

Reptile Gout: Causes, Signs, Diagnosis, Treatment, and Prevention

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Gout is a common disease among reptiles, including snakes, iguanas, monitor lizards, and tortoises.

What causes gout?

Uric acid is one of the breakdown products of dietary protein in certain animals, including some reptiles. The uric acid is removed from the blood by the kidneys and excreted in the urine. Gout can occur if the level of uric acid in the blood exceeds the ability of the kidneys to remove it. The uric acid may crystallize in the joints which is termed "articular gout." It may also be deposited in various organs ("visceral gout"), such as the liver, spleen, pericardial sac (the covering of the heart), kidneys, and lungs, and mucous membranes, such as the mouth. When the uric acid crystallizes in tissues it forms small, white nodules called "tophi."

There are two types of gout. In primary gout, the high uric acid level is a result of an abnormal breakdown of protein. Primary gout is thought to be hereditary in humans. In secondary gout, the high level is due to the inability of the kidneys to adequately excrete the uric acid. This can be caused by medications, chronic diseases, kidney disease, starvation, improper diet, decreased water intake or chronic dehydration, and other environmental factors which affect the kidneys' ability to eliminate uric acid. A common cause of gout is feeding animal proteins (e.g.; dog or cat food) to vegetarian reptiles, whose digestive systems cannot properly digest and metabolize animal-based protein. In these cases, large amounts of uric acid are produced and the kidneys cannot adequately eliminate them.

What are the signs of gout and how is it diagnosed?

Tophi may be visible on the inside of the mouth in animals with gout. Joints may be enlarged, stiff, and painful. If there is renal failure or there are large deposits of uric acid in the kidneys, they may be enlarged.

After examining the animal and obtaining a thorough history of the diet; availability of water; the temperature and humidity of the cage as well as other environmental factors; and previous health problems and treatments, the veterinarian will suspect gout. [Radiographs](#) help to substantiate the diagnosis; the identification of uric acid crystals in joint fluid, biopsies, or tophi confirms it.

How is gout treated?

Any underlying dietary or environmental cause will need to be remedied. Diets such as Hill's Canine u/d, which are low in those proteins which are metabolized into uric acid, may be used in carnivorous reptiles. Proper hydration is necessary and fluids may need to be administered. If arthritis from gout is severe, it is possible to surgically remove the uric acid crystals from the joint. Unfortunately, severe and sometimes irreversible damage to the joint may have already occurred. Medications such as allopurinol, probenecid, sulfinpyrazone, or colchicine may be used, but the exact dosage and safety of these drugs in reptiles have not been determined. Most reptiles will need to be treated for life or the condition will quickly reappear if therapy is discontinued.

Gout can be complicated by a secondary bacterial infection in the joints. If this occurs, antibiotics are added to the treatment regimen.