Contents

PART 1: PRINCIPLES OF CHILD NUTRITION

1. **Nutritional Needs in Children** 1
   Suraj Gupte, Aruna Chandra, E William
2. **Antioxidants** 20
   GS Latha
3. **Assessment of Nutritional Status** 32
   Suraj Gupte, Utpal Kant Singh

PART 2: VITAMINS

4. **Vitamins: Essentials and Therapeutics in a Nutshell** 40
   Novy Gupte, Suraj Gupte, Utpal Kant Singh
5. **Vitamin A Deficiency** 64
   Suraj Gupte, Kareena Naidu, Isobel Tanapong
6. **Vitamin D Deficiency** 72
   Harmesh S Bains
7. **Vitamin D Deficiency Rickets and Other Rickets** 78
   Suraj Gupte, Waheeda Shaik, EW Kawasaki

PART 3: MINERALS

8. **Micronutrients and Macrominerals** 95
   Novy Gupte, Suraj Gupte, Utpal Kant Singh
9. **Iron Deficiency Anemia** 109
   VN Tripathi, Piyush Upadhyay, Rakhi Jain
10. **Neuropsychiatric Dysfunctions in Iron Deficiency Anemia** 116
    TM Ananda Kesavan
11. **Zinc in Child Nutrition** 126
    Pushpendra Magon, Harmesh S Bains

PART 4: NUTRITION IN DIFFERENT PEDIATRIC AGE GROUPS

12. **Antenatal Nutrition: Effect on Fetal and Neonatal Outcome** 133
    Rashmi Dwivedi

13. Infant and Young Child Feeding **147**
Bhavana B Lakhkar

14. Adolescent Nutrition **169**
Rashmi Dwivedi

PART 5: UNDERNUTRITION AND OBESITY

15. Protein-Energy Malnutrition: Overview **184**
Suraj Gupte, Utpal Kant Singh

16. Severe Acute Malnutrition **227**
Harmesh S Bains, Manu Sharma Sareen

17. Refeeding Syndrome **235**
Pushwinder Kaur, Harmesh S Bains

18. Immunology of Malnutrition **242**
Ashish Simalti, Sheikh Minhaj Ahmed, Uday Bodhankar

19. Malnutrition and the Nervous System **254**
TM Ananda Kesavan, Nithya Thuruthiyath

20. Prevention of Childhood Malnutrition **261**
Pushwinder Kaur, Pushpendra Magon

21. Feeding of Low Birth Weight Babies **270**
Anita Singh, Anup Thakur

22. Pediatric Obesity **286**
Noopur Singhal Sud, Harmesh S Bains

PART 6: PEDIATRIC PRACTITONER AND NUTRITION

23. Handling Nutritional Problems in Office Practice **303**
Anuradha Bansal, Harmesh S Bains

PART 7: NUTRITION IN SYSTEMIC DISEASES

24. Nutrition in Diabetes **317**
Shaveta Kundra

25. Nutrition in Pediatric Irritable Bowel Syndrome **330**
Yogesh Waikar

26. Nutritional Management of Diarrhea **335**
Jatinder Singh, Harmesh S Bains, Vaneeta Bhardwar

27. Nutrition in Cystic Fibrosis **342**
Thomas L Ratchford, Jeffrey H Teckman, Dhiren R Patel

28. Nutrition in Celiac Disease **356**
Shaveta Kundra

29. Diet in Inflammatory Bowel Disease **369**
Pankaj C Vaidya

30. Diet in Chronic Liver Disease **379**
Aditi, Pankaj C Vaidya, Vibhor V Borkar

31. Nutrition in Acute Kidney Injury **386**
Sumantra Kumar Raut, Rajiv Sinha

PART 8: MISCELLANEOUS

32. Food Intolerance and Allergy **401**
Edwin Dias

33. Drug-Nutrient Interaction **409**
Uday Bodhankar, Sandeep Dhingra, Sheikh Minhaj Ahmed

34. Sports Nutrition **420**
VN Tripathi, Rakhi Jain, Piyush Upadhyay

35. Nutritional Supplements **426**
VN Tripathi, Piyush Upadhyay, Rakhi Jain

Index 433