

Table of contents

PART 1 - Phosphocalcium metabolism

- Chapter 1: Physiology: calcium and phosphate
- Chapter 2: Vitamin D: skeletal and systemic effects
- Chapter 3: Phosphocalcium physiology: thyroid and parathyroid
- Chapter 4: FGF23: regulations and functions
- Chapter 5: Magnesium
- Chapter 6: Fetal Phosphocalcium metabolism
- Chapter 7: Phosphocalcium metabolism from birth to adolescence

PART 2 - Bone metabolism

- Chapter 8: Bone physiology
- Chapter 9: Chondrogenesis
- Chapter 10: Fetal bone development
- Chapter 11: Bone development from birth to adulthood
- Chapter 12: Bone: an endocrine organ involved in an energy metabolism and fertility

PART 3 - Evaluation methods

- Chapter 13: Measurement of different parameters of phosphocalcium metabolism.
- Chapter 14: Bone biomarkers: which and in what situations?
- Chapter 15: Radiological investigation techniques
- Chapter 16: Dual photonic X-ray absorptiometry (DXA)
- Chapter 17: New techniques to assess bone density and microarchitecture
- Chapter 18: Iliac crest bone biopsy from the: a tool for diagnosis and translational research.

PART 4 - Diagnostic approaches

- Chapter 19: The investigation and management of hypocalcaemia
- Chapter 20: The investigation and management of hypercalcaemia
- Chapter 21: The aetiological investigation and management of hypophosphataemia
- Chapter 22: The aetiological investigation and management of hyperphosphataemia
- Chapter 23: The aetiological investigation dysmagnesaemia

PART 5 - Pathology of phosphocalcium metabolism.

- Chapter 24: Rickets due to deficiency
- Chapter 25: Rickets due to pseudodeficiency
- Chapter 26: Pathology of the calcium receptor
- Chapter 27: Hypoparathyroidism
- Chapter 28: Pseudohypoparathyroidism
- Chapter 29: Hyperparathyroidism
- Chapter 30: Hypophosphatasia
- Chapter 31: Hypophosphataemic rickets
- Chapter 32: Phosphate diabetes
- Chapter 33: Hypercalciuria, lithiasis and nephrocalcinosis
- Chapter 34: Particular features of paediatric phosphocalcium diseases in adults
- Chapter 35: Management of bone diseases in adulthood: the example of X-linked hypophosphataemia

PART 6 - Bone pathology

- Chapter 36: Idiopathic juvenile osteoporosis
- Chapter 37: Osteogenesis imperfecta
- Chapter 38: Constitutional bone fragility
- Chapter 39: Osteopetrosis

PART 7 - Ectopic calcification and ossification

- Chapter 40: Tumour calcinosis
- Chapter 41: Progressive osseous heteroplasia
- Chapter 42: Progressive ossifying fibrodysplasia
- Chapter 43: Vascular calcifications

PART 8 - Tooth disorders

- Chapter 44: Biology of tooth development
- Chapter 45: Tooth disorders in osteogenesis imperfecta
- Chapter 46: Tooth disorders in hypophosphataemic rickets
- Chapter 47: Parodontal features of genetic bone diseases

PART 9 - Secondary phosphocalcium and bone abnormalities

- Chapter 48: Tumour lysis syndrome
- Chapter 49: Reduction in bone mass in children who have recovered from cancer
- Chapter 50: Phosphocalcium metabolic abnormalities and cardiology
- Chapter 51: Calcium phosphate and bone abnormalities secondary to inflammatory gastrointestinal tract diseases.
- Chapter 52: Bone consequences of chronic cholestatic liver diseases.
- Chapter 53: Phosphocalcium diseases in the newborn.
- Chapter 54: Mineral and bone abnormalities in chronic renal failure
- Chapter 55: Osteoporosis and central motor handicap.
- Chapter 56: Bone complications in children on long term parenteral nutrition
- Chapter 57: Phosphocalcium and bone abnormalities secondary to a chronic disease: cystic fibrosis.
- Chapter 58: Phosphocalcium and bone abnormalities in intensive care patients.
- Chapter 59: Phosphocalcium and bone abnormalities associated with chronic inflammatory diseases.

PART 10 - Phosphocalcium and bone abnormalities of treatments

- Chapter 60: Phosphocalcium and bone abnormalities in long term corticosteroid therapy.
- Chapter 61: Phosphocalcium and bone abnormalities of growth hormone.
- Chapter 62: Phosphocalcium and bone abnormalities of bone therapies.
- Chapter 63: Side effects of antimitotic treatments on bone mineralisation and phosphocalcium metabolism
- Chapter 64: Effects of treatments on phosphocalcium and bone - renal transplantation

PART 11 - Nutrition and treatments

- Chapter 65: Nutritional factors influencing acquisition of bone mineral mass during growth
- Chapter 66: Vitamin D supplementation, when and how?
- Chapter 67: Reference phosphocalcium ranges in paediatrics.