

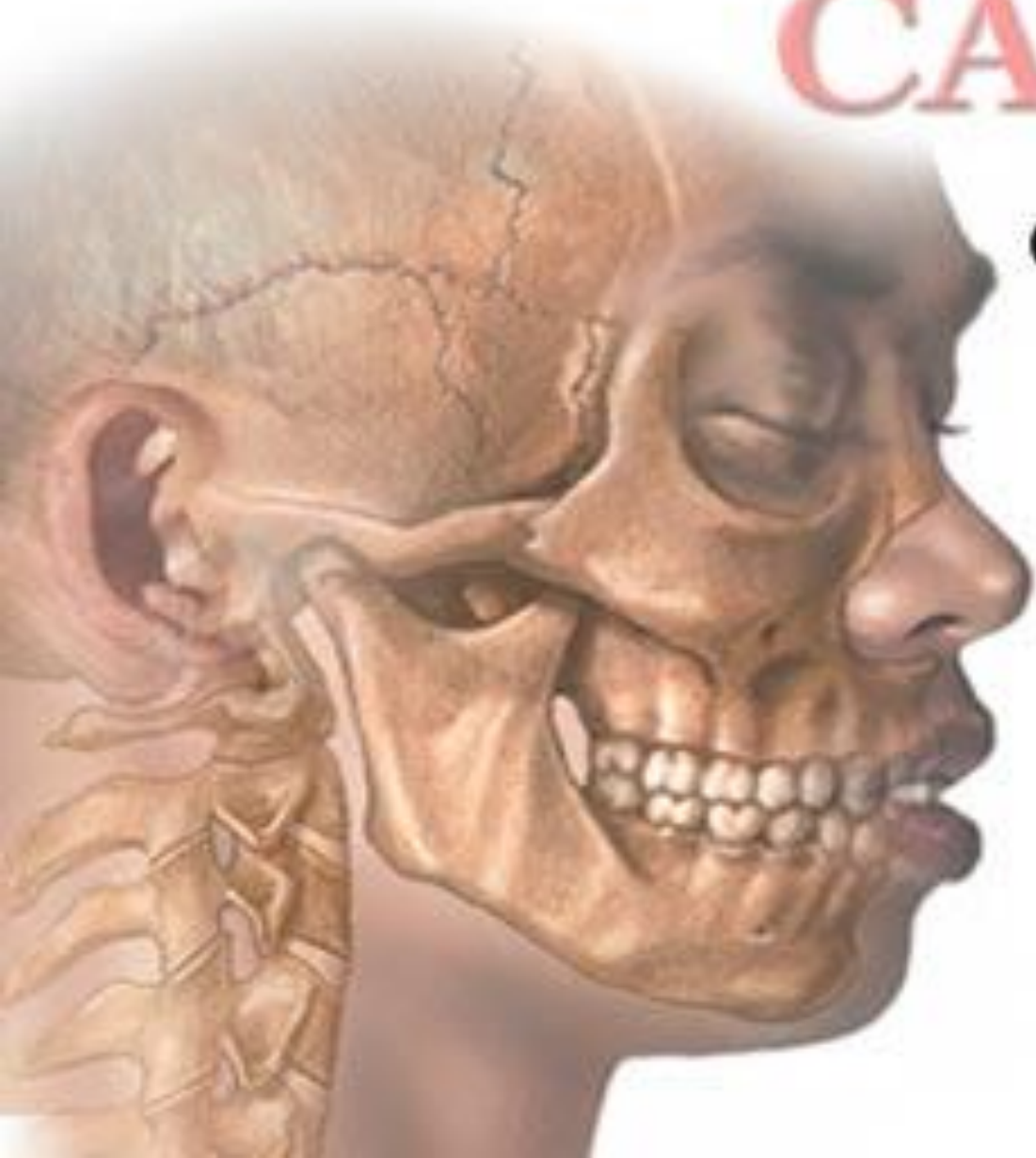


Calcium in blood

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M.Sc. in Pharmacy/clinical chemistry*

minerals

CALCIUM



Calcium is essential for the formation and maintenance of bones and teeth, blood clotting, normal heart beat and hormone secretion

What is calcium blood test?

- **It checks the calcium level in the body that is not stored in the bones.**

Functions of calcium in the body:

- **To build and fix bones and teeth**
- **To help nerves work**
- **To make muscles squeeze together**
- **To help the heart to work**
- **To help blood clot**

Factors that determine the amount of calcium in the body:

- *Calcium you get in your food.*
- *Calcium and vitamin D your intestine absorb.*
- *Phosphate in the body.*
- *Certain hormones including parathyroid hormone, calcitonin and estrogen in the body.*

Viva!

