



THIS JUST IN

Weight-Loss Ointment

Mirataz receives FDA approval

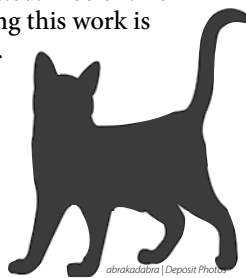
Things just got easier for cat owners everywhere. We now have an FDA-approved ointment that targets unintentional weight loss in cats.

Mirataz is applied topically to the cat's inner ear once daily. While the drug is considered a weight-gain medication, it can be used in cats with diseases associated with unintended weight loss.

"We estimate that veterinarians in the U.S. see as many as 9 million cats each year with unintended weight loss due to various underlying conditions," says Richard Chin, M.D., President and CEO of KindredBiosciences, the manufacturer of Mirataz.

Mirtazapine (mirtazapine transdermal ointment) blocks specific serotonin and histamine receptors that play a role in appetite and nausea. The ointment induced a 3.9 percent increase in body weight in cats with unintended weight loss in as little as two weeks, resulting in measurable plasma concentrations of mirtazapine in cats, the manufacturer stated. A scientific manuscript describing this work is pending publication.

Side effects include behavioral changes, like vocalization and hyperactivity, vomiting, and skin irritation. ■



Myth Buster: Canned vs. Dry Food

Cornell's veterinary chief of veterinary clinical nutrition explains what each food offers to help you decide what's best for you and for your cat

We want the best for our cats, and nutrition plays a vital role in any animal's health. But advertising and lay opinions can leave a cat owner wondering whether to feed canned food or dry foods.

With so many claims about whether to feed wet, dry, or both, we went to Joseph J. Wakshlag, DVM, PhD, Section Chief of Clinical Nutrition at Cornell's College of Veterinary Medicine, for expert advice. Here's what you need to know:

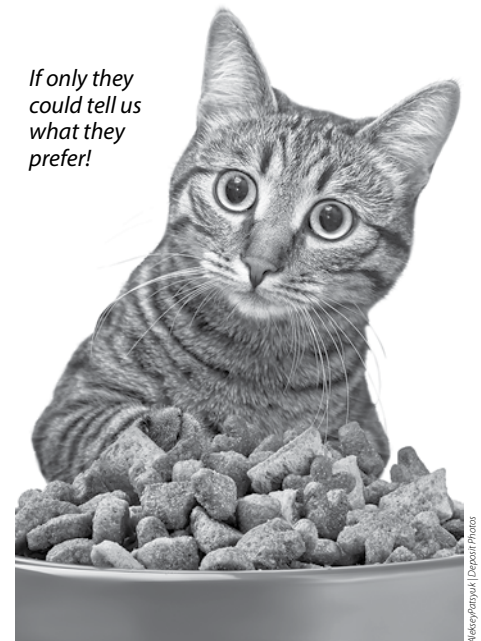
"Dry food is convenient, easy, less mess, may be better for teeth. Wet food is better for dieting cats sometimes, better for water intake—not great for teeth health," says Dr. Wakshlag.

Unless your cat has a physical or medical reason for choosing one food or another, such as wet food for the cat with few teeth, you can feed either wet or dry, or both.

Dry Food: Convenient

Kibble wins for convenience. Scoop up the right amount for your cat (most cats only need about ¼ cup of the average dry food twice a day), pour it into the dish, and done. Roll or clip the top of the bag until next time. Canned food requires a

If only they could tell us what they prefer!



spoon to scoop out the last bits of food from the can, plus leaves you with either an empty can to recycle or leftovers that need to be stored in the fridge.

Dry Food: Less Mess

If your cat doesn't finish her meal in one sitting, dry food will still be there waiting the next time she circles around. Wet food, on the other hand, will start to dry out, which can be unappetizing. Plus, it leaves you, the owner, with a crusty mess to clean up. For barn cats, uneaten canned food can quickly attract bugs (this can also be an issue if your house is plagued by ants).

Whichever food type you feed, wash your cat's bowl regularly even if she licks it clean. Saliva mixed with food particles is a haven for bacteria, which can potentially cause problems for your cat.

Dry Food: Dental Care

Chomping on kibble helps to scrape

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Importance of Taurine

Taurine deficiency can lead to:

- ➔ Blindness
- ➔ Cardiomyopathy
- ➔ Poor digestion
- ➔ Impaired immune response
- ➔ Birth defects and stillbirths
- ➔ Death

Himalayan Cats May Be Most Prone to Skin Disease

Allergy-induced hot spots and folliculitis are leading causes in all cats

A team led by Cornell dermatologist William H. Miller, VMD, Medical Director of the Companion Animal Hospital at the Cornell University College of Veterinary Medicine, researched the medical records of 1,407 cats with dermatologic diagnoses and noted that Himalayan cats are much more likely than other cats to be diagnosed with a skin disease. Why is not clear, but it may be due to breeding practices that can increase the frequency of genetically-influenced diseases like allergies.

