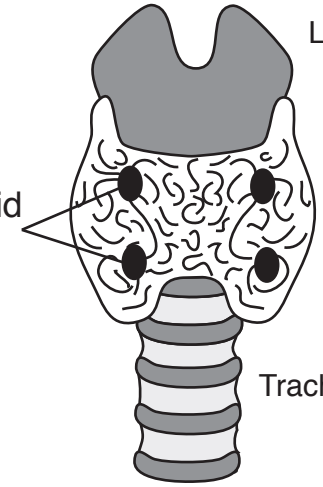
Calcium Regulation in the Blood

Hypocalcemia

Hypercalcemia



Parathyroid glands

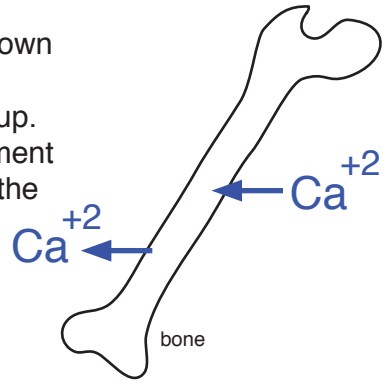
Thyroid Gland (Parafollicular Cells)

Parathyroid Hormone

Calcitonin

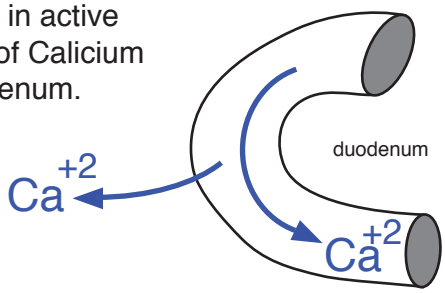
Parathyroid Hormone
- stimulates bone breakdown to proceed at a faster pace that bone build up. The result is a movement of calcium from the bone to the blood.

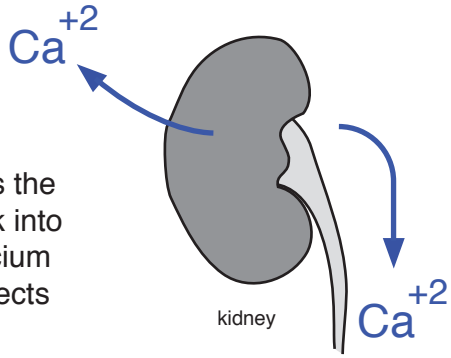
Calcitonin stiumlates bone growth This results in bone buildup proceeding at a faster rate than bone breakdown. As mineralization occurs, calcium is removed from the blood.



Parathyroid hormone promotes Vitamin D activation by kidneys. This results in active absorption of Calicium from deuodenum.

Calcitonin *may* decrease appitite which *may* decrease calcium intake indirectly





Parathyroid Hormone stimulates the kidney to reabsorb calcium back into the blood, thereby reducing calcium loss in the urine. The above effects of parathyroid hormone help to restore homeostasis!

Calcitonin stimulates the excretion of calcium into the urine. Therefore calcium leaves the body, and this helps to restore homeostasis.