

# Metabolic Bone Disease

All reptiles can be affected by **Metabolic Bone Disease (MBD)**, also known as Nutritional secondary hyperparathyroidism.

Bearded dragons, turtles and lizards are commonly affected.

This disorder is caused by **low dietary levels of calcium or vitamin D**, an improper ratio of dietary calcium to phosphorus, and/or **inadequate exposure to ultraviolet Light (UVB)** rays.

Appropriate UV lighting is important for the absorption of calcium which plays an important part in bone and muscle development. Thus, it is important to have your bulbs checked and replaced every 6 months!

The disease process is easily preventable with the correct husbandry but difficult to manage once it occurs. Prevention is better than cure.



**Common clinical signs include:**

- Poor skeletal development
- Lethargy/weakness/reluctance to move
- Poor appetite
- Weight loss
- Fractures

**Some of these husbandry changes and treatment include:**

- Appropriate UVB lighting
- Calcium supplementation
- Proper diet
- Exposure to natural unfiltered sunlight if possible



**Diagnosis** requires a thorough examination of the husbandry, a full physical exam, and radiographs (x-rays) to look at the bone density. Blood testing can also be useful.

**Treatment** depends on the severity of disease.

Pathological fractures/broken bones can occur. Treatment takes a long time and sometimes they are unfortunately too sick to survive. Amputation or repair of the broken limbs is sometimes required. With less severe cases, making the appropriate husbandry changes and dietary supplementation often resolves the issue.

The **prognosis** depends on the severity of the disease. In some cases, the clinical signs can be reversed with treatment, we strongly advise you seek veterinary advice if any of the clinical signs listed are encountered or you are at all concerned.