



STRESS POINTS

Modifications to a cat's environment and water intake may help limit clinical signs of FIC.



MEET THE AUTHOR

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Nutrition and Behavior Therapy for Feline Idiopathic Cystitis

Forms of feline lower urinary tract disease (FLUTD) are common presenting complaints in veterinary practice. FLUTD encompasses disorders affecting the urinary bladder or urethra, including feline idiopathic cystitis (FIC). FIC is categorized as an inflammatory disease and refers to cystitis from an unknown cause despite a thorough diagnostic evaluation.

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While cats diagnosed with FIC present primarily for acute or chronic obstructive or nonobstructive disease with signs of lower urinary tract disease such as hematuria, dysuria, pollakiuria, and stranguria, these signs are not specific for any one disease.¹ Published studies support common risk factors associated with FIC, such as age (2 to 7 years), excessive body weight, environment, and stress.^{2,3}

Given that the underlying cause of FIC is unknown and presentation and clinical signs vary widely, the cause is likely multifactorial, and treatment may be multifaceted. While some treatment regimens include medical management, this article focuses on stress reduction through nutrition and behavior therapy.

THE ENVIRONMENT AND NUTRITION HISTORY

There is currently no cure for FIC and treatment is focused on decreasing the cat's clinical signs, which also

helps reduce the recurrence of "flares." Veterinary nurses can play a key role by obtaining an accurate and comprehensive environment and nutrition history to determine the areas for improvement (**BOXES 1, 2**). These questions can be discussed during a scheduled veterinary nurse appointment as part of an FIC management program. Once the history is collected, the veterinary nurse can collaborate with the clinician to create appropriate goals, beginning with 1 or 2 initial changes. Introducing changes slowly can help avoid overwhelming the client and preserve the human-animal bond as they work through diet and lifestyle adjustments.

BEHAVIORAL GOAL: STRESS MANAGEMENT

Cats can be sensitive to life stressors or events and usually prefer predictable, routine settings.⁴ A variety of circumstances can prove overwhelming for cats depending on their personality and age. Common

BOX 1

Environmental History Questions to Aid in Managing a Diagnosis of Feline Idiopathic Cystitis

1. Have you had [cat's name] since he/she was a kitten?
 - If not, how long have you had [cat's name]?
2. Are there any new human or animal additions to the home?
3. How many cats and/or dogs are in the household?
 - Are there issues between the other cat(s) and/or dog(s)?
4. Are there exotic pets in the household?
5. How big is the living space (e.g., apartment, condo, detached house)?
6. Did you move recently?
7. Is [cat's name] indoor only?
 - If no, how does he/she behave outside?
8. Does [cat's name] have access to a screened-in outdoor area?
9. Do you leash-walk [cat's name]?
10. How many litterboxes does [cat's name] have access to?
 - How frequently are they cleaned?
 - Where are they in the home?
 - What type of litter do you use?
 - How deep/thick is the litter?
 - What kind of litterboxes do you use (e.g., open, covered)?
 - Does [cat's name] consistently use the litterbox for elimination?
 - If he/she eliminates outside the litterbox, where?
11. Does [cat's name] have access to the following resources without competition?
 - Toys
 - Scratching area
 - Safe vertical space
 - Safe sleeping area
12. What is the general noise level inside the home and nearby?
13. What is [cat's name]'s general temperament when at home (e.g., aggressive, fearful, playful, solitary, anxious)?
14. Has [cat's name]'s "normal" temperament changed recently?
15. How often and for how long are you away from home?
16. How frequently does the household receive visitors?
17. How does [cat's name] respond to visitors?





