
Contents

Contributors	ix
Reviewers	xv
Foreword	xix
Preface	xxi
Acknowledgments & Dedication	xxiii
PART I	
INTRODUCTORY AND BASIC PHYSIOLOGY	
1. Mechanics of Nutrient Intake	3
Mark R. Corkins, MD, CNSP, SPR, FAAP	
Carol G. McKown, DDS, MS, PC	
Memorie M. Gosa, PhD, CCC-SLP, BCS-S	
2. Gross Digestion Principles: Gastric Grinding and Gastrointestinal Motility	15
Molly Dienhart, MD	
Desale Yacob, MD	
Jane Balint, MD	
3. Carbohydrates: Changes With Development	23
Thaddaeus D. May, MD	
Robert J. Shulman, MD	
4. Fats	31
Peggy R. Borum, PhD	
5. Protein Digestion, Absorption, and Metabolism	41
Richard A. Helms, PharmD	
Oscar R. Herrera, PharmD	
John A. Kerner, MD	
6. Minerals	57
Winston Koo, MBBS, FACN, CNS	
Mirjana Lulic-Botica, BSc, BCPS	
May Saba, PharmD, BCNSP	
Letitia Warren, RD, CSP	
7. Water-Soluble Essential Micronutrients	69
Winston Koo, MBBS, FACN, CNS	
Judith Christie, RN, MSN	
May Saba, PharmD, BCNSP	
Mirjana Lulic-Botica, BSc, BCPS	
Letitia Warren, RD, CSP	
8. Fat-Soluble Vitamins	91
Winston Koo, MBBS, FACN, CNS	
May Saba, PharmD, BCNSP	
Mirjana Lulic-Botica, BSc, RPh, BCPS	
Judith Christie, RN, MSN	
9. Fluids and Electrolytes	107
Gerald L. Schmidt, PharmD, BCNSP	
PART II	
AGE-SPECIFIC NUTRITION FOR GROWTH AND DEVELOPMENT	
10. Nutrition and Early Development	131
Ricardo Rueda, MD, PhD	
Esther Castanyas-Muñoz, PhD	
Richard W. Gelling, PhD	
José M. López-Pedrosa, PhD	
Yen-Ling Low, PhD	
Christina Sherry, PhD, RD	
Barbara Marriage, PhD, RD	
11.  Human Milk	153
Jacqueline J. Wessel, MEd, RDN, CNSC, CSP, CLE	
12.  Infant Formulas and Complementary Feeding	169
Kelly Green Corkins, MS, RD, LDN, CNSC	
Allison Beck, MS, RD, LDN, CSP, CNSC	
13.  Enteral Formulas	185
Kelly Green Corkins, MS, RD, LDN, CNSC	
Wednesday Marie A. Sevilla, MD, MPH	

14. Obesity and Metabolic Syndrome	199
Kalyan Ray Parashette, MD, MPH	
Sandeep K. Gupta, MD	
15. Lipid Disorders	221
Elizabeth L. Wright, MS, RD, CSP, LDN	
Megan Dougherty, RD, CSP, LDN, CNSC	
Kristi Drabouski, RD, CSP, LDN, CNSC	
16. Childhood Overweight and Obesity: Efficacy and Safety of Popular Diets and Weight Control Programs.	231
Catherine Christie, PhD, RDN, LDN, FAND	
Claudia Sealey-Potts, PhD, RDN, FAND	
Corrine Labyak, PhD, RDN	
Judith C. Rodriguez, PhD, RDN, FAND	
17. Pediatric Sports Nutrition	243
Jackie Buell, PhD, RD, ATC, CSSD	
Diane L. Habash, PhD, MS, RD, LD	
Jessica Buschmann, MS, RD, LD	
25. Gastrointestinal Disease.....	387
Donald George, MD	
Elizabeth Bobo, MS, RD, LDN, CNSC	
Jill Dorsey, MD, MS	
26. Hepatic Disease	411
Samuel A. Kocoshis, MD	
Renee A. Wieman, RD, LD, CNSC	
Monique L. Goldschmidt, MD	
27. Intestinal Failure.....	427
Robert H. Squires, Jr., MD	
Kishore R. Iyer, MBBS, FRCS (Eng), FACS	
28. Pulmonary Disorders.....	441
Laura Grande, MS, RD, CSP, LDN	
Allison Mallowe, MA, RD, LDN	
Maria Mascarenhas, MBBS	
29. Oncology, Hematopoietic Transplant, Gastrointestinal Supportive Care Medications, and Survivorship.	459
Nancy Sacks, MS, RD, LDN	
David Henry, MS, BCOP, FASHP	
Kristen Bunger, MS, RD, CNSC	
Kelly Kolp, RD, CNSC	
Andrea White-Collins, RN, MS, CPNP	
Britt Olsen, RN, MSN, CPNP	
Kyrie L. Hospodar, RN, MSN, CPNP	
Susan R. Rheingold, MD	
30. Trauma and Burns.....	495
Arlet G. Kurkchubasche, MD	
31. Surgery	507
Arlet G. Kurkchubasche, MD	

