## **Cat Watch** Cornell University College of Veterinary Medicine Feline Health Center

Expert information on medicine, behavior, and health from a world leader in veterinary medicine

**O** THIS JUST IN

### **Prescreen for Diabetes**

#### It may come down to timing

recent study took blood glucose readings from a variety of cats 8 years old and older as they entered the veterinary clinic, after they had been hanging out for a few hours, and again after fasting. One challenge of measuring blood glucose in cats is that their levels tend to skyrocket temporarily when they are stressed, such as at the clinic.

The researchers determined that cats with blood glucose values of 117-189 mg/ dl should be retested a few hours later to see whether the reading was just due to stress or if there is a persistent high blood glucose level. If the initial reading is over 189 mg/dl or if the second reading is over 116 mg/dl, the cat should be fasted overnight before measuring again and glucose tolerance should be measured.

Bottom Line: A high blood glucose reading at your veterinarian's office may well be a stress response, but this could also be confused with underlying diabetes. If your veterinarian is suspicious of your cat's blood glucose level, he or she may want to keep your cat in the hospital to measure blood glucose

over time or may teach you how to do a reading at home where your cat is relaxed.

> Journal of Feline Medicine and Surgery, Dec. 2017

# study at the University of

A Root Canal for Cats

It's a good option to save your cat's injured tooth

California at Davis looked at root canals in cats. Nadine Fiani BVSc, DAVDC, Assistant Clinical Professor and Section Chief of the Dentistry and Oral Surgery Service at the Cornell College of Veterinary Medicine contributed to this study.

Success of the root canal was based on post-treatment radiographic evaluations. Of the 37 teeth evaluated, 18 were considered successfully treated and an additional 12 considered to have no evidence of failure. (The differentiation between successful and "no evidence of failure" dealt with the stabilization and resolution of inflamed root resorption.) The risk of failure was greatest in cats over 5 years old.

A cat's canine teeth are the most likely to undergo a root-canal procedure due to the size of the teeth. Fractures were the most common cause of damage and were usually associated with trauma. Once a tooth is fractured, the dental pulp, which is rich in nerve endings, is exposed. This is both painful and exposes the pulp to bacterial infection. That infection can spread into the tooth roots and potentially even into the bone of the cat's jaw.

According to the American



The first step is a veterinary examination.

Veterinary Dental College (avdc. org), a root canal involves removal of the diseased pulpal tissue. The clean, disinfected root canal is then filled with an inert material to prevent future bacterial contamination. A toothcolored restoration is placed to seal the crown against further infection. It is less invasive than an extraction, plus the cat can keep the tooth.

This study suggests that a root canal is a reasonable alternative to pulling an injured canine tooth. Follow-up studies to characterize longevity of the repairs need to be done.

Journal of Veterinary Medical Association (JAVMA), March 1, 2018

#### **INSIDE THIS ISSUE**

Tramadol for Osteoarthritis2	
New Feline Seizure System2	
Trim Those Nails	
Hip Dysplasia4	
Low-Calorie Treats5	
Urinary Diets6	
5 Tips for Using Therapeutic Diets7	
End Grooming Battles8	

## **Paw Preference by Gender**

#### Males like to use the left paw

study from Queen's University, Belfast, says cats exhibit clear paw preference, much as humans do. Researchers recruited 24 neutered male and 20 spayed female cats and asked the cat owners to collect data on which paw cats used when they stepped down the stairs or over objects, whether they slept on the left or right side of their body, and which paw the cat used to reach for

food inside a three-tier food tower.

Most cats showed paw preference when they



reached for food (73%), stepped down (70%), and stepped over objects (66%). All male cats showed a preference for using their left paw, while females were more inclined to use their right paw.

Animal Behavior. "Female cats are more likely to be right-handed, researchers discover." ScienceDaily.

### **Tramadol for Osteoarthritis**

Improvements were noted at the 2 mg/kg dose, given twice daily

ony or osteo arthritis can be painful. While cats often hide pain well, with the use of pain medications owners often see a dramatic improvement in their cats' mobility and quality of life. Many pain medications, including non-steroidal anti-inflammatory drugs (NSAIDs), are not metabolized well by cats and can even be deadly.

