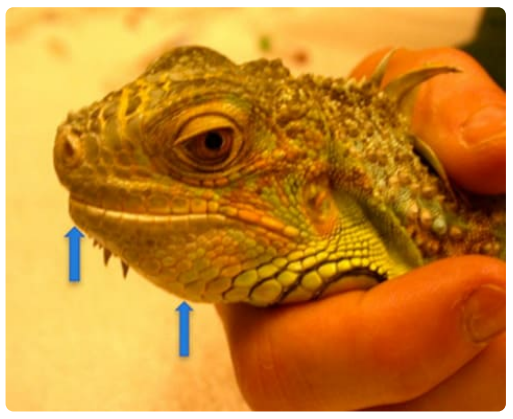
Top 10 Reptile Diseases Part 1

Take a bite out of the first 5 of the top 10 reptile diseases!

Over 5 million turtles, snakes, lizards, & other reptiles were pets in the U.S. in 2011.

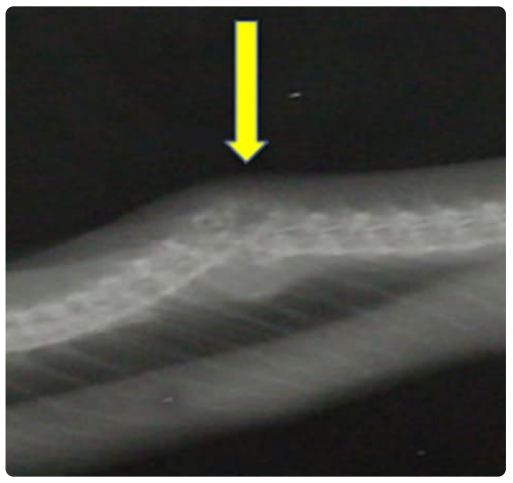
1. Metabolic bone disease (MBD)
   - **Classic case:**
     - "Bent iguana" (pathologic fractures) OR
     - Progressive weakness in a young reptile OR
     - Swollen limbs from fibrous osteodystrophy
     - History of a deficient diet (unsupplemented lettuce, ground meat, mealworms, crickets)
   - **Dx:**
     - Physical exam: distorted, rubbery mandible
     - Radiography: poor mineralization, greenstick fractures
     - Low plasma 25-dihydroxycholecalciferol
     - Later see hyperphosphatemia and hypocalcemia
   - **Tx:**
     - CRITICAL: Correct diet and lighting
       - Dietary Ca:P = 1.5-2.1
       - Unfiltered sunlight or full spectrum light (UVB) needed for vitamin D3
     - "Gut-load" whole prey (prey supplemented with calcium or calcium/vit D)
     - Calcitonin: only if normocalcemic
   - **Pearls:**
     - Prognosis is fair to good if caught early, but poor if hypocalcemia and bone loss
     - Renal secondary hyperparathyroidism can occur in older animals with end-stage renal disease
       - Present with inability to move and muscle fasciculations



Green iguana with a swollen and shortened jaw from MBD

2. Salmonellosis
   - **Classic case:**
     - Reptiles AND amphibians are often carriers, shedding bacteria in feces
     - May see septicemia, osteomyelitis, abscesses
   - **Dx:**
     - Culture (abscess or blood)

- Biopsies
- Radiographs: vertebral infection in snakes
- Necropsy: acute enteritis or necrotizing fibrinous enteritis



Pathologic fracture in a snake with chronic salmonellosis

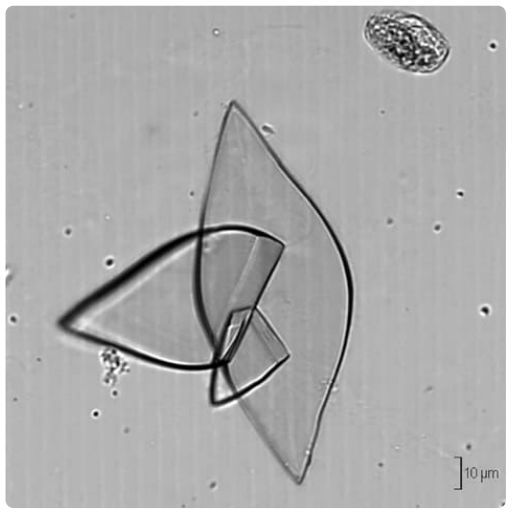
- **Tx:**
  - Debridement
  - Systemic antibiotics if septicemic (may increase emergence of resistant strains)
  - Supportive care
    - Fluids
    - NSAIDs
- **Pearls:** ZOONOTIC concern
  - Red-eared slider turtles illegal to sell if under 4 inches of shell length (can fit in child's mouth)
  - Practice good hygiene after handling reptiles or amphibians, enclosures, and their food
  - Children under 5, the elderly, and people with compromised immune systems are at high risk of infection
  - Etiology: Usually *S. bongori* or *S. enterica*

3. Dysecdysis (retained shed)

Retained spectacles

- **Classic case:**
  - Snakes with retained or partially shed skin
  - Lizards: see over feet and toes, can constrict distal toes and tail tip
- **Dx:**
  - Physical exam
  - Rule out underlying disease
- **Tx:**
  - Soak animal prior to assisting shed
  - Be careful with retained spectacles, can damage cornea
  - Treat underlying disease
- **Pearls:**
  - Environment may be too dry or poor nutrition
  - Subspectacular abscesses can occur between cornea and spectacle
  - Exuvium is the shedded whole skin (snakes)
  - Lizards shed in pieces

4. Gout



Uric acid crystals in gout

- **Classic case:**
  - Visceral: obtunded, weak, dehydrated
    - Primary is caused by excess dietary protein
    - Secondary is due to dehydration or renal disease
  - Articular: swellings, white nodular tophi (urate-centered granulomas) around appendicular joints, PAINFUL
  - Rare to have both types in one animal
- **Dx:**
  - Increased blood uric acid levels
  - Radiographs show mineralized tophi in organs or joints
  - FNA of joints: see needle-shaped crystals
- **Tx:**
  - Rehydration/abundant access to water, vitamin supplementation, analgesics
  - Primary visceral: decrease dietary protein; try to approximate diet of reptile's natural habitat
  - Secondary visceral: treat underlying disease
  - Medical Rx is challenging, poorly understood & takes cues from human protocols

- Allopurinol, may decrease uric acid production (debated)
- Probenecid, to promote urate excretion
- Colchicine/corticosteroids to manage acute gouty arthritis attacks

- **Pearls:**
  - Prognosis is poor
  - Pseudogout occurs in turtles, with mineral deposition (not urate) in and around feet

5. Hemipenal and phallic prolapse

- **Classic case:**
  - Prolapsed structure, unable to retract
  - Vulnerable to trauma during mating
- **Dx:** Physical exam
- **Tx:**
  - Hypertonic topicals, lubricants, and reduction
  - Surgical amputation: phallus and hemipenes have no urethra
- **Pearls:**
  - Single phallus in crocodilians and chelonians
  - Paired hemipenes in lizards and snakes
  - Oviduct prolapse can occur in females when straining to pass eggs: SERIOUS

Red-tailed boa with bilateral hemipenal prolapse

Images courtesy of Haley Luna (Kevin the tortoise), Jean A. Paré, DVM, DVSc, DACZM (MBD, snake spine, retained spectacles, prolapsed hemipenes), and Doruk Salanci (uric acid crystals).

Exotics