



# **Osteomalacia**

**MS. Tejasvini Kalekar**  
**Assistant Profesor**  
**MES college of Nursing**

# Word Meaning

- Greek origin
- Osteo – bone
- Malacia - softness

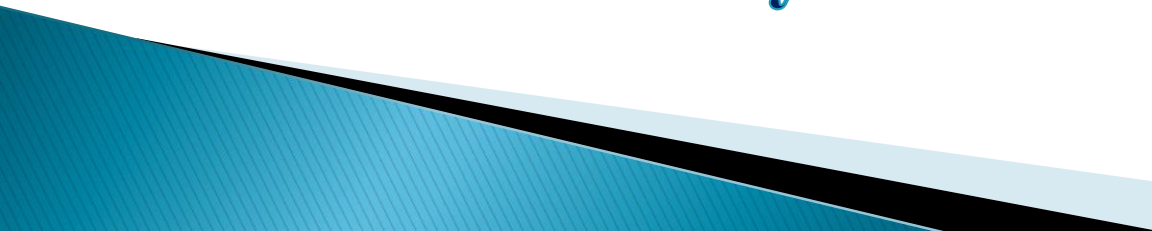
# Definition


**Osteomalacia is defined as a Rare bone disorder associated with vitamin D deficiency, resulting in decalcification and softening of bone.**

# Incidence

- Women mostly affected (Muslims)
- Its endemic in Asia

# Etiology

- ▶ Lack of exposure to UV rays (needed for Vit.D synthesis)
  - ▶ Drugs – anticonvulsants (phenytoin)
  - ▶ GI malabsorption
  - ▶ Extensive burns
  - ▶ Chronic diarrhoea
  - ▶ Pregnancy – multiple pregnancy
  - ▶ **Kidney disease**
- 

- ▶ Excessive loss of calcium (celiac disease, biliary tract obstruction, chronic pancreatitis)
  - ▶ After surgery of gastrointestinal system
- 

# Pathophysiology

Vit.D insufficiency



- Vit.D required for the absorption of the calcium from the intestine



- Insufficient vit.D intake can interfere with the normal mineralization of bone activity or insufficient calcification of bone



- Leads to bone softening and associated symptoms

# Clinical features

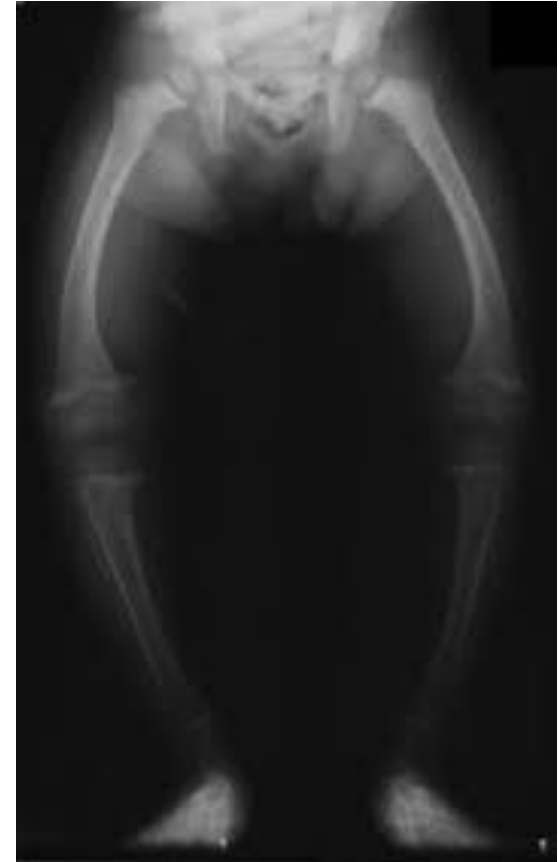
- Bone become bent and flattened as they soften
- Pathologic fracture
- Fatigue, malaise, bone pain (with tenderness)
- Difficult to walk, rise from a chair, low back pain, progressive muscle weakness, weight loss , deformity of spine (kyphosis), fracture with delayed healing





# Diagnostic investigation

- X-ray – generalized demineralization with trabecular bone loss
- Bone biopsy
- Serum calcium and phosphorus reduced
- Alkaline phosphates level is elevated



# Management

- Diet – vit D, calcium and phosphorous rich
- Vit.D3 (cholecalciferol), vit.D2 (ergocalciferol)
- Calcium salts and phosphorous supplements may also prescribed
- Eggs, low fat milk, fish
- Exposure to sunlight
- Weight bearing exercises
- Orthopedic deformities may be treated with surgery (osteotomy).



# Nursing management

## **Assessment**

- Assess for bone pain in the low back and extremities
- Assess for fracture
- Obtain information about co existing diseases (malabsorption syndrome) and dietary habits
- Note skeletal deformities on physical examination

- Relieving pain – change in positions and analgesic
- Improving body image – trusting relationship, encourage patient to discuss any changes in body image and methods of coping
- Encourage to use existing strength
- Allow talk with the similar successful patients

# Nursing diagnosis

- Acute pain r/d to bone tenderness and possible fracture
- Disturbed body image related to bowing of legs, waddling gait and spinal deformities
- Deficient knowledge about disease process and treatment