

Managing Cats with Lower Urinary Tract Disease

Both Diet and Environment Matter



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Q What are known risk factors for cats developing lower urinary tract disease (LUTD)?

A The risk factors can be grouped into three categories: **genetic, epigenetic, and environmental.**¹ A leading factor is male gender, because the anatomy of the urethra in male cats is long and narrowing, which can lead to elimination problems.¹ If you look at a specific type of LUTD, such as feline idiopathic cystitis (FIC), risk factors can include obesity, anxiety, and frequent diet changes;² as well as use of non-clumping litter, living with other cats, living in an apartment and even living in a home that doesn't provide a perch for surveying their environment.³

Q What are the particular dangers for cats that don't drink enough water?

A Along with the inherent risks of dehydration, cats that don't take in adequate water have limited excess water reserves to flush out in their urine, resulting in increased urine specific gravity (USG). While we don't really know the optimal level of water intake for a cat, I believe it's better for cats to have a more dilute specific gravity than many of them typically create on their own. A mantra you often hear is, 'dilution is the solution,' and for cats with LUTD, this is desirable.

Q How can dietary intervention help cats diagnosed with LUTD?

A Since wet food often contains more than 70% moisture, offering wet food to cats as the primary diet or as complementary to dry food can increase their liquid intake. However, because cats can be picky about their food preferences, owners may have to try alternate approaches. I have some clients who've had success adding water to dry food. I tell them to start with just a drop or two and then work their way up to the highest volume of water the cat will tolerate.

Some dietary solutions are designed to stimulate free water intake. Some clients add a bit of tuna juice or clam juice to their pet's water bowl to make the water more appealing. Feeding a veterinary recommended diet supplemented with sodium chloride can increase urine volume in cats, which may be of benefit in the management of many types of LUTDs.⁴ Finally, it's essential that water be both fresh and easily accessible.

Q What about environmental changes? How can they help?

A With any LUTD and especially with FIC, stress reduction is important. Is there a spot in the home where a client can provide a 'safe zone' for the cat to easily escape? Is there climbing access to higher vantage points?⁵ Is there an area that offers visual (e.g., view of a fish tank or bird feeder) or tactile stimulation (e.g., scratching post)?⁵ These types of spaces should be available in both indoor and outdoor environments, and serve as forms of multimodal environmental modification, which is currently recommended as the primary therapy to prevent recurrence of FIC.⁵

I also recommend keeping at least one litter box on every level of the home. For multi-cat households, there should be one box for each cat, plus an additional box.⁶ Keeping litter boxes clean is also crucial so cats won't hold their urine or urinate in inappropriate places.⁶

There is no one-size-fits-all approach for every cat with LUTD, and veterinarians may have to try multiple approaches with individual patients. Whether the ultimate solution is a diet, a water supplement, an environmental change, or all of these, having more than one tool to try can improve the chances of success.

Feeding a wet diet can be an important strategy for increasing liquid intake in cats.



1. Westropp JL, Delgado M, Buffington CAT. Chronic Lower Urinary Tract Signs in Cats: Current Understanding of Pathophysiology and Management. *Veterinary Clinics of North America - Small Animal Practice*, 49(2), 187-209.

2. Lund HS, Sævik BK, Finstad OW, et al. Risk factors for idiopathic cystitis in Norwegian cats: a matched case-control study. *J Feline Med Surg*, 2016 Jun;18(6):483-91.

3. Kim Y, Kim H, Pfeiffer D, et al. Epidemiological study of feline idiopathic cystitis in Seoul, South Korea. *J Feline Med Surg* 2018 Oct;20(10):913-21.

4. Xu H, Laflamme DP, Bartges JW, et al. Effects of dietary sodium on urine characteristics in healthy adult cats. *Journal of Veterinary Internal Medicine*, 2006. 20:738.

5. Buffington CAT, Westropp JL, Chew DJ, et al. Clinical evaluation of multimodal environmental modification (MEMO) in the management of cats with idiopathic cystitis. *J Feline Med Surg*. 2006 Aug;8(4):261-8.

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Suggested resource:

<https://indoorpet.osu.edu/cats>.

The Ohio State University Indoor Pet Initiative is a resource for both clients and practitioners. This website provides comprehensive information on increasing the overall enrichment throughout the life of a cat.

Feline Hydration FAQs: Defining Strategies for Successful Supplementation



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Purina® PRO PLAN® Hydra Care™ is formulated to increase total water intake and promote hydration in cats. The following are answers to three common questions regarding the best practices when using supplemental hydration.

Q Which feline patients stand to benefit most from supplemental hydration?

A Cats evolved as desert animals and, compared to dogs, appear to have a less effective and incomplete response to dehydration. This suggests that almost any cat could benefit from increased hydration. Factors to consider when assessing hydration and the need for supplementation are **lifestyle** and **medical conditions**.

- **Lifestyle.** Cats that eat only dry food consume less total water than those eating wet food, even though cats eating wet diets voluntarily drink less free water.¹ Activity level can be another factor. A cat that bounds around the house and plays with owners and other household cats has higher hydration needs than a sedentary cat.

- **Medical conditions.** Several common conditions are known to predispose cats to dehydration. Cats with **chronic renal insufficiency** are unable to concentrate urine as well as healthy cats, setting up a need for supplemental hydration. Cats **with lower urinary tract disease**, especially those with a history of urolithiasis, can benefit from increased urine volume to dilute molecules that contribute to stone formation. Dehydrated cats can also **develop chronic constipation**—a condition that can be mitigated with additional fluids. Finally, any condition that affects mobility, such as **osteoarthritis**, can be problematic if it hinders the cat's ability to get up and go to the water bowl.

