

Key Clinical Resources & White Papers regarding potential Health Risks associate with altered urinary pH

1. Intermittent alkaline urine in a cat fed an acidifying diet
from JAVMA July 1996 (peer-reviewed)
by C A Buffington ¹, D J Chew

<https://pubmed.ncbi.nlm.nih.gov/8926188/>

Abstract

Detection of alkaline urine traditionally sends an alert to the clinician to consider the presence of a urease-producing bacterial urinary tract infection, postprandial alkaline tide, or the ingestion of a diet that is non-acidifying. In the cat of this report, acid urine was produced while the cat was in the home environment, but alkaline urine was produced following the stress of a long trip to the veterinarian's office. Stress-induced respiratory alkalosis was highly suspected as the cause for the alkaline urine. If traditional causes for alkaline urine are not apparent for cats that produce alkaline urine at the veterinary clinic, *we suggest that urinary pH be determined on samples collected in the home.*

2. Feline Struvite & Calcium Oxalate Urolithiasis
from Today's Veterinary Practice September/ October 2015 (peer-reviewed)
by Gregory F. Grauer, DVM, MS, Diplomate ACVIM (Small Animal Internal Medicine)

<https://todaysveterinarypractice.com/wp-content/uploads/sites/4/2016/06/T1509F01.pdf>

“Metabolic Factors. In addition, *formation of sterile struvite uroliths may be twice as likely if urine pH is consistently elevated (6.5–6.9 versus 6–6.2).* Alkaline urine pH is commonly affected by

diet but may also be associated with drug therapy and renal tubular disorders

Laboratory Findings

Urine pH, crystalluria, and presence of urease-producing bacteria may aid in the presumptive identification of urolith type.”

3. Urinalysis in Companion Animals

from Today's Veterinary Practice May/ June 2014 (peer-reviewed)
by Theresa E. Rizzi, DVM, Diplomate ACVP

<https://todaysveterinarypractice.com/wp-content/uploads/sites/4/2016/06/T1405C09.pdf>

“Increase in urine pH (alkaline urine) may result from urinary tract infections with urease producing bacteria (that convert urea to ammonia). *Alkaline urine in a dog or cat should prompt an evaluation* to determine if white cells and/or bacteria are present (often evident in urine sediment).”

4. Feline Lower Urinary Tract Disorders (Session 1) and Sterile Cystitis (Session 2)

from World Small Animal Veterinary Association World Congress Proceedings, 2001 (peer-reviewed)
by Tony Buffington

<https://www.vin.com/apputil/content/defaultadv1.aspx?id=3843770&pid=8708>

“The two most common stone types in cats are struvite and calcium oxalate. Struvite (magnesium ammonium phosphate) urolithiasis and urethral obstruction have been induced experimentally in healthy cats by feeding diets containing three to ten times the amount of magnesium found in commercial cat

foods. These studies led to the conclusion that magnesium was a primary cause of naturally occurring struvite urolithiasis in cats. It subsequently was learned that struvite stones in the bladder of healthy cats fed large quantities of magnesium dissolved when the urine pH was reduced to approximately 6.0. These results suggested that magnesium's effect on struvite formation *depended on the urine pH*, an idea supported by the finding that the form of magnesium used in previous studies had increased the urine pH."

5. What Does it mean if my Cat's Pee is Acidic? Understanding Feline Urinalysis results

from CompanAI online Nov 4 2025 (not peer-reviewed)
by Dr. Sam Sheppard

<https://companain.ai/articles/what-does-it-mean-if-my-cats-pee-is-acidic/>

"Both too much and too little acidity create problems. **Struvite crystals** form when urine becomes too alkaline, but **calcium oxalate stones** develop when it swings too acidic."