

Healthy shell development in tortoises

ABNORMAL

Pyramided growth



Why does pyramiding happen?

- Pyramiding happens when the scutes grow vertically vs. horizontally
- Incorrect diet including too much protein, too low calcium, inadequate fiber, lack of vitamin D3, being kept too cool, too much food, not enough exercise and **poor hydration** (soak your tortoise and provide a place to bury!)
- Pyramiding does not occur in the wild
- **Consequences: The tortoise will have significant health issues including, but not limited to, Metabolic Bone Disease and a severely shortened lifespan**

Can abnormal growth be corrected?

No. Once abnormal growth is established the damage both internally and externally is done. Healthy shell will grow under the damaged shell if conditions are changed but the damage will stay.

ABNORMAL

Sunken shell



Why do the shells 'sink'?

- The pyramided shell grows too heavy for the supporting bone structure causing collapse
- Collapse causes damage to the internal organs, especially the lungs
- **Consequences: The tortoise will have significant health issues including, but not limited to, Metabolic Bone Disease and a severely shortened lifespan**

Healthy growth



- Starts immediately after hatching – correct environmental conditions must be provided
- **EVERY SPECIES** of tortoise needs a warm, moist place to bury themselves during the developmental years
- Burying mimics the conditions in the nest. Current research shows tortoises may spend extended periods in the nest
- While buried the tortoise will absorb the moisture into its shell and skin and the building blocks of healthy growth are started
- Correct fresh, varied diet and correct temperatures are vital as well

Exotic pets need exotic care

Information presented is intended as a general guide and in no way represents finality on the subject. Owners and prospective owners are encouraged to continue learning about the animals in their care.