

Contents

Contributors	v		
Reviewers	xi		
Foreword	xvi		
Preface	xviii		
Acknowledgments	xx		
PART I Basics of Nutrition and Metabolism			
1. Nutrient Intake, Digestion, Absorption, and Excretion	3		
<i>Tina Colaizzo-Anas, PhD, RD, CDN</i>			
2. Energy	22		
<i>Jennifer A. Wooley, MS, RD, CNSC</i> <i>David Frankenfield, MS, RD</i>			
3. Carbohydrates	36		
<i>Pei-Ra Ling, MD</i> <i>Karen C. McCowen, MD</i>			
4. Probiotics and Prebiotics	51		
<i>Gail Cresci, PhD, RD, LD, CNSD</i>			
5. Lipids	63		
<i>Mary Hise, PhD, RD, CNSD</i> <i>John C. Brown, PhD</i>			
6. Protein	83		
<i>Lorraine S. Young, MS, RD, CNSD, LDN</i> <i>Laurel R. Kearns, MS, RD, CNSC, LDN</i> <i>Sandra L. Schoefel, MS, RD, RN, CNSC, LDN</i> <i>Nicole Canon Clark, MS, RD, CNSC, LDN</i>			
7. Fluids, Electrolytes, and Acid-Base Disorders	98		
<i>Ginger Langley, PharmD, BCNSP, BCPS, CPHQ</i> <i>Sharla Tajchman, PharmD, BCNSP, BCPS</i>			
8. Vitamins and Trace Elements	121		
<i>Susan F. Clark, RD, PhD</i>			
PART II Clinical Foundations of Nutrition Support			
9. Nutrition Screening and Assessment	155		
<i>Gordon L. Jensen, MD, PhD</i> <i>Pao Ying Hsiao, MS, RD</i> <i>Dara Wheeler, RD</i>			
10. Overview of Enteral Nutrition	170		
<i>Susan L. Brantley, MS, RD, CNSC, LDN</i> <i>Mary E. (Beth) Mills, MS, RD, CNSC, LDN</i>			
11. Enteral Formulations	185		
<i>Gail Cresci, PhD, RD, CNSD, LD</i> <i>Jennifer Lefton, MS, RD, CNSD</i> <i>Dema Halasa Esper, MS, RD, LD</i>			
12. Enteral Access Devices	206		
<i>John C. Fang, MD</i> <i>Robin Bankhead, CRNP</i> <i>Merin Kinikini, RD, RN, FNP</i>			
13. Complications of Enteral Nutrition	218		
<i>Ainsley M. Malone, MS, RD, LD, CNSC</i> <i>David Seres, MD, ScM, PNS</i> <i>Linda Lord, NP, MSN, CNSN</i>			
14. Overview of Parenteral Nutrition	234		
<i>Jay M. Mirtallo, MS, RPh, BCNSP, FASHP</i> <i>Meera Patel, PharmD, BCPS</i>			
15. Parenteral Nutrition Formulations	245		
<i>Jacqueline R. Barber, PharmD, BCNSP, FASHP</i> <i>Gordon S. Sacks, PharmD, BCNSP, FCCP</i>			
16. Parenteral Access Devices	265		
<i>Elizabeth A. Krzywda, APNP, MSN</i> <i>Deborah A. Andris, APNP, MSN</i> <i>Charles E. Edmiston Jr, PhD</i>			
17. Complications of Parenteral Nutrition	284		
<i>Vanessa J. Kumpf, PharmD, BCNSP</i> <i>Jane Gervasio, PharmD, BCNSP</i>			
18. Drug-Nutrient Interactions	298		
<i>Carol J. Rollins, MS, RD, CNSD, PharmD, BCNSP</i>			
19. Dietary Supplements	313		
<i>Joseph I. Boullata, PharmD, RPh, BCNSP</i> <i>Michele Nicolo, MS, RD, CDE, CNSD, LDN</i> <i>Kathleen W. Stratton, JD, MA, RD, LDN</i>			

