

Prevalence of Urinary Calculi in Dogs & Cats

The following tables outline the prevalence of urinary calculi in dogs and cats presented to Banfield Pet Hospitals in 2014. Urinary calculi in cats are discussed in **Feline Struvite & Calcium Oxalate Urolithiasis** (page 14).

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Prevalence of Urinary Calculi per 10,000 Dogs & Cats Seen, Grouped by Age & Diagnosis* (2014)

DIAGNOSIS	DOGS (per 10,000)					CATS (per 10,000)				
	All Dogs Combined	Juvenile (< 1 year)	Young Adult (1-< 3 years)	Mature Adult (3-10 years)	Geriatric (> 10 years)	All Cats Combined	Juvenile (< 1 year)	Young Adult (1-< 3 years)	Mature Adult (3-10 years)	Geriatric (> 10 years)
	N = 2,385,508	n = 534,765	n = 589,559	n = 1,166,624	n = 283,106	N = 481,643	n = 114,850	n = 106,938	n = 188,675	n = 97,805
Cystic Calculi	9.1	0.1	1.9	12.4	5.2	5.6	0.2	2.9	9.2	1.6
Nephrolithiasis	1.4	0	0.1	1.3	1.5	2.8	0	0.5	2.8	4
Urolithiasis	25	0.9	5.9	33.8	13.9	15.3	1	8.5	24.2	9.4

Prevalence of Urinary Calculi per 10,000 Dogs & Cats Seen, Grouped by Reproductive Status & Diagnosis* (2014)

DIAGNOSIS	All Dogs Combined	Intact	Spayed/Castrated	All Cats Combined	Intact	Spayed/Castrated
	N = 2,385,508	n = 568,512	n = 1,816,566	N = 481,643	n = 53,784	n = 426,644
Cystic Calculi	9.1	3.3	10.3	5.6	0.7	5.9
Nephrolithiasis	1.4	0.5	1.6	2.8	0.4	2.9
Urolithiasis	25	9.3	28	15.3	3.2	16

Prevalence of Urinary Calculi per 10,000 Dogs Seen, Grouped by Body Size & Diagnosis (2014)

DIAGNOSIS	All Dogs Combined	Toy/Small (< 20 lb)	Medium (20 to < 50 lb)	Large (50 to < 90 lb)	Giant (≥ 90 lb)
	N = 2,385,508	n = 1,203,203	n = 643,884	n = 491,340	n = 47,081
Cystic Calculi	9.1	13.3	5.7	4.1	1.5
Nephrolithiasis	1.4	2.4	0.4	0.2	0
Urolithiasis	25	36.6	15.6	10.7	5.5

*NOTE: Age group and reproductive status totals do not match overall totals. Age groups are derived from visit age in 2014; some pets may have been counted in multiple age categories (eg, a pet that visited as a juvenile and then as a young adult in 2014). Reproductive status totals do not match due to animals of unknown sex or reproductive status.

Path to Pet Wellness: These data from Banfield Pet Hospital readily demonstrate that uroliths are common and should be included on the differential diagnosis list in both dogs and cats with urinary tract signs. Most of the urolithiasis cases reported in these data likely had cystic calculi, but this diagnosis could also include nephroliths, ureteroliths, and urethroliths. Comparing these data to previously published epidemiologic studies in dogs and cats is difficult¹ because urolith type is not reported.

It is interesting to note that, in dogs, the incidence of all uroliths, including nephroliths, appears to be inversely proportional to body size. Although the urolith types would be different, the number of male and female animals with uroliths is remarkably similar. In this data set, the prevalence of urolithiasis was lower in intact male and female dogs and cats, possibly because many of the intact animals were also younger in age. Uroliths are relatively rare in dogs and cats less than one year of age.

—Gregory F. Grauer, DVM, MS, Diplomate ACVIM (Small Animal Internal Medicine), Kansas State University

Reference

1. Thumchai R, Lulich J, Osborne CA, et al. Epizootiologic evaluation of urolithiasis in cats: 3,498 cases (1982-1992). *JAVMA* 1996; 208:547-551.

In each issue of *Today's Veterinary Practice*, **Pet Health by the Numbers** correlates an article topic with statistics provided by Banfield Pet Hospital (banfield.com). These statistics are extracted from data collected from the medical records of nearly **2.4 million dogs** and more than **480,000 cats** presented to more than **890 Banfield Pet Hospitals** in 2014.

Learn more about data collection by reading **Welcome to Pet Health by the Numbers** (January/February 2014 issue) and **Key Findings from the State of Pet Health 2014 Report** (May/June 2014 issue), both available at tvpjournal.com.

Suggested Reading:

- Cannon AB, Westropp JL, Ruby AL, Kass PH. Evaluation of trends in urolith composition in cats: 5,230 cases (1985-2004). *JAVMA* 2007; 231:570-576.
- Houston DM, Moore AE. Canine and feline urolithiasis: Examination of over 50,000 urolith submissions to the Canadian Veterinary Urolith Centre from 1988 to 2008. *Can Vet J* 2009; 50:1263-1268.
- Low WW, Uhl JM, Kass PH, et al. Evaluation of trends in urolith composition and characteristics of dogs with urolithiasis: 25,499 cases (1985-2006). *JAVMA* 2010; 236:193-200.
- Weichselbaum RC, Feeney DA, Jessen CR, et al. Evaluation of the morphologic characteristics and prevalence of canine urocystoliths from a regional urolith center. *Am J Vet Res* 1998; 59:379-387.