Tramadol is a synthetic opioid that was evaluated in a study at the University of California at Davis. The goal was to determine if long-term tramadol therapy can be safely used for arthritis pain in cats. The side effects of tramadol can include sedation, abnormal mental status, and diarrhea. Behavioral effects ranged from euphoria (happy cats) to dysphoria (sad or upset cats). Varying dosages were looked at to maximize positive effects and minimize side effects.

The study included 17 cats over 10 years of age. The cats had to have radiographic (X-ray-based) proof of osteoarthritis and not be on any confounding medications or supplements. Three dose levels were evaluated: 4 mg/kg, 2 mg/kg, and 1 mg/kg. Cats were treated for five consecutive



Tramadol may be an option for cats to improve their mobility and quality of life.

days then had two days off. Cats wore activity-count collars during the study for an objective measurement of activity. The study covered five weeks of treatment.

As expected, more cats had side effects with the 4 mg/kg and 2 mg/kg doses. However, at the 2 mg/kg dose, given twice daily, the cats showed definite improvements in mobility and corresponding improvements in quality of life. This study suggests that tramadol might be an option to consider for geriatric cats with arthritis pain.

Journal of Veterinary Medicine Association (JAVMA), March 1, 2018

## **Taking a Page From the Canine Seizure System**

*Using this system will help advance diagnosis and treatment in cats* 

e may now start classifying seizures in cats based on the canine system of the International Veterinary Epilepsy Task Force (IVETF).

The IVETF breaks down seizure causes in dogs as being reactive (with a cause such as ingesting a toxin or a metabolic disorder like liver disease), secondary (due to pathological issues in the brain), or idiopathic (unknown cause, potentially with genetic predispositions). These classifications are determined through a history and exam, blood tests, urinalysis, and ideally MRI and cerebrospinal fluid analysis. A new feline study took an adapted version of these criteria and looked at 110 cats with



idiopathic epilepsy and secondary seizures. The study did not include "reactive" seizures. Just as with dogs, young adult cats, ages 1 to 7 years, were more likely to have idiopathic epilepsy than secondary seizures. That makes sense, as many secondary causes, such as cancer, are more common in senior cats.

Cats with idiopathic epilepsy were more likely to have a normal neurologic exam than cats with secondary seizures. Again, that makes sense, since the reason for the secondary seizures is constantly present in the affected cat while idiopathic seizures are related to periodic "short circuits" in the cat's brain.

The study's hope is that more knowledge about feline seizures in general will lead to better diagnostics and treatments. (See our March 2018 article on neurologic symptoms at catwatchnewsletter.com.)

PubMed: 28720302 DOI: 10.1016/j.tvjl.2017.04.001



#### **EDITOR IN CHIEF**

Bruce G. Kornreich, DVM, Ph.D., Dipl ACVIM

# EXECUTIVE EDITOR Cynthia Foley

TECHNICAL EDITOR

Debra M. Eldredge, DVM

#### **ADVISORY BOARD**

James A. Flanders, DVM, Dipl ACVS, Associate Professor, Clinical Sciences

> Margaret C. McEntee, DVM, Dipl ACVIM, DACVR, Professor of Oncology

William H. Miller, Jr., VMD, Dipl ACVD, Professor, Clinical Sciences

> Pamela J. Perry, DVM, Ph.D. Lecturer, Clinical Sciences, ACVB Behavior Resident



Cornell University College of Veterinary Medicine Feline Health Center

For information on your cat's health, visit the Cornell University College of Veterinary Medicine, Cornell Feline Health Center website at www.vet.cornell.edu/fhc/.

## Send Ask Elizabeth questions and letters to the editor:

CatWatch\* 535 Connecticut Ave. Norwalk, CT 06854-1713 catwatcheditor@cornell.edu

Subscriptions: \$39 per year (U.S.) • \$49 per year (Canada). For subscription and customer service information, visit www.catwatchnewsletter.com/cs or write to: CatWatch, P.O. Box 8535, Big Sandy, TX 75755-8535. 800-829-8893



CatWatch\* (ISSN: 1095-9092) is published monthly for \$39 per year by Belvoir Media Group, LLC, 535 Connecticut Ave., Norwalk, CT 06854-1713. Robert Englander, Chairman and CEO; Timothy H. Cole, Executive Vice President, Editorial

Director; Philip L. Penny, Chief Operating Officer; Greg King, Executive Vice President, Marketing Director; Ron Goldberg, Chief Financial Officer; Tom Canfield, Vice President, Circulation. ©2018 Belvoir Media Group, LLC.