PART III Nutrition Support of Specific States			
20. Pregnancy and Lactation	331		
<i>Catherine Cimbalik, RN, RD, CNSC</i>			
<i>James D. Paauw, MD, PhD</i>			
21. Wound Healing	348		
<i>Joyce K. Stechmiller, PhD, ACNP-BC,</i>			
<i>FAAN</i>			
22. Nutrition in Neurologic Impairment	363		
<i>Kathryn Ruf, PharmD</i>			
<i>Barbara Magnuson, PharmD, BCNSP</i>			
<i>Jimmi Hatton, PharmD</i>			
<i>Aaron M. Cook, PharmD, BCPS</i>			
23. Critical Care Sepsis	377		
<i>Keith Miller, MD</i>			
<i>Laszlo Kiraly, MD</i>			
<i>Robert G. Martindale, MD, PhD</i>			
24. Trauma, Surgery, and Burns	392		
<i>Bryan R. Collier, DO, FACS, CNSC</i>			
<i>Jill R. Cherry-Bukowiec, MD, MS, FACS</i>			
<i>Mary E. (Beth) Mills, MS, RD, CNSC, LDN</i>			
25. Pulmonary Failure	412		
<i>Krista L. Turner, MD, FACS</i>			
26. Gastrointestinal Disease	426		
<i>David Frantz, MD, MS</i>			
<i>Craig Munroe, MD</i>			
<i>Carol Rees Parrish, MS, RD</i>			
<i>Joseph Krenitsky, MS, RD</i>			
<i>Kate Willcutts, MS, RD, CNSC</i>			
<i>Amy Fortune, RD, PA-C</i>			
27. Liver Disease	454		
<i>Thomas H. Frazier, MD</i>			
<i>Benjamin E. Wheeler, MD</i>			
<i>Craig J. McClain, MD</i>			
<i>Matthew Cave, MD</i>			
28. Pancreatitis	472		
<i>Carol Rees Parrish, MD, RD</i>			
<i>Joseph Krenitsky, MS, RD</i>			
<i>Stephen A. McClave, MD</i>			
29. Renal Disease	491		
<i>Robert Wolk, PharmD</i>			
<i>Charles J. Foulks, MD, FACP, FACN</i>			
30. Short Bowel Syndrome	511		
<i>Sherry Tarleton, RD, CNSC</i>			
<i>John K. DiBaise, MD, FACG</i>			
31. Solid Organ Transplantation	523		
<i>Jeanette M. Hasse, PhD, RD, LD, FADA,</i>			
<i>CNSC</i>			
<i>Laura E. Matarese, PhD, RD, LDN, FADA,</i>			
<i>CNSC</i>			
32. Human Immunodeficiency Virus (HIV) Infection	536		
<i>Peter J. Wasserman, RD, MA</i>			
<i>Sorana Segal-Maurer, MD</i>			
<i>David S. Rubin, MD</i>			
33. Cancer	563		
<i>Robin B. Mendelsohn, MD</i>			
<i>Mark A. Schattner, MD</i>			
34. Nutritional and Medical Management of Diabetes Mellitus in Hospitalized Patients	580		
<i>Laura Newton, MA, RD</i>			
<i>W. Timothy Garvey, MD</i>			
35. Obesity	603		
<i>Ryan T. Hurt, MD, PhD</i>			
<i>Thomas H. Frazier, MD</i>			
36. Nutrition Support for Older Adults	620		
<i>Charles Mueller, PhD, RD, CNSD</i>			
<i>Rena Zelig, MS, RD, CSG</i>			
37. Chylothorax and Chylous Ascites	630		
<i>Thomas H. Frazier, MD</i>			
<i>David A. Spain, MD, FACS</i>			
<i>Stephen A. McClave, MD</i>			
PART IV Management and Professional Issues			
38. Home Nutrition Support	639		
<i>Marion Winkler, PhD, RD, CNSC</i>			
<i>Elizabeth Hagan, RN, CNSC, BSN</i>			
<i>Jorge E. Albina, MD</i>			
39. Ethics and Law	656		
<i>Cynthia M.A. Geppert, MD, MA, PhD,</i>			
<i>MPH, FAPM, DAAPM</i>			
<i>Albert Barrocas, MD, FACS</i>			
<i>Denise Baird Schwartz, MS, RD, FADA,</i>			
<i>CNSC</i>			
40. Quality Improvement	677		
<i>Naomi E. Cahill, RD, MSc</i>			
41. Application of Research, Derivation of Guidelines, and Evidence-Based Practice	693		
<i>Kelly A. Tappenden, PhD, RD</i>			