CALCIUM METABOLISM IN IGUANAS
By Dorrinick P. Giorgianni 7-24-04

LIGHT
Natural unfiltered sunlight or good full-spectrum UVR

DIET
High Calcium/Low Phosphorous

SKIN
Vitamin D3 (cholecalciferol) is formed.

LIVER/KIDNEY
Convert D3 (cholecalciferol) to 1,25 Dihydroxycholecalciferol (active Vitamin D3) used in digestion. 1,25DHC is necessary for the iguana to properly absorb calcium from digested food in the intestine.

INTESTINE
Vitamin D3 effectively absorbs calcium from the food being digested.

BLOOD
Calcium is transported in a continuous process of increase and decrease based on blood calcium serum levels. Calcium is stored in the bone matrix.

OSTEOCLASTS: Cells, stimulated by PTH, responsible for the demineralization of bone and the release of calcium into the blood.

OSTEOCLASTS: Cells, stimulated by (CT), responsible for resorption of calcium from blood and the production of bone.

• When blood calcium levels decrease, the parathyroid gland secretes a hormone (PTH) which stimulates osteoclast activity and releases calcium from bone material into the blood.

• Once blood calcium levels return to normal, the thyroid gland secretes calcitonin (CT) a hormone which decreases osteoclast activity, thereby inhibiting the release of stored calcium from the bone. Increased osteoclast activity resorbs the calcium from the blood into the bone matrix.

SOURCE INFORMATION: Iguana Times, Vol. 9 Num. 1 8.2. Calcium Metabolism In Iguanas, Bruce Bogoskiavsky, DVM Animal Veterinary Hospital of Orlando FL 32809
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