

Estimation of Phosphate

Presented By

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What is phosphorus?

- *It is a mineral that combines with other substances to form organic and inorganic phosphate compounds.*

What are functions of phosphates?

- *Energy production*
- *Muscle and nerve function*
- *Bone growth*
- *Buffer that maintains acid-base balance*

What are phosphorus rich foods?

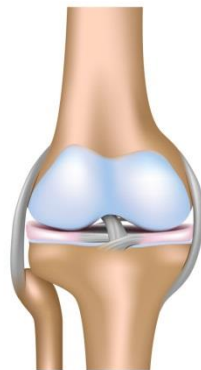


Phosphorus Rich Foods

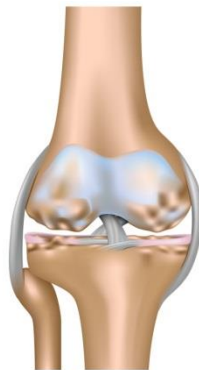
How can the body regulate blood phosphate level ?

- *How much it absorbs from the intestines*
- *How much it excretes via kidneys*
- *It is also affected by parathyroid hormone (PTH), calcium and vitamin D.*

What are symptoms of low phosphate levels?



Healthy knee joint



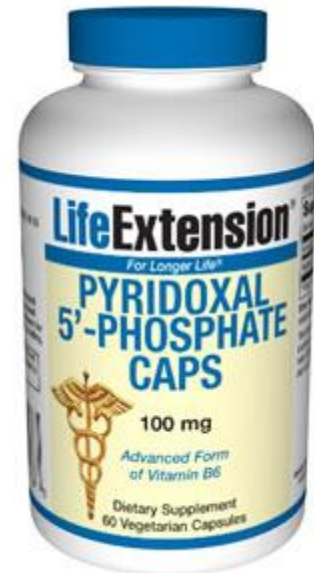
Osteoarthritis

Causes of hypophosphatemia:

- *Hypercalcaemia and high level of PTH*
- *Overuse of diuretics*
- *Malnutrition*
- *Diabetic ketoacidosis*
- *Hypothyroidism*
- *Hypokalemia*
- *Rickets due to vit. D deficiency*
- *Sever burns*
- *Alcoholism*
- *Chronic antacid use*

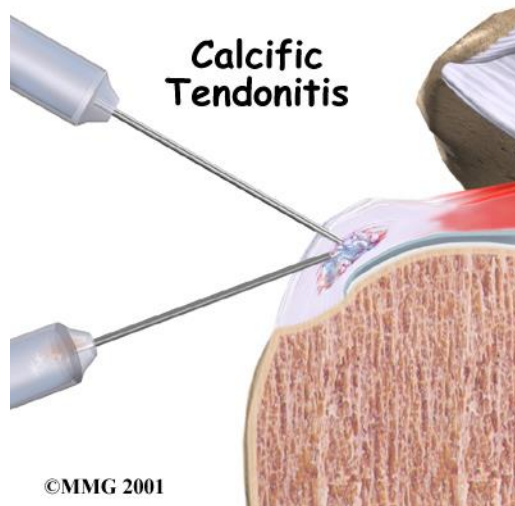
Causes of hyperphosphatemia:

- *Kidney failure*
- *Hypoparathyroidism*
- *Hypocalcaemia*
- *Diabetic ketoacidosis (first seen)*
- *Phosphate supplementation*



High phosphorus level can lead to organ damage, why?

✓ due to calcification, deposits of calcium phosphate in tissues.



Reference level:

- *12-60 years : 2.7-4.5 mg/dl*

Why are phosphate levels in children higher than in adults?

THANK YOU