Indeed, the most common diagnoses found in the study were allergies (inhalant or environmental) and bacterial folliculitis/furunculosis. "The high frequency of allergic diseases not only shows that allergies are fairly common in the cat, but that they are also frustrating to manage," Dr. Miller says. "Allergies are forever, which means they have to be treated forever. Many of these cases are referred to specialists so that the cat receives the most up-to-date treatments."

"Fortunately, true hot spots are rare in cats," Dr. Miller says. "Cats who create hot spots around their ears usually have been shaking their heads or showing some other signs of ear disease before the hot spot appears."

Hot spots differ from acute moist folliculitis and furunculosis where the raw skin is thicker than the surrounding skin, Dr. Miller says. You'll notice small raised skin bumps or even pus-filled bumps when you clip the area. Owners often miss bacterial disease because it's hidden by the cat's coat. "Bacterial infections are itchy in animals, and it's not uncommon for an animal with an infection to suddenly attack one infected area because the itchiness there becomes intolerable." ■



A Himalayan kitten with a beautiful coat.

Petterfor/Adobe Stock

Cornell Researchers Earn Winn Feline Foundation Grant

They will study feline coronavirus as a cause of upper respiratory disease

Gary Whittaker, PhD, and Elizabeth Berliner, DVM, will assess the importance of feline coronavirus as a cause of upper-respiratory disease in shelter cats and the role it plays in the development of feline infectious peritonitis (FIP). ■

Cats, Ticks, and Lyme Disease

It remains unclear if cats are susceptible to Lyme disease

Dwight Bowman, PhD, a parasitology professor in the Department of Microbiology and Immunology at Cornell University College of Veterinary Medicine, is conducting a study on ticks that have been removed from cats. Ticks can carry disease-causing pathogens, such as Lyme disease.

While it is still unclear whether or not cats are susceptible to Lyme disease from ticks in the wild, it has been proven that they can be infected under laboratory conditions, and some cats with symptoms that may be attributed to Lyme disease show improvement with therapy usually used to treat the disease. The goal of this study is to determine the types of ticks that are attaching to cats, how many ticks are infected with the bacteria that causes Lyme disease, and where these ticks are located around the country. Contact fhcticks@cornell.edu if you're interested in helping with the study. ■



CatWatch

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Food continued from p. 1

plaque off your cat's teeth, slowing the development of periodontal disease. If your cat has a history of dental issues, your veterinarian may prescribe a dental diet. These diets consist of large, extra-crunchy kibbles designed to make your cat chew more.

Unfortunately, feeding a dental diet alone will not completely prevent plaque and tartar buildup, as any food leaves particles behind in your cat's mouth that bacteria can feed on. The gold standard for dental care is daily brushing (see "Brushing Your Cat's Teeth," p 5), and the American Veterinary Dental College recommends annual dental cleanings by your veterinarian.

Canned Food: Dieting

Most canned foods are about 70 percent water, which means that canned food typically has fewer calories than the same volume of dry food. Because of this, your cat will feel fuller eating wet food, even though she is eating fewer calories. This can make weight loss easier if your cat is one who pesters you if she doesn't feel like she has eaten enough.

Canned Food: Increased Water Intake

That 70 percent water is also beneficial for cats who don't drink much. Felines in the wild get much of their water from the prey they consume. For our pet cats, kibble makes for some pretty dry prey. This is fine if your cat makes up for it by drinking enough water, but many cats are poor drinkers. Poor water intake can lead to or exacerbate constipation and/or kidney problems.

Other ways that you can increase your cat's water intake are to add a little tuna juice to her water bowl or test drive a kitty drinking fountain. Some cats are attracted to a dripping faucet and will drink straight out of the sink.

Canned Food: More Palatable

Moist foods tend to have more flavor and a stronger scent, especially if there is some sauce or gravy. This makes canned foods more attractive for many picky cats. Canned food can also be warmed up to make it smell even better (careful not to make it too hot), which is beneficial to encourage a sick cat to eat.

So, What Should I Feed?

Which form of cat food you choose to feed depends on which variety works best for you and, more importantly, which

formula fits your cat's needs and your own lifestyle.