BOX 2

Nutrition History Questions to Aid in Managing a Diagnosis of Feline Idiopathic Cystitis^a

1. Have you noticed any recent changes in [cat's name]'s weight or body condition?
2. What do you currently feed [cat's name]?
 - Have you changed his/her diet recently?
3. How much food do you give [cat's name], and how often do you feed him/her?
 - Have you changed the amount or frequency recently?
4. How is [cat's name]'s appetite?
 - Do you “top” his/her food with anything to entice eating?
5. Where are [cat's name]'s food and water bowls?
6. How many bowls are there for fresh water?
7. If there are other cats in the household:
 - Do they share bowls?
 - Is there competition for food?
8. Do you give [cat's name] treats?
 - If so, what brand/type/flavor? How many per day?
9. If [cat's name] goes outside, does he/she have access to other food?
10. Do you give [cat's name] any dietary supplements? If so, which ones?
11. How do you give [cat's name] medications (if any)? Do you use food?

^aBody weight, body condition score, and muscle condition score should be assessed during the visit.

stressors include diet change, transportation, novel or unfamiliar objects and places, loud noises, and strangers (human or animal) approaching their personal space.

Stressful surroundings often exacerbate FIC, leading to undesirable behaviors such as inappropriate urination, aggression, vomiting, and selective appetite.⁵ Therefore, a major area to address in efforts to reduce stress is environmental needs. Regardless of the number of cats in the household, it is important to provide a safe environment with multiple areas for food, water, litterboxes, rest, scratching, and vertical space. This allows cats to avoid interaction with other cats, minimizing bullying, competition, and thus stress.

Cats generally prefer a private, often raised location where they can monitor the environment. Encouraging owners to provide hiding places for cats to help reduce stress can be as simple as taking a cardboard box and creating an entry and exit so the cat can rest inside or jump on top. Ideally, there should be as many hiding places as there are cats, keeping in mind the “safe places” should be distanced from each other.

If adjustments to environmental resources appear to have minimal impact on the cat's stress level and negative behaviors, a consultation with a board-certified veterinary behaviorist may provide additional support for the owner and cat(s). The resources in **BOX 3** may also be helpful.

BOX 3

Online Resources

- American Association of Feline Practitioners catvets.com
- American College of Veterinary Behaviorists dacvb.org
- American College of Veterinary Nutrition acvn.org
- Indoor Pet Initiative indoorpet.osu.edu

PHEROMONE ENVIRONMENT

Cats evaluate their security by gathering information from their surroundings through olfactory and chemical senses. Chemical sensing refers to the detection of pheromones, which are used to communicate information between members of the same species. Specifically, in cats, scent or pheromonal marking is done through facial and body rubbing to establish boundaries for their safe and secure territory. Cats produce pheromones from scent glands located in their cheek, temporal, and caudal regions, as well as paw pads. Providing interior scratching stations is an easy way to encourage and improve the cat's ability to

deposit its scent, assisting them in feeling secure and potentially decreasing stress.

Synthetic feline facial pheromones (SFFPs) are available and have been suggested as a means to mimic the natural markings cats create by rubbing their faces on objects.⁶ At this time, the use of SFFPs is lacking strong evidence to support it as a tool for managing FIC, although it is possible that SFFPs could decrease stress in some individual cats with FIC by activating specific sensory neurons.

NUTRITION INTERVENTIONS

Water Intake

Cats evolved from the desert environment and therefore can survive on less water than other species

BOX 4

Tips for Transitioning to Canned Food

Advise the client to offer the new diet next to the old diet in a similar container. If the cat does not consume the new diet within an hour, it should be removed. This routine can be repeated until the cat is readily eating small amounts of the new diet.

When the cat is eating the new diet, the amount of old food available should be decreased in small amounts every day until it can be removed entirely. This may take a couple of weeks.

Once the cat is fully transitioned, schedule a veterinary nurse recheck appointment to monitor the cat's weight, body condition score, and appropriate intake/feeding recommendations; review stress management success strategies; and troubleshoot any concerns from the owner.