Postmaster: Send address corrections to CatWatch, P.O. Box 8535, Big Sandy, TX 75755-8535.

Express written permission is required to reproduce, in any manner, the contents of this issue, either in full or in part. For more information: Permissions, CatWatch, 535 Connecticut Ave., Norwalk, Connecticut 06854-1713.



# **Trim Those Nails**

# With a little patience and a lot of persistence, you can make this dreaded task routine

any cats will wear down their nails with routine scratching (hopefully on an approved scratching post and not your furniture), but for others, we're responsible for their "pawdicures." You may need to keep your cat's nails trimmed to lessen the damage from scratches or to make your cat's affectionate kneading less painful. Cats who don't wear down their nails must be trimmed regularly to avoid the nails growing into the cat's paw.

Going to the veterinary office or a groomer are options, but doing nails at home is less stressful for your cat and cheaper and more convenient for you.

#### **Start Slowly**

The biggest challenge to trimming most cats' nails is not the actual clipping, but having their paws handled. Think about your daily interactions with your cat—do you touch her feet regularly, or do you just pet her head and back? If she is already used to having her paws handled, you have a head start. If not, that needs to be the first step.

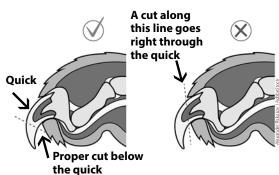
Whenever you are petting your cat, occasionally run your hand down each of her legs to her paw. At first she will probably withdraw her foot. Don't worry—just continue petting as normal and then try again in a few minutes.

Over time, she will realize that you aren't going to do anything scary to her paw and she will let you touch it. From there you can gradually move up to holding each paw for brief periods of time. You can also reward her with favorite treats or playtime after you touch one of her paws.

#### **How to Trim**

You can purchase a commercial nail clipper in either a guillotine style or a scissors style, or you can just grab human nail clippers. Choose whatever tool you're most comfortable using.

Gently squeeze your cat's paw to expose the nail to be trimmed. You should be able to see the white hook at the end and the wider section with pink in the middle. The hook is the part that you want to clip back, and it has



no feeling, just like the end of your own fingernails. The pink is the "quick," which contains blood vessels and nerve endings. If you cut your cat's quick, it will both hurt and bleed.

Once your cat's nail is exposed and you can see where the quick is, use your clippers to trim the hook off the nail (see figure above). Reward your cat with a treat or by petting her throughout the job, so she finds the procedure both painless and rewarding.

#### **Work in Stages**

Many cats won't sit still for you to trim all of their nails, especially when you are starting out. Clip a couple of nails and then give your cat a break and continue later. Depending on your cat's personality and patience, this might mean trimming all of her nails over the course of an hour or spreading them out over a couple days.

As she gets used to this, you will be able to do more nails at a time.

Pay attention to your cat's signals that she is getting annoyed. She might pull her foot away from you or tuck it tightly under her body. If she does one of these things, give her a short break or work on a different foot and come back to that one.

She also may swish her tail, narrow her eyes, or growl. These signals indicate impending kitty rage, so it is best to abandon nail trimming for the moment and come back later when she is in a better mood. Patience and persistence pay off.

#### **Tips and Tricks**

Be sure your cat is comfortable. Some cats like to be held on their backs like a baby, but others do not. Keep your cat in as natural a position as possible while trimming her nails. For example, if she is resting on the couch, only pull her foot away from her body just enough so that you can get to her nails.

Be patient. It is better for nail trimming to take a long time to complete than to have a bad experience that leaves both you and your cat dreading the next session.

Make sure to get all the nails!
Polydactyl cats—those with extra toes—
usually have extra nails to go with those
toes. The extra nails may not be in regular
contact with the ground, which means
they often will grow longer faster.

If needed, wrap your cat in a towel to gently restrain her.

#### **Regular Trims**

Keep on top of your cat's nails so that they don't grow too long. For many cats, trims can be several weeks apart. For cats who have issues with their nails, such as the thick, brittle nails that some older cats get, or for cats who just aren't wearing their nails down at all, more frequent trims may be necessary.