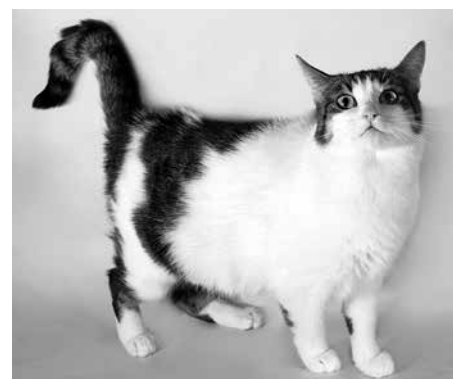
Dr. Wakshlag assures us that there is no merit to the myth that dry food causes illnesses in cats: "Overfeeding causes risks of other diseases in cats—not the form of the food in general."

When choosing which food to feed, ingredients are one of the most important things to consider. Dr. Wakshlag says, "Primarily animal sources for protein and overall protein are first things to look for—or to eyeball (the label) for. Meat ingredients like meals and byproduct meals actually work for me since they are good sources of protein that are typically lower in ash."

Ash refers to the minerals and other inorganic materials present in any food. Animal sources of protein are important for cats because they are obligate carnivores and require meat to obtain essential amino acids such as taurine (see sidebar, p 1).

Cats do not require grain-free diets. Carbohydrates are a source of energy, just like proteins and fats, and will not harm your cat provided she also is getting sufficient amounts of protein (see our October 2017 article "Calories, Carbs, and Ingredients in Grain-Free Diets," at catwatchnewsletter.com).

Look for foods that have the Association of American Feed Control Officials (AAFCO) statement that the diet has been formulated to be complete



Cats who are overweight may benefit from the lower calories found in wet food.

and balanced, either for all life stages or for the life stage most appropriate for your cat (growing and reproduction or adult maintenance).

Cat foods may also have a statement that they have passed a feeding trial using AAFCO procedures, which means that the food has been tested on cats over time as opposed to simply being analyzed to meet the standards.

If you choose to make a homemade diet, we advise you to seek the help of a veterinary nutritionist. A nutritionist can help you to formulate a recipe that fits your cat's needs and will make sure that the homemade diet contains the nutrients that she requires for a happy, healthy life. Go to the American College of Veterinary Nutrition site (acvn.org) to find a nutritionist. ■

Cat Food Storage

Just like our own food, cat food and treats can become contaminated with harmful bacteria if it isn't stored properly.

- ▶ The FDA recommends storing dry cat food in a cool and dry place (less than 80° F). The food should be in a location your cat can't get into. Store dry food in the original bag, clipped shut. This assures you have the UPC code, lot number, brand and manufacturer, and "best by" date easily available in case of a product defect or recall of that food.
- ▶ If you choose to use another container, be sure it's clean, dry, and has a lid that fits snugly and can't be opened by your cat. Save the UPC code, lot number, brand, manufacturer, and "best by" date for that bag in case of a recall. (Tape it to the outside of the container but remember to change it when you open a new bag of kibble.) Wash and dry the storage container between bags of kibble to get residual fat and crumbs off the container's surfaces, keeping the new food fresh.
- ▶ Refrigerate or toss leftover canned and pouched cat food.
- ▶ Wash bowls daily, including the water bowl.



Many of us prefer to use a pretty container over the cat-food bag, but it's a lot more work to keep the food fresh.

Your Cat's Subtle Hind-Leg Pain

Cats can run and jump with the best animal athletes, but if she injures her rear end, she may just stop

The first signs of a hind-end problem can be subtle. You probably will not see an obvious limp. You might suddenly realize that you have not had to scold the cat off the counter in a week or more. Or you might notice that the first-floor litter box is “getting all the action” while the one up (or down) the stairs is pristine. These are often indications that your cat is experiencing some degree of arthritis, possibly even hip dysplasia (see also “Cats Hide Signs of Hip Dysplasia” from our May 2018 issue at catwatchnewsletter.com).

Rear-end lameness can also arise acutely. Your indoor cat who snuck out the back door may come home limping badly or even dragging her rear. Hit-by-car trauma is the most common cause of pelvic and rear-leg fractures. Cats can also injure legs by getting a leg stuck in a railing when they go to leap or by landing badly from a high spot. Spinal trauma and cat-fight abscesses can show up as rear-leg lameness as well.

Another acute cause of hind-leg lameness is aortic thromboembolism (ATE), which is a clot that most

commonly originates in the heart and travels through the aorta to its termination near the hind limbs, blocking blood supply to this region of the body. This is most commonly seen in cats with hypertrophic cardiomyopathy (HCM), a disease of heart muscle that is the most commonly diagnosed heart disease in cats. ATE is painful, and cats may vocalize while being extremely weak or even paralyzed in the rear.