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BOX 5

Ideas for Increasing a Cat's Water Consumption

- Select an appropriate water dish
 - Should have low edges or a wide opening to limit whisker fatigue
 - Can be easily cleaned and sanitized
- Choose a good location for the water dish
 - In a quiet place with low foot traffic
 - Away from litter pans and food bowl
- Provide fresh, clean water
- Offer a canned diet
- Provide a water fountain
- Offer hydration supplements

and drink less frequently. With conditions like FIC, increasing water intake may prove beneficial by decreasing the urine specific gravity and increasing urination, thereby “flushing” the bladder more frequently.

When ways to increase a cat's moisture intake are being considered, canned diets should be an option. Canned and dry diets vary considerably in their moisture content, with canned products generally containing more than 60% moisture and dry products generally less than 10%. Theoretically, increasing the proportion of canned food and thereby increasing water intake may decrease the urine specific gravity.⁷ However, cats generally have very selective and individualized taste and texture preferences. Some cats may refuse canned food and become more stressed through a diet trial, working against the goal for overall stress management. Veterinary nurses can use the tips in **BOX 4** to help clients limit stress around the introduction of new food.

If the effort to transition a cat to canned food is unsuccessful, other approaches can be used to encourage additional water intake. One option involves a nutrient-enriched water supplement for cats, targeting hydration. In addition, modifying the way water is offered—for example, location, water dish size, and water cleanliness—may entice the cat to drink more. **BOX 5** lists actions for owners to try. While these methods have not been proven to benefit every cat with FIC, they may have a positive impact on the cat's wellbeing, thereby limiting stress.



Working with owners to appropriately structure the environment for their cat(s) and providing feeding guidelines to support urinary health and ideal body weight will, at a minimum, increase the cat's wellbeing.



Therapeutic Urinary Diets

Several available therapeutic urinary diets may prove beneficial in management of lower urinary tract disease; however, not all target stress reduction. Therapeutic urinary diets targeting FLUTD and/or FIC in cats may use the following nutritional approaches:

- Increasing solubility of crystalloids within the urine
- Decreasing the retention of urinary crystals
- Limiting proinflammatory mediators and increasing anti-inflammatory mediators
- Increasing intake of L-tryptophan and α -casozepine

Stress-Reducing Supplements and Supplemented Therapeutic Diets

L-tryptophan is an essential amino acid that is a precursor for synthesis of serotonin, an inhibitory neurotransmitter. It may have an anxiolytic effect in cats. One 2-month study observed significant changes in behaviors such as vocalization, agonistic behavior, house soiling, and scratching in cats eating a diet supplemented with L-tryptophan.⁸

α -Casozeprine is available as a supplement and is an additive in some therapeutic urinary diets. It is derived from bovine milk and has anxiolytic properties. One study suggests that α -casozepine is beneficial in limiting anxiety and socially stressful conditions in cats.⁹

Long-chain omega-3 fatty acids (eicosapentaenoic acid and docosahexaenoic acid) and antioxidants such as vitamin E and β -carotene have been considered as agents to reduce bladder inflammation. To date, there are no studies evaluating the therapeutic dose for cats with FIC, but studies have supported the long-term use of multipurpose therapeutic urinary diets containing a wide range of omega-3 and antioxidant content.¹⁰

While oral supplements may be beneficial, consideration should be given to minimizing any stress associated with their administration. When possible, the use of formulated therapeutic urinary diets that also target stress reduction through the addition of beneficial ingredients and/or supplements should be considered.

CONCLUSION

FIC is a complex disease process and is currently not completely understood. Nevertheless, veterinary nurses can play a key role in management and guidance around successful FIC treatment. Since FIC appears to be a disease that is not solely related to the bladder, exceptional client communication in conjunction with supportive therapies can benefit both acute and chronic cases. Working with owners to appropriately structure the environment for their cat(s) and providing feeding guidelines to support urinary health and ideal body weight will, at a minimum, increase the cat's wellbeing. Ultimately, for cats with FIC, after any necessary medical treatments/procedures, focusing on stress reduction through environmental enrichment and maximizing water intake and urine volume to limit bladder irritants are the best approaches to limiting clinical signs associated with FIC. **TVN**

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