Nails that grow too long can loop around to puncture your cat's foot, which is both painful and has a high risk of infection. Once every two weeks is a good place to start, and you can adjust your schedule based on your cat's needs.



Trimming your cat's nails should be a relaxed, simple, regular procedure. Check the cat's nails every couple of weeks.

# **Cats Hide Signs of Hip Dysplasia**

Hip dysplasia is not just a dog disease—although many cats downplay their pain by limiting their activity

diagnosis of hip dysplasia might take you by surprise. Usually, a cat comes into the veterinarian because the owner notices that the cat is lame or sore, or less active than normal. Some cats with hip dysplasia will be consistently off in their gait, while other cats only show stiffness after a wild chase through the house.

And, cats being cats, some never show obvious lameness because they limit their activity to nonpainful moves themselves. In these cats, however, you'll probably see the change in their activity level, such as a cat that would routinely leap up to check out things on the counter staying on the floor.

Hip dysplasia isn't something we normally think of in cats. Dogs, yes. However, cats can have hip abnormalities and hip arthritis as well. Just as in dogs, hip problems tend to be seen in the bigger-boned, heavier breeds of cats, such as Maine Coon cats. Still, even small, lithe cats like the Devon Rex can develop hip dysplasia, as can domestic shorthairs.

#### What Is Dysplasia?

Hip dysplasia appears to be a multifactorial condition, involving primary and modifier genes, as well as being influenced by various environmental factors. Dysplasia means abnormal growth or development. Hip refers to the hip joint, which is a "ball and socket" joint that connects the femur to the pelvis. The head of the femur is the "ball" that fits into the "socket" of the acetabulum of the pelvis. Ideally, your cat has a clean, round femoral head and nice deep acetabulum to stabilize the joint.

This connection is not bone-on-bone, of course. There is articular cartilage and joint fluid between the bones to reduce friction and keep the joint working smoothly. The muscles also help to stabilize the joint and can minimize malfunction and malformation effects.

In hip dysplasia, the acetabulum may be shallow, so it does not hold the femoral head firmly in place. This can even be a subluxation (misalignment) due to the femoral head sliding out of the socket area of the acetabulum. The



femoral head itself may not be smooth and round or there may be joint laxity that leads to small, repeated traumas within the joint every time your cat moves. Generally, both hips will show some degree of dysplasia in affected cats, although it may be worse on one side.

#### **The Diagnosis**

It can be difficult for a veterinarian to diagnose lameness in a cat just by physical examination. A thorough history can help. For example, if you got your cat

#### What You Can Do

- Take your cat to the veterinarian if you see lameness or decreased activity
- Be aware x-rays (usually with sedation) may be required for the diagnosis
- Consider joint nutraceuticals to help lubricate the joint
- Use analgesics/anti-inflammatory pills to control pain (consult with a veterinarian)
- Help your cat maintain a healthy body weight
- Increase exercise, if possible, with play
- Make modifications in your house to provide easy access for your cat to things like litter boxes and screened window sills

as a stray, it is possible he was hit by a car sometime in his past.

Ideally, your veterinarian would like to see your cat move, preferably in a straight line. Cats, of course, usually have their own ideas about that. At the

> veterinary clinic, they'll probably simply hunker down and refuse to move. So, the veterinarian will use manipulation of the joints to find areas of pain. Even then, though, some cats are quite stoic, especially in unfamiliar surroundings.

Both PennHIP, a radiographic screening method for hip evaluation, and the OFA (Orthopedic Foundation for Animals) provide protocols and testing for hip dysplasia in cats, based on existing dog protocols.

Radiographs (i.e, x-rays) will be needed to evaluate the bones of the hip joint and usually require sedation both to ensure the cat's cooperation and to minimize pain from an arthritic joint.

The standard view is with the cat lying on her back and her hind legs stretched out straight. This view is like the evaluation radiograph required for OFA certification of the degree of dysplasia in the hip. (The OFA classifies hips into seven different categories: Excellent, Good, Fair, Borderline, Mild, Moderate, or Severe.) Additional views are done for PennHIP certification, which looks at measurements of joint laxity as well as hip-joint conformation.