Acute onset of severe lameness/paralysis in any limb or combination of limbs is an emergency, and cats demonstrating this sign should be brought to a veterinarian immediately.

First Aid

With any lameness, start checking your cat out from the bottom up. A torn nail or burnt pad, such as from leaping onto the stove before it has totally cooled down, can be quite painful. Cats with these injuries may hold up the affected leg or use it gingerly.

Gently palpate up the cat's leg, feeling for any crepitus (crackly sound) from a fracture, swelling that may indicate

an abscess or edema, or changes in temperature. Gently flex and extend the cat's joints to see if you can isolate the painful area.

A cool leg and/or paw may suggest problems with circulation, such as thromboembolism. Increased warmth may indicate an abscess or infection. If you feel a temperature change or a difference between the two rear legs, you should call your veterinarian to schedule an examination immediately. Luckily, you usually have a “normal” leg for comparison.

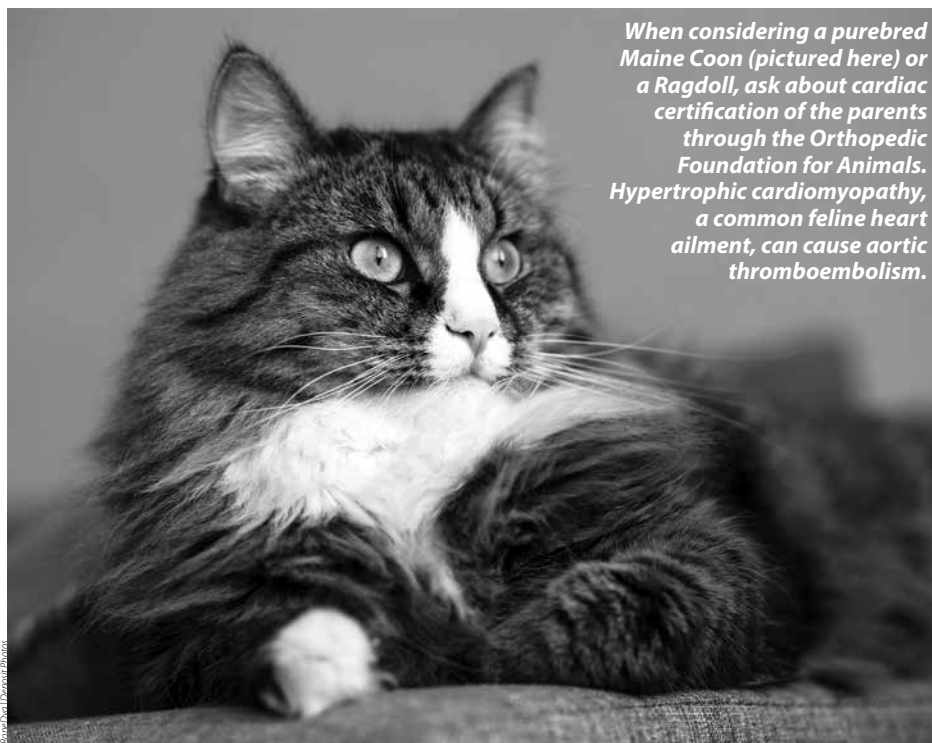
Again, if your cat is dragging her rear end, it is likely that both legs have significant problems, and you should call your veterinarian immediately and plan to head to the clinic ASAP.

At the Clinic

Surgery is often not an option for pelvic fractures in cats. There is a saying that in cats, “If you get the ends of two broken bones in the same room, they will heal.” While cats aren't quite this amazing, many, if not most, pelvic fractures will heal reasonably well with crate rest. During this time, you may need to assist your cat with urination and defecation due to associated nerve damage and pain, but many cats recover amazingly well.

Once radiographs indicate healing, careful rehabilitation can bring most cats back to a relatively normal, pain-free existence. Arthritis may develop over time and require the use of pain medications and/or anti-inflammatories for comfort. Joint supplements, such as chondroitin and glucosamine or omega 3 fatty acids, may also help to slow the development of arthritis.

Fractures of the rear leg may require surgery. Severe cases may even necessitate amputation of a leg. Don't despair—cats handle amputations much better than people. They have none of the mental stress that a human amputee suffers and



When considering a purebred Maine Coon (pictured here) or a Ragdoll, ask about cardiac certification of the parents through the Orthopedic Foundation for Animals. Hypertrophic cardiomyopathy, a