Calcium-rich foods



Almonds



Amaranth grain



Asparagus



Apricots (dried)



Artichokes



Baked beans (haricot)



Blackberries



Blackstrap molasses



Blackcurrants



Bok choy



Brazil nuts



Bread (wholemeal)



Broccoli



Chickpeas



Cinnamon



Edamame (soya beans)



Fennel



Kale



Kidney beans



Olives



Oranges



Sesame seeds
(and other seeds)



Soya milk (fortified)



Spring greens



Tofu



Swede



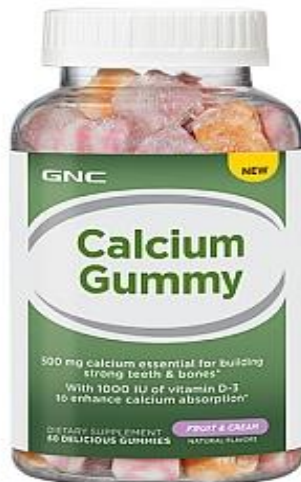
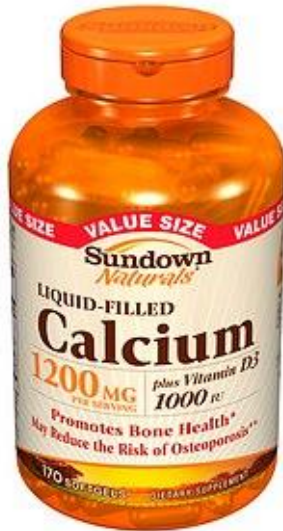
Walnuts