When radiographs are sent to OFA or PennHIP, veterinary radiologists take measurements and compare the radiographs to those of normal cats. Ideally a cat's radiographs would be compared to a cat of the same breed as well. Currently, only Maine Coon cats have enough cats in the registries to make this comparison reasonable.

Bony or osteo arthritis in the hip may be a result of hip dysplasia or it can be from trauma to the joint area. Bad falls, being hit by a car, and even the extra effort from being overweight can

#### Information at the OFA

The OFA has 23 cat-breed registries, including non-purebred, for a variety of diseases. Some breeds are doing serious genetic clearances while others are just getting started. The registry is open for anyone to search at ofa.org/diseases/breed-statistics.

contribute to arthritis in the hip. With some cases, it may be difficult for your veterinarian to distinguish between genetic hip malformations and trauma if the joint is badly affected when viewed on x-rays. Still, one study of randomized cats showed a 32 percent incidence of hip arthritis compatible with hip dysplasia.

#### **Treatment and Prognosis**

What do you do if your cat is diagnosed with hip dysplasia? Luckily, with their smaller body size and good muscle mass, many cats with hip dysplasia never show any signs of problems. What you need to do depends upon whether your cat shows clinical lameness or not. Some cats will have hip dysplasia on x-rays but not show any signs. For these cats, you may simply need to watch carefully and consider a joint supplement to minimize the development of any arthritis.

Watch your cat's weight. Being overweight means more stress on joints. Encourage your cat to be active, but try to limit big leaps. Cat agility is becoming a popular sport (catagility.com), but it's not a good idea with hip dysplasia!

If your cat shows frequent or constant bouts of lameness, your options are somewhat limited. Pain and antiinflammatory medications can help.

If your cat does not respond well to one combination of medications, discuss other options with your veterinarian. Just as some pain medications work well for one person while someone else swears by a different drug, cats may have individual differences in response to the medications, too.

Those drugs may be enough for some cats. You can also do environmental modifications, such as moving the litter box upstairs, so your cat doesn't have to venture into the basement. Surgery is also an option in some cases of hip dysplasia (see sidebar).

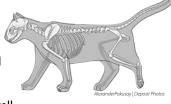
Preventing hip problems means keeping your cat fit and trim. Avoid extreme exercise—including big leaps—especially when your cat is young and growing. Do encourage moderate exercise and keep your cat active.

If a big-boned breed of cat is your heart's desire, ask about hip evaluations on the sire and dam of the litter you're considering. Normal parents aren't a guarantee of clear hips, but it puts the odds in your favor. Remember that many cats handle hip dysplasia and hip arthritis fine, with a little management help from their owners.

### **Surgery Options for Cats**

#### Small bones make surgery more difficult

Surgery may be in store for cats with severe and painful cases of hip dysplasia. Total hip replacements can be done but are very uncommon. Cat bones are small and somewhat fragile, so they don't always hold implants well.



"You can just remove the femoral head—the ball part of the hip's ball-and-socket joint—and not replace it," says Ursula Krotscheck, DVM, DACVS, Cornell College of Veterinary Medicine Associate Professor, and Section Chief of the Small Animal Surgery Section. "The muscles that normally hold those components of the hip will essentially continue to do their job, but without the painful bone-on-bone contact.

"Although the cat may have a mechanical lameness and the affected limb may be a little shorter after the operation, the leg usually will have an almost normal range of motion and excellent function. The animal usually will be able to sit up, run, jump, and engage in normal cat behavior."

Cats who undergo surgery will require rest and then rehabilitation post-operatively. Many cats go back to full normal activity.

#### **©** DID YOU KNOW?

#### Low-Calorie Treats for the "Rotund Cat"

#### Dehydrated meat, catnip, fruits, and vegetables can add variety

eople love to give their pets treats and pets love to eat them. What's not to like? The catch is when your cat is on the "round" side and needs to lose some weight. You would still like to reward her for good behavior and possibly use some treats for training. What are good options?

Treats should never be more than 10 percent of your cat's diet. Start by simply setting aside a portion of your cat's daily food to use for treats and training. This is easiest to do with kibble. You may even want to try a different flavor of your regular food to make it "special," and your retailer might have a sample bag for you to try.

