

Causes

- ↓ **Intestinal absorption**
 - ↓ **Vit D intake**
 - **Chronic diarrhea**
 - **Laxative abuse**
- ↑ **Loss thru kidneys**
 - **Diuretics**
 - **DKA**
 - **Build up of PTH**
- **Shift from ECF to ICF**
 - **Respiratory Alkalosis**
 - **Hyperglycemia**
 - **Enteral or parenteral feeding w/o sufficient P supplement**

S/S

- **Weak**
 - **Muscle weakness** (most common), **Slurred Speech**, **Dysphagia**, **Resp failure**, ↓ **Bone density**, **Osteomalacia**, **Bone pain**, ↓ **Bowel sounds**
- **Neuro**
 - **Paresthesia**, **Irritability**, **Memory loss**, **Confusion**
- **Cardiac**
 - ↓ **Cardiac contractility** due to ↓ **ATP**, **Hypotension**, ↓ **CO**, **Cardiomyopathy**
- **Respiratory**
 - ↓ **O₂ delivered to myocardium** = **chest px**, **Hemolytic anemia**, ↓ **fx of leukocytes**, **Affects platelet fx** = **bruising, bleeding**

Hypophosphatemia

< 2.5 mg/dl

Phosphate important for: membrane integrity; muscle & neuro fx; metabolism of CHO, P, fat; helps promote O₂ delivery to RBCs; helps buffer acids/bases; promotes energy transfer to cells; helps WBC phagocytosis & platelet fx; essential for healthy bones/teeth.

**85% in bones (1:2 ratio c Ca⁺⁺)
14% in soft tissue
1% in extracellular fluid**

Tx

- ↑ **P rich foods**
- **Oral supplements**
- **IV K⁺ phosphate or Na⁺ phosphate**

Labs/Diagnostics

- **Serum P < 2.5**
- ↑ **Creatine kinase level**
- **X-rays: osteomalacia or bone fx**
- ↓ **Mg⁺ & ↑ Ca⁺⁺**

Associated Drugs

- **Diuretics**
- **Antacids**
- **Insulin**
- **Laxatives**