

### **Key Features:**

- Provides an accessible source of the most current, reliable and comprehensive information in the broad field of nutrition
- Features new chapters on topics of emerging importance, including the microbiome, eating disorders, nutrition in extreme environments, and the role of nutrition and cognition in mental status
- Covers topics of clinical relevance, including the role of nutrition in cancer support, ICU nutrition, supporting patients with burns, and wasting, deconditioning and hypermetabolic conditions

### **Περιεχόμενα:**

#### **Section A. Macronutrients**

##### 1. Energy metabolism

KLAAS R. WESTERTERP

##### 2. Protein and amino acids

YONG-MING YU AND NAOMI K. FUKAGAWA

##### 3. Carbohydrates

RYLEE T. AHNEN, RACHEL MOTTET, MORRINE OMOLO, AND JOANNE SLAVIN

##### 4. Lipids

PETER J.H. JONES AND ALICE H. LICHTENSTEIN

#### **Section B. Vitamins**

##### 5. Vitamin A and provitamin A carotenoids

WILLIAM S. BLANER

##### 6. Vitamin D

JAMES C. FLEET AND SUE A. SHAPSES

##### 7. Vitamin E

MARET G. TRABER AND RICHARD S. BRUNO

##### 8. Vitamin K

GUYLAINE FERLAND

9. Vitamin C  
CAROL S. JOHNSTON

10. Thiamine  
LUCIEN BETTENDORFF

11. Riboflavin  
ALFRED H. MERRILL AND DONALD B. MCCORMICK

12. Niacin  
WILLIAM TODD PENBERTHY AND JAMES B. KIRKLAND

13. Vitamin B6  
VANESSA R. DA SILVA AND JESSE F. GREGORY III

14. Folate  
ALLYSON A. WEST, MARIE A. CAUDILL, AND LYNN B. BAILEY

15. Vitamin B12  
SALLY P. STABLER

16. Pantothenic acid  
JOSHUA W. MILLER AND ROBERT B. RUCKER

17. Biotin  
WILLIAM TODD PENBERTHY, MAHROU SADRI, AND JANOS ZEMPLENI

18. Choline  
ISIS TRUJILLO-GONZALEZ AND STEVEN H. ZEISEL

**Section C. Minerals**

19. Calcium  
CONNIE M. WEAVER

20. Phosphorus  
ORLANDO M. GUTIE´ RREZ

21. Magnesium  
REBECCA B. COSTELLO AND A. ROSANOFF

22. Iron  
PETER J. AGGETT

23. Zinc  
MOON-SUHN RYU AND TOLUNAY BEKER AYDEMIR

24. Copper  
JAMES F. COLLINS

25. Iodine and the iodine deficiency disorders  
MICHAEL B. ZIMMERMANN

26. Selenium  
LENNY K. HONG AND ALAN MARK DIAMOND

27. Chromium  
JOHN B. VINCENT

28. Sodium, chloride, and potassium  
HARRY G. PREUSS

29. Manganese, molybdenum, boron, silicon, and other trace elements  
FORREST H. NIELSEN

#### **Section D. Other Dietary Components**

30. Water  
SAMUEL N. CHEUVRONT, ROBERT W. KENEFICK, SCOTT J. MONTAIN,  
AND MICHAEL N. SAWKA

31. Fiber  
IAN T. JOHNSON

32. Carotenoids  
JOHANNES VON LINTIG

33. Carnitine  
PEGGY R. BORUM

34. Dietary flavonoids  
GARY WILLIAMSON

35. Dietary supplements  
PAUL R. THOMAS, PAUL M. COATES, AND CAROL J. HAGGANS

**Section E. Cross Discipline Topics**

36. Systems biology and nutrition  
MARK TOMA´ S MC AULEY

37. The microbiome and health  
JOSEPH F. PIERRE AND VANESSA A. LEONE

38. Nutrient regulation of the immune response  
PHILIP C. CALDER AND PARVEEN YAQOOB

Index