Q What results have been seen in hydration supplementation studies in cats?

A Offering cats Hydra Care™ can help healthy hydration. In a study, cats offered Hydra Care™ in a third bowl increased their liquid intake by 28% over the control cats. In

another study, cats consuming Hydra Care™ had a significant increase in urine volume and significant decreases in urine specific gravity and urine osmolality compared to cats consuming only tap water, in addition to dry food. ($P < 0.0001$)

In addition, a recent study² demonstrated that healthy cats ingesting a nutrient-enriched water (NW) 2–3 hours prior to anesthesia will begin the procedure better hydrated than cats offered tap water (compared to baseline). In addition, cats offered the NW appeared to be equally hydrated compared to cats administered IV fluids or better hydrated than cats with no IV fluids following the completion of a brief (less than 20 minutes) anaesthetic procedure.

Q How should clients handle Hydra Care™?

A I tell clients to handle Hydra Care™ as they would handle wet food. Because we want to ensure the product is consumed, I advise putting Hydra Care™ in a third bowl vs. adding it to the cat's water bowl or putting it on top of food.

Just as with wet food, if the Hydra Care™ bowl has been out for several hours and the cat hasn't finished it, it's best to dispose of what's left and wash the bowl. Opened pouches of Hydra Care can™ be sealed and stored in the refrigerator, just like wet food. Finally, it's important to keep the Hydra Care™ bowl away from dogs in the household or it's likely to be gone in about two seconds!

1. Seefeldt SL, Chapman TE. Body water content and turnover in cats fed dry and canned rations. *American journal of veterinary research* 1979;40:183-185.

2. Zanghi B, McGivney C, Eirmann L, et al. Hydration measures in cats during brief anesthesia: Intravenous fluids versus pre-procedure water supplement ingestion (abstr). *American College of Veterinary Medical Forum* 2019.

28%

Cats offered Hydra Care™ in a third bowl increased their liquid intake by 28% over control cats*.

*Compared to cats consuming only water in addition to dry feeding. Cats must consume at least 25ml/kg of body weight daily for benefit.

Helping Clients Get Comfortable with Hydration Supplementation



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Hydration should be a lifelong topic of discussion for cat owners. I begin emphasising the importance of keeping cats well-hydrated during kittenhood. And while feeding wet food and advising various strategies to encourage cats to drink are my preferred options for healthy patients, hydration supplementation plays an important role when cats have issues such as lower urinary tract disease, chronic renal insufficiency (CRI), chronic constipation and obesity.

CRI: A case for hydration supplementation.

For example, I've found that at a certain stage in CRI, cats reach a point where administering subcutaneous fluids at home should be considered. Some cat families and their cats are open to this, and others aren't.

While I continue to recommend subcutaneous fluids for a number of

patients with CRI, Purina® Pro Plan® Hydra Care™ has become a "gap filler" for many of them. My clients like the fact that Hydra Care™ is easy to administer, and having it as an option helps me discuss the challenges of dehydration a little sooner.

Offering a risk-free trial and setting expectations earns client acceptance.

My patients—even cats with CRI—have been pretty accepting of Hydra Care™. Meanwhile, offering their owners free trial packets has supported their acceptance. Owners are quite willing to take a free sample and they appreciate the chance to try the supplement risk-free. If the cat loves it, clients call me right back and ask how to purchase a box.

It's also been helpful for me to talk to clients about my own cat's experience with Hydra Care™ (see "Personal Anecdote Builds Case for Hydra Care"). Because it's

a novel kind of product for owners, sharing my experience can help them understand what to expect. I tell them, "You know how some wet food comes as morsels in gravy? This looks like a packet of just the gravy." Many of them say, "Oh, my cat loves the gravy—he usually licks it up and leaves the morsels behind!"

The better I am at shaping client expectations and using down-to-earth language owners understand, the more receptive I find they will be to my recommendations.

Personal Anecdote Builds Case for Hydra Care

I have a 16 ½-year-old cat with hypertrophic cardiomyopathy and diabetes. A cardiologist told me two years ago that my cat had just four months to live, so he has definitely outlived the prognosis. He is on a number of medications, including diuretics to keep him out of heart failure. Not surprisingly, these medications have led him to be mildly dehydrated and constipated.

When I learned about Hydra Care, I decided to let my cat try it. When I opened the first packet and gave it to him during his evening meal, he quickly lapped up the entire bowl. The next day I checked his litter boxes (he is a pampered cat with mobility problems, so he has three) and was surprised to see a big, healthy stool in each one. I knew then he had been more constipated than I realized. And he clearly felt great that following day.

It is meaningful to owners when I can speak about my own pet's experiences. This story has really helped me explain Hydra Care to my clients.



Addressing dehydration can help cats with common issues such as constipation.

Key Takeaways

- There is no one-size-fits-all approach for cats with LUTD, but feeding a wet diet, making environmental changes in the cat's living space, and adding a water supplement are all options to consider.
- Cats with dehydration resulting from either lifestyle or medical issues can benefit from hydration supplementation with Hydra Care™.
- Sharing personal anecdotes about Hydra Care™, as well as offering a sample pack of product free of the charge, can help eliminate barriers to product trial.


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