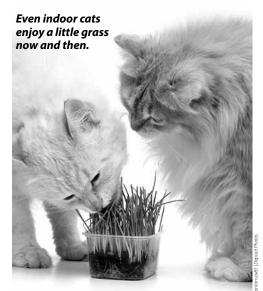
If you own a dehydrator, you can consider making some chicken or beef jerky for your cat. Do not use spices; go with straight meat. Use lean cuts to minimize calories and fat. Slice the meat thin and dehydrate it until it is almost brittle, at which point it

becomes easy to break into small bitesize treats. Cats love meat, so these are popular treats.

For true low-calorie choices, you can also consider fruits or vegetables, if your cat shows interest:

- ▶ Apples (fresh or dehydrated)
- ▶ Bananas (fresh or dehydrated)
- **▶** Blueberries
- ► Carrot slices (cooked or fresh)
- ► Celery
- **▶** Cucumbers
- ► Green beans
- Melon pieces
- ➤ Zucchini (cooked or fresh)

You can provide a small amount of catnip. It's low calorie and provides lots of amusement, too! Many cats also love having a small plot of grass, such as wheat or oats, to chew on.



# **Use Diet to Support Urinary Health**

Water, wet food, and special foods make a difference

utrition plays a key role in your cat's health, and his urinary tract is no exception. If your cat is diagnosed with a urinary-tract disorder, such as kidney disease, feline idiopathic cystitis, bladder stones, or urinary-tract infections, your veterinarian may recommend switching to a urinary diet to help manage the condition and help prevent further problems. But there are many more factors that influence urinary health that you can monitor.

#### **Hydration**

Drinking enough water goes a long way toward protecting your cat's urinary health. Dr. Richard Goldstein, DVM, former Cornell Associate Professor of Small Animal Medicine, advises, "We believe that at least 50 percent of a cat's diet should be wet food." Canned food contains more moisture than dry food, and so increases your cat's daily water intake. This increased water intake flushes your cat's urinary tract, thereby promoting good urinary tract health.

You need to be sure there is always plenty of fresh, clean water available that your cat can access easily. Some cats are more inclined to drink running water and will be attracted to a faucet left at a trickle or a kitty water fountain.



Checking the litter box for wet spots helps to monitor for urine problems, but it's pretty tough to do in a full house.

#### **Urinary Stones**

Stones form when there is a surplus of minerals in the cat's urinary system. These excessive minerals form crystals, which can then clump together to form small stones.

Struvite and calcium oxalate crystals are the most common offenders, and struvite crystals can usually be minimized through a modification of diet. Struvites form in alkaline urine, so they often can be dissolved with an acidic diet. For cats with a history of struvite formation, feed diets that are limited in magnesium and that promote acidification of the urine.

Most of today's commercial diets meet this requirement, so supplementation is usually not necessary (and making the body and urine too acidic can also cause problems). Animal-based proteins (such as chicken or beef) result in a more acidic urine, and DL-methionine is a common urinary acidifier added to many cat foods (DL-methionine is also an essential amino acid). Small, frequent meals can also help keep your cat's urine in the healthy pH range.

#### **Kidney Disease**

Cats with chronic kidney disease (CKD) are often put on a kidney-friendly diet. These diets are usually low in protein, phosphorous, and sodium. The breakdown products of proteins and the concentrations of phosphorus and sodium are filtered and regulated by the kidneys, so having lower protein, phosphorus, and sodium in the diet can be beneficial to cats with CKD.

Be aware that other therapies—including phosphate binders, potassium, B vitamin, antioxidant supplementation, alkalinization therapy, and administration of fluids either intravenously or subcutaneously—have the potential to help cats with CKD. However, these approaches need more controlled studies to determine for certain whether they offer any benefits.

#### Sodium

Sodium may be added to some diets to encourage your cat to drink more water. While this may be effective for some cats, those with heart or kidney problems should not eat high-sodium diets.

#### **Protein Source**

Meat-based proteins keep the urine more acidic, which decreases the formation of urinary crystals and stones. Cooked egg whites are high in protein but low in phosphorous, so subbing in some cooked egg whites for part of your cat's daily protein can be beneficial for cats with kidney disease who need decreased phosphorous in their diet.

#### **Phosphorous**

For cats with kidney disease, restricting dietary phosphorous can be beneficial. Choose a diet that is low in phosphorous or that includes phosphate binders, such as aluminum hydroxide, calcium carbonate, calcium acetate, sevalamar HCl, or lanthanum carbonate. Phosphate binders can be added if necessary.