Watercress



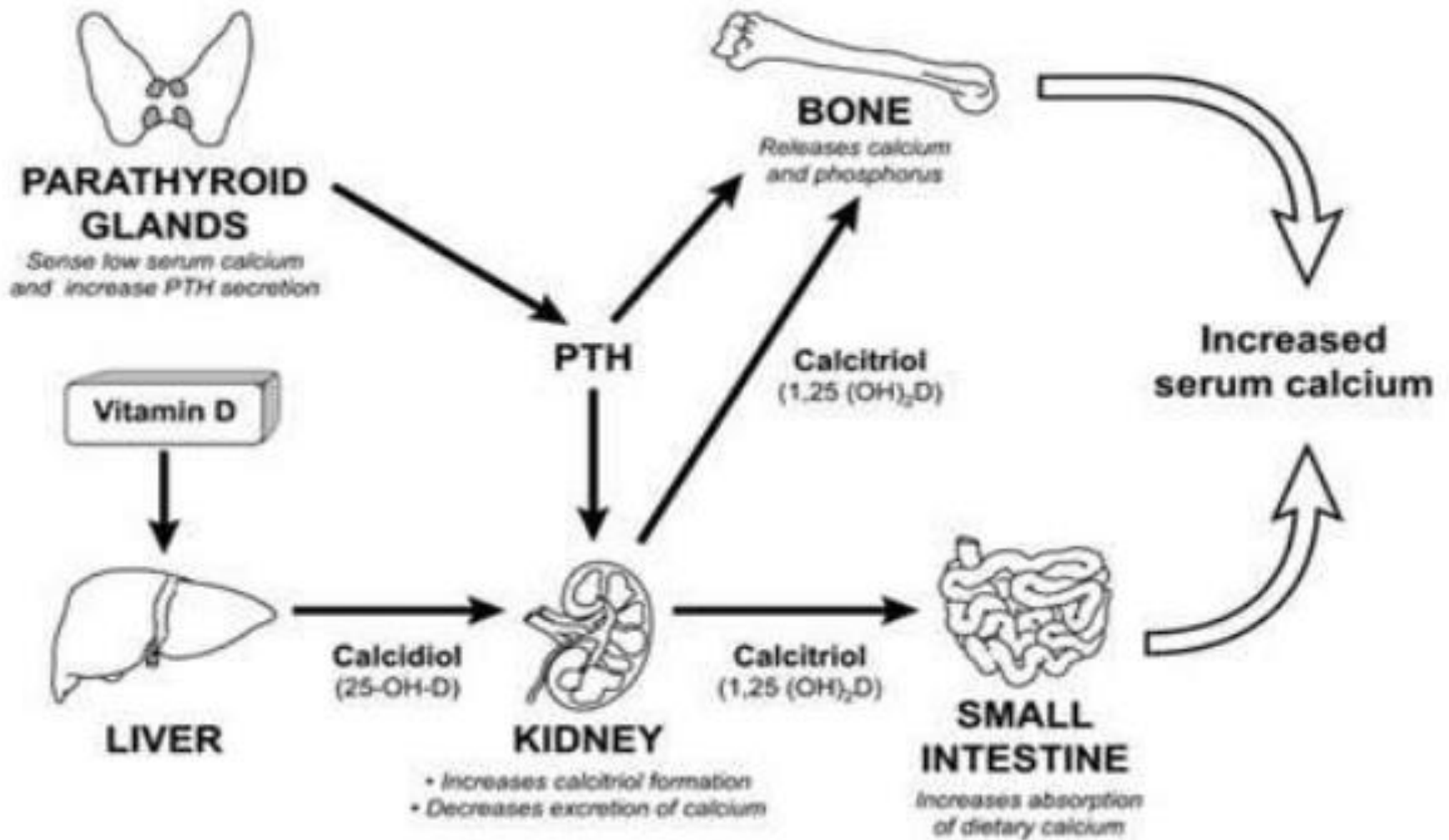
Calcium supplements





Calcium Metabolism

-Dr. Chintan



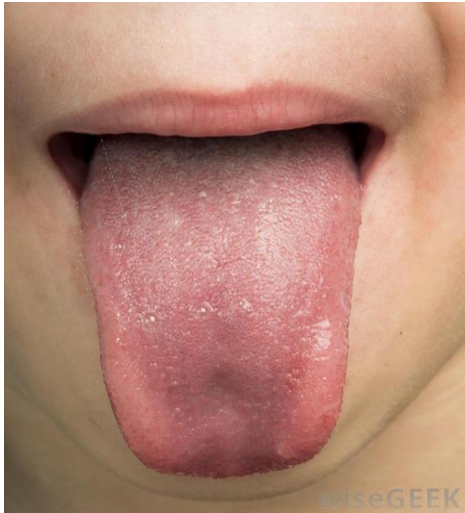
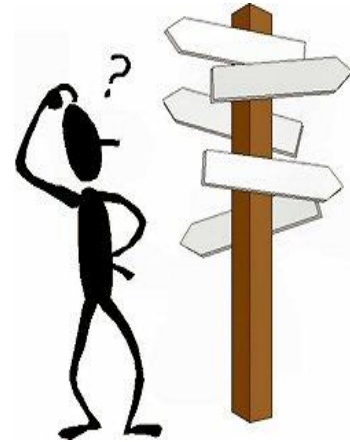
Hypocalcemia

- *It is an abnormally low calcium level in the blood.*
- *It can be caused by low levels of PTH, vitamin D deficiency, kidney failure, acute pancreatitis or insufficient magnesium and protein in the blood.*

Symptoms of hypocalcemia:

- **Abnormal heart rhythms**
- **Muscle cramps, twitching or seizures**
- **Tingling, burning, tickling sensation of the hands, feet, lips and tongue.**
- **Confusion**
- **Depression**

Symptoms of Hypocalcemia



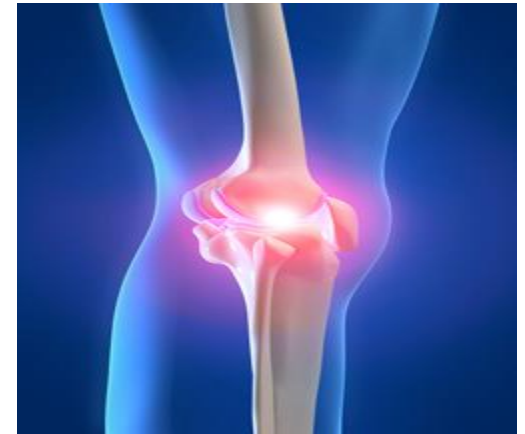
Hypercalcemia

- *It is an abnormally high calcium level in the blood.*
- *It can be caused by high levels of PTH, vitamin D overdose, prolonged periods of bed rest or immobilization and cancers of bones.*

Symptoms of hypercalcemia:

- **Dehydration**
- **Extreme tiredness**
- **Loss of appetite**
- **Nausea and vomiting**
- **Weight loss**
- **Constipation**

Symptoms of Hypercalcemia



Why calcium test is done?

- *To check for problems with parathyroid glands, kidney failure and stones, cancers of breast, neck, lung and head, bone problems, pancreatitis and abnormal ECG.*

- *To check if symptoms are caused by very high levels of calcium*
 - *To check if symptoms are caused by very low levels of calcium*
 - *As a part of routine blood test*
- ❖ *Bone mineral density test measures the amount of calcium in the bones*

How is the blood test done?

- *The patient should be in recumbent position and rest at least for 30 minutes before the test*
- *The blood should be drawn without the use of tourniquet*



THANK YOU

