. With their Evidence Analysis Library, the American Dietetic Association is a leader in presenting practitioners with the concept of evidence-based practice. This text complements this effort and enhances our students' familiarity with this important subject.

Cultural Diversity Sidebar: Cultural differences that involve the nutrition and health differences and similarities among ethnic groups are highlighted. This is a wonderful opportunity for students to learn more about what I call "diseases that discriminate": Obesity, cardiovascular disease, and diabetes are all most common in minority populations. Why? Are differences genetic or are they related to lifestyle or to health care? What are the gaps in nutrition research in different groups? How do you work with people from cultures/ethnicities that are different from your own to improve their health or nutritional status? This feature will help students answer these questions, develop their professionalism, and improve their practice.

Critical Thinking Sidebar: Found throughout the chapters, the points considered assist the reader in critical thinking concepts of different sections of the text. Perhaps the most important thing a student can learn is to analyze and evaluate, examine and reason, reflect and decide. Why? So they can solve complex real-world problems, weigh evidence and make conclusions, learn to ask the right questions, and develop informed opinions to share with others.

Case Studies and Nutritional Management: These sections are provided to demonstrate chapter

concepts. Case studies actively involve students in learning and simulate or represent actual problems they will face as professionals. Students can work alone or in groups to develop solutions, as they would in the workplace.

Thus case studies help develop knowledge and skills of students in a wide variety of subjects and improve critical thinking skills, public speaking, and group interactions.

Issues to Debate: These issues include withholding and withdrawing nutrition, the ethical implications of nutritional care, and right to die case law. It is critical that students learn the physiologic, moral, ethical, and legal issues surrounding these emotionally charged issues. Debate and discussion with others help students understand these issues as they apply across the life span; it also helps nutrition students learn how they will interact with other health professionals.

Web Site Resources: Web sites are provided not only for present use as students work through the material presented, but also for use by the students when they become the teachers. The Internet has opened virtually all information to all people at all times. No health professional can work without it. However, there are no filters on or standard for materials posted on the Web. It is important to help students understand this and to help them use appropriate materials. The Web sites provided in this book provide reliable and accurate information.

For students, *Reader Objectives* guide them stepwise through the chapter, and *Key Terms* sidebars throughout the chapters assist with new terminology and concepts. Also included are *Special Sections*, which are designed to heighten curiosity and give insight to a particular issue. *Chapter Summaries* crystallize the most important elements of the chapters and help bring the chapter contents into perspective.

For instructors, there is a separate *Instructor's Manual* with *multiple choice questions* and *answers to case studies*, as well as *PowerPoints* available electronically as for all chapters.

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