### **Urinary Tract Disorders in Cats**

It's wise to monitor your cat's urinary health

**Kidney Disease:** This is the loss of function of the kidneys. Kidney disease can occur acutely or as a gradual, chronic progression. Cats often don't show signs of kidney disease until there is significant damage to the kidneys. Kidney diets are usually low in protein, phosphorous, and sodium, and high in fiber, antioxidants, and water-soluble vitamins.

**Feline Idiopathic Cystitis (FIC):** This is an inflammation of the inner lining of bladder, which can make urination painful.

**Kidney and Bladder Stones:** Uroliths, or urinary stones, are a buildup of minerals that form in the bladder and/or urethra. Struvite stones can often be prevented by feeding an acidic diet that is low in magnesium. Calcium oxalate stones are generally less amenable to treatment with dietary modification.

**Urethral Obstruction:** When the urethra is blocked, either by stones or urethral plugs, little-to-no urine can exit the body. This causes the buildup of pressure within the urinary tract and wastes inside your cat's body, which are medical emergencies requiring immediate veterinary consultation.

# Symptoms of Feline Urinary Problems

A urinary blockage is an emergency. If your cat stops urinating or is having difficulty urinating, take him to the veterinarian immediately.

Watch for these red-flag signs that something is wrong:

- ► Urinating outside the litter box
- Increased or decreased urination
- **▶** Difficult or painful urination
- ▶ Blood in the urine
- Excessive genital-area grooming

#### **Stress**

Many signs of urinary-tract problems, such as inappropriate urination, can be caused by stress. In fact, stress has been implicated in the development of feline idiopathic cystitis. A cat who is unhappy about a new housemate or who is suffering from osteoarthritis may avoid using his litter box, causing strain on his urinary tract and resulting in urinating outside of the box.

The Cornell Feline Health Center cautions: "Many pet food manufacturers market diets formulated for 'urinary health.' While these foods may reduce the likelihood that cats with feline idiopathic cystitis will develop a urethral obstruction, there is no evidence that they have reduced the incidence of feline lower urinary tract signs themselves."

If the underlying cause of your cat's urinary problems is something physical, such as the formation and buildup of stones due to a nutrient imbalance, a diet change will help, but no food will be able to fix stress-related problems. Consider any major changes that have occurred in your cat's life and make sure that there are plenty of litter boxes available in safe, quiet places.

#### Consistency

Changes in diet can sometimes cause a recurrence of FIC. So, if your cat's health is stable, and he's doing well on a certain diet, it may be wise to not rock the boat.

#### **Weight Management**

Whether your cat is eating a urinary diet or not, weight management is crucial to his health. Overweight cats are at a higher risk for a variety of diseases, including urinary tract problems. Feed your cat small, frequent meals, and encourage him to exercise and play. Institute weightloss plans slowly and with the help of your veterinarian.

#### Prescription or Over-the-Counter?

No urinary diet food is one-size-fits all. Depending on the exact problem that your cat

has, one food option may be better than another (for example, different diets are ideal for cats with urinary stones versus cats with kidney disease). If your veterinarian suggests that you switch to a urinary diet, don't be afraid to ask questions to determine which qualities and ingredients are necessary for your cat to flourish on the new diet. Depending on your cat's needs, there may be an overthe-counter option that will work or he may require a prescription diet.

### Can All My Cats Eat the Urinary Diet?

In many cases, the answer to this



A diet of 50 percent wet food can be good for hydration.

question is yes, but it depends on the needs of your cats. If each of your cats has his own specific dietary needs, they may not all benefit from the same food.

Any food that you choose should have an AAFCO (Association of American Feed Control Officials) statement that the food meets the nutrient profile requirements for your cat's life stage or for all life stages.

Ask your veterinarian to make sure that the urinary diet you are considering doesn't conflict with any of the dietary needs of your other cats. If it does, you may need to monitor feeding times.