PART III DISEASE STATES AND NUTRITION

18. Neurological Impairment	261
Ala K. Shaikhkhailil, MD	
Robin Meyers, MPH, RD, LDN	
19. Eating Disorders	275
Mary Pat Turon-Findley, MS, RD, LD	
20. Food Allergies	289
Cassandra L.S. Walia, MS, RD, CD, CNSC	
Mary Beth Feuling, MS, RD, CSP, CD	
Leslie M. Gimenez, MD	
Praveen S. Goday, MBBS, CNSC	
21. Diabetes Mellitus and Other Endocrine Disorders ..	309
Alaa Al Nofal, MD	
W. Frederick Schwenk II, MD	
22. Inborn Errors of Metabolism.....	317
Sandy van Calcar, PhD, RD, LD	
23. Cardiac Disease	337
Janice Antino, RD, MS, CNSC	
Mindy Freudenberg, RD, MS, CNSC	
Anupama Chawla, MD, DCH (UK), CNSC	
24. Renal Disease	351
Christina L. Nelms, MS, RD, CSP, LMNT	
Marisa Juarez, MPH, RD, LD	
Bradley A. Warady, MD	

25. Gastrointestinal Disease.....	387
Donald George, MD	
Elizabeth Bobo, MS, RD, LDN, CNSC	
Jill Dorsey, MD, MS	
26. Hepatic Disease	411
Samuel A. Kocoshis, MD	
Renee A. Wieman, RD, LD, CNSC	
Monique L. Goldschmidt, MD	
27. Intestinal Failure.....	427
Robert H. Squires, Jr., MD	
Kishore R. Iyer, MBBS, FRCS (Eng), FACS	
28. Pulmonary Disorders.....	441
Laura Grande, MS, RD, CSP, LDN	
Allison Mallowe, MA, RD, LDN	
Maria Mascarenhas, MBBS	
29. Oncology, Hematopoietic Transplant, Gastrointestinal Supportive Care Medications, and Survivorship.	459
Nancy Sacks, MS, RD, LDN	
David Henry, MS, BCOP, FASHP	
Kristen Bunger, MS, RD, CNSC	
Kelly Kolp, RD, CNSC	
Andrea White-Collins, RN, MS, CPNP	
Britt Olsen, RN, MSN, CPNP	
Kyrie L. Hospodar, RN, MSN, CPNP	
Susan R. Rheingold, MD	
30. Trauma and Burns.....	495
Arlet G. Kurkchubasche, MD	
31. Surgery	507
Arlet G. Kurkchubasche, MD	

PART IV NUTRITION CARE OF THE PEDIATRIC PATIENT

32. Assessment of Nutrition Status by Age and Determining Nutrient Needs.	531
Timothy Sentongo, MD, ABPNS	
33. Nutrition Access.	567
Beth Lyman, RN, MSN, CNSC	
Sohail R. Shah, MD, MSHA, FAAP	
34. Enteral Nutrition Support: Determining the Best Way to Feed.	583
Jessica Monczka, RD, LDN, CNSC	
35. Parenteral Nutrition Support	593
Catherine M. Crill, PharmD, FCCP, BCPS, BCNSP	
Kathleen M. Gura, PharmD, BCNSP, FASHP, FPPAG	

36.  Evaluation and Monitoring of Pediatric Patients	
Receiving Specialized Nutrition Support	615
Elaina Szeszycki, PharmD, BCNSP	
Wendy Cruse, MMSc, CLS, RD	
Michelle Beitzel, PharmD	
37. Ethical Issues in Providing Nutrition	641
Kelly Cronin Komatz, MD, MPH, FAAP, FAAHPM	
Index	647