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## THC Toxicity

The hemp plant *Cannabis sativa* contains the toxic compound  $\Delta^9$ -tetrahydrocannabinol (THC). Dogs can be intoxicated through inhalation of smoke, ingestion of the plant, or ingestion of products made with leaves, concentrated THC, or hashish oil. Signs, usually seen within 30–60 minutes of ingestion, can include CNS depression, ataxia, mydriasis, increased sensitivity to motion or sound, hyperesthesia, ptialism, tremors, and acute onset of urinary incontinence. A retrospective study was conducted in a state with legalized medical marijuana to determine whether the increase in medical marijuana licenses correlated with marijuana toxicity in dogs and investigate the use of a urine drug screening test (UDST) when diagnosing marijuana ingestion in dogs. Medical records of 125 dogs were evaluated: 76 with known marijuana exposure or a posi-

tive UDST, 6 with known marijuana ingestion and a negative UDST, and 43 with known marijuana ingestion that were not tested. The increase in THC-intoxicated dogs appeared to correlate with increased medical marijuana licenses, increasing 4-fold in 5 years, while humans registered for medical marijuana increased 146-fold. Increased clinician awareness, population changes, or increased willingness of clients to seek veterinary attention might have affected these numbers. UDSTs may be unreliable and only helpful if the test is positive. The human UDST has not been validated for use in dogs, and its usefulness remains controversial.

### ■ Commentary

With its increased use in human medicine, marijuana is becoming a more common toxicant in veterinary medicine. Onset of

signs depends on the route of exposure and ranges from 5–60 minutes. Fortunately, it is seldom lethal; most patients respond in 1–5 days. Although decontamination by emesis is often unsuccessful (marijuana is commonly used as an antiemetic in human medicine), activated charcoal with a cathartic may be beneficial. An illicit urine drug screen is helpful in confirming this diagnosis, although this may not be reliable.<sup>1</sup>—*Garret Pachtinger VMD, DACVECC*

### ■ Source

Evaluation of trends in marijuana toxicosis in dogs living in a state with legalized medical marijuana: 125 dogs (2005-2010). Meola SD, Tearney CC, Haas SA, et al. *JVECC* 22:690-696, 2012.

1. Evaluation of a human on-site urine multi-drug test for emergency use with dogs. Teitler J. *JAAHA* 45:59-66, 2009.



## Tennis Elbow & the Feline Patient

In this prospective study, medial humeral epicondylitis was characterized based on anatomic, radiographic, and histologic observations in 60 European shorthair cats that died (or were euthanized) for medical reasons. Elbow instability was not noted in any cats. Radiographs of both elbows were taken using extended craniocaudal and extended and flexed mediolateral projections. Histologic samples from normal elbows and those with new bone formation at the medial epicondyle were compared. Radiographic evidence of medial humeral epicondylitis including chronic degeneration, mineralization, and metaplastic bone formation were noted in 6 cats (10%); 2 had histologic evidence of ulnar nerve displacement and epineural fibrosis. Results suggested that medial humeral epicondylitis is common in cats and has potential clinical sequelae. Active pronation and supination are important

movements in cats, especially for climbing and hunting. Whether this predisposes cats to epicondylitis is unknown. Early stage epicondylitis may be overlooked in cats, particularly in the absence of soft tissue mineralization on radiographs.

### ■ Commentary

This prospective study examined 60 deceased cats with no history of orthopedic disease. Radiographs were taken of the elbows and intricate histologic evaluation was performed. In more severe cases of medial epicondylitis, cartilage defects, local mineralization and thickening of the joint capsule, and compression with degenerative changes in the ulnar nerve were seen. Inflammation was not seen, which is consistent with the human version (ie, tennis elbow), in which inflammation is only present in the early stage.



This analysis by the University of Zurich lends more precise information on the pathology of elbow arthritis in cats. The effect of joint disease on the ulnar nerve is fascinating. Early diagnosis and

treatment with disease-modifying agents, weight loss, and NSAIDs would be beneficial to these suffering patients.—*Jonathan Miller, DVM, MS, DACVS*

### ■ Source

Medial humeral epicondylitis in cats. Streubel R, Geyer H, Montavon PM. *VET SURG* 41:795-802, 2012.

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