**⊚** 5 THINGS

## **Five Tips for Using Therapeutic Diets**

Get the most out of your cat's pricey new food

- Ask your veterinarian about treats. For example, giving a lot of high-sodium treats could undo the good of your low sodium diet.
- Try different ways to make the diet more appealing if your cat is turning up her nose. Consider food toys, like puzzles, or ask about warming up the food to make the aroma more enticing.
- Always check with your veterinarian if you want to change flavors or formulas. Sometimes the different versions have nutrient changes that might not be appropriate for your cat's specific condition.
- If you decide to stop the diet for any reason, do so gradually and under the supervision of your veterinarian. Some therapeutic diets are required for the rest of your cat's life, while others may be appropriate for a short-term illness.
- Remember, every cat is an individual. Don't assume a therapeutic diet is right for all your pets. If you have been free feeding, you may need to make changes to accommodate your cat with special dietary needs.

Deborah E. Linder, DVM, MS, DACVN, Petfoodology blog, Cummings Veterinary Medical Center

# **End Grooming Battles**

## The trick is to gradually make brushing a non-issue

Dear Elizabeth, I am a Tortie-colored chunky girl who tips the scales at almost 15 pounds. I have long hair that gets matted on my lower spine area, and I become wild and aggressive when someone tries to brush me there.

I am friendly to the two humans that I live with, but not real friendly to outsiders. I will allow Mom to pick me up and hold me, and I rarely jump into her lap for a few minutes. I do sleep with Mom and Dad, and sometimes come to the head of the bed and cuddle for a short time.

Is there a non-traumatic way to help Mom groom me? I really don't like the veterinarian and sedation.

Sincerely, Callie

Dear Callie,
Grooming is an important activity (as you know) and can not only provide health benefits to a kitty (less chance of matting, with associated skin infections) but is also a great bonding time for both owner and cat, as long as both are accepting of this activity!

It's important that your owner consult with your veterinarian to make sure you are not behaving this way because you are physically uncomfortable being touched in this area due to medical problems, such as arthritis/skin allergies.

If you are carrying around a few extra pounds, it may be more difficult for you to reach certain areas on your body (like your lower spine area) to groom, resulting in a predisposition to matting in these areas. Obesity is also associated with a greater risk for other problems, including arthritis and diabetes, so please consult with your veterinarian to see if a weight-reduction program may help you.

It may be worth having your owner consider a few things, too. The first is to minimize any stress associated with grooming and to consider using synthetic feline hormones in the room and/or

#### Coming Up ...

- Coccidia and Giardia in Kittens
- ► After-Surgery Home Care
- ► Fleas Who Feast on Indoor Cats
- ► Plastic, Ceramic, Steel: Which Bowl's Best?



Elizabeth works with the Cornell Feline Health Center in providing the answer on this page (vet.cornell.edu/fhc/).

on the towel/surface on which you sit while being brushed. It is important that she talk in calm tones, and it may be worth her trying to gradually desensitize you to the brush by keeping it in your immediate environment without brushing, all the while praising with calm words and/or (low-calorie) food treats. This should be done daily for several consecutive days.

Your people could try using the brush for you to rub up against when you are seeking caresses (like at bedtime). The goal is to make the brush less associated with the negative experience of brushing and have it become a part of the furniture, so to speak.

Your mom can try to intermittently gently caress your lower spine region without brushing, just to get you used to stimulation there, and praise you for good responses. Any negative responses should prompt immediate cessation of the activity, and she should not punish you for this behavior. In some cases, a distracting noise, such as someone shaking an aluminum can filled with coins, can stop negative behavior in cats.

If you can get to where she can place the brush on your lower spine region without brushing, she should try just this for several consecutive days. Ultimately, you may get to used it. The goal is to gradually introduce limited brushing while praising, stopping immediately if any negative behavior is observed. With this approach, cats often accept things that they didn't accept initially.

In some cases, consultation with a veterinary behaviorist and/or the use of anti-anxiety medication can be beneficial to cats that may become aggressive. The most important thing, though, is that your owner avoid any activities that result in her being bitten/scratched and that she seek out appropriate medical advice if she is injured as a result of your aggression.

My advice to you is to try to relax and enjoy these grooming sessions ... if you do, you will see that they are actually a blessing in disguise!

All My Best, Elizabeth



# **CORNELL FELINE HEALTH CENTER**

**SAVE THE DATE: JULY 27 - 29, 2018** 

FRED SCOTT

Feline Symposium

2018

Celebrating 30 years of excellence in feline veterinary education

Learn more: https://goo.gl/aZZV2X