

Contents

List of Tables and Figures	vii
Preface	xiii
Acknowledgments & Dedication	xv
PART I	
INTRODUCTORY AND BASIC PHYSIOLOGY	
1. Mechanics of Nutrient Intake	3
Mark R. Corkins, MD, CNSC	
Carol G. McKown, DDS, MS, PC	
Memorie M. Gosa, PhD, CCC-SLP, BCS-S	
2. Principles of Feeding and Gastrointestinal Motility	19
Molly Dienhart, MD	
Jane Balint, MD	
Desale Yacob, MD	
3. Carbohydrates	31
Suzanna L. Attia, MD, MScPH	
4. Fats	39
Peggy R. Borum, PhD	
5. Protein Digestion, Absorption, and Metabolism	51
Oscar R. Herrera, PharmD	
Richard A. Helms, PharmD	
6. Minerals	71
Winston Koo, MBBS, FACN, CNS	
May Saba, PharmD, BCNSP	
Letitia Warren, RD, CSP	
Mirjana Lulic-Botica, PharmD, BCPS	
7. Water-Soluble Vitamins and Related Compounds	87
Winston Koo, MBBS, FACN, CNS	
Judith Christie, RN, MSN	
May Saba, PharmD, BCNSP	
Letitia Warren, RD, CSP	
Mirjana Lulic-Botica, PharmD, BCPS	
8. Fat-Soluble Vitamins	117
Winston Koo, MBBS, FACN, CNS	
May Saba, PharmD, BCNSP	
Mirjana Lulic-Botica, PharmD, BCPS	
Judith Christie, RN, MSN	
9. Fluids and Electrolytes	139
Gerald L. Schmidt, PharmD, BCNSP	
PART II	
AGE-SPECIFIC NUTRITION FOR GROWTH AND DEVELOPMENT	
10. Nutrition and Early Development	167
Ricardo Rueda, MD, PhD	
Paula Soriano, MSc	
Esther Castanys-Muñoz, PhD	
José M. López-Pedrosa, PhD	
Yen-Ling Low, PhD	
11. Human Milk Feeding and Clinical Considerations	197
Christina J. Valentine, MD, MS, RD, FAAP, FASPEN	
Amy Gates, PhD, RDN, LD	
12. Infant Formulas and Complementary Feeding	215
Kelly Green Corkins, MS, RD, LDN, CNSC, FAND, FASPEN	
Lindsey Lee, MS, RD, LDN, CSP	

13. Enteral Formulas 231
Kelly Green Corkins, MS, RD, LDN, CNSC,
 FAND, FASPEN

**14. Childhood Overweight and Obesity:
 Efficacy and Safety of Popular Diets
 and Weight-Control Programs** 239
David Freestone, DO

15. Lipid Disorders 271
Elizabeth L. Wright, MS, RDN, CSP, LDN,
 FAND, CLC
Danielle H. Campbell, MS, RDN, LDN
James Gherardi, BS, DTR

**PART III
 DISEASE STATES AND NUTRITION**

16. Severe Neurological Impairment 285
Gina Rempel, MD, FRCPC, FASPEN

17. Eating Disorders 313
Mary Pat Turon-Findley, MEd, RD, CMHIMP, LD

18. Food Allergies 331
Mary Beth Feuling, MS, RD, CSP, CD
Leslie M. Gimenez, MD
Nicole M. Martin, RD, CSP, CD
Praveen S. Goday, MBBS

**19. Diabetes Mellitus and Other Endocrine
 Disorders** 357
Michelle Reed, MS, RD, CSP, LDN, CDCES

20. Inborn Errors of Metabolism 369
Sandy van Calcar, PhD, RD, LD

21. Cardiac Disease 399
Kavisha Shah, MD

22. Renal Disease 419
Christina L. Nelms, MS, RD, LMNT/LD
Marisa Juarez-Calderon, MPH, RD, CSP, LD
Bradley A. Warady, MD

23. Gastrointestinal Disease 461
Jill Dorsey, MD, MS
Donald George, MD
Elizabeth Bobo, MS, RD, LDN, CNSC, FAND

24. Hepatic Disease 489
Julie Bonn, MD
Samuel A. Kocoshis, MD

25. Intestinal Failure 507
Vikram Raghu, MD, MS
Kishore R. Iyer, MBBS, FRCS (Eng), FACS

26. Pulmonary Disorders 527
Laura Padula, MS, RD, LDN
Rachel Kofsky, MA, RD, CSP, LDN, CLC
Maria Mascarenhas, MBBS

**27. Pediatric Oncology and Hematopoietic
 Stem Cell Transplant Patients** 547
Hannah Williams, RD, LDN, CSP, CSO
Bethany Squillante, MS, RD, CSP, LDN
Darielle Wilhelm, RD, LDN, CNSC
Karen Smith, MS, RD, CSO, LD/LDN
Erika May Murphy, PharmD, BCPPS
Susan Rheingold, MD

28. Trauma and Burns 577
Arlet G. Kurkchubasche, MD

29. Surgery 591
Arlet G. Kurkchubasche, MD

**PART IV
 NUTRITION CARE**

**30. Assessment of Nutrition Status
 by Age and Determining Nutrient
 Needs** 617
Ellen Wagner, MD
Timothy Sentongo, MD

31. Nutrition Access 655
Katina Rahe, RN, BSN, CPN

32. Enteral Nutrition Support 675
Jessica Monczka, RD, CNSC
Sarah Simental, MS, RD, CSNC, CSPCC

33. Parenteral Nutrition Support 689
Kathleen M. Gura, PharmD, FASHP, FPPA,
 FASPEN, FMSHP, BCNSP
Catherine M. Crill, PharmD, FCCP, BCPS,
 BCNSP

**34. Evaluation and Monitoring of Pediatric
 Patients Receiving Specialized Nutrition
 Support** 715
Elaina Szeszycki, PharmD, CNSC
Wendy Cruse, MMSc, RDN, CSPCC
Clare McLaughlin, RDN, CSPCC

35. Ethical Issues in Providing Nutrition 743
Kelly Cronin Komatz, MD, MPH, FAAP, FAAHPM

Index 749

Contributors 783

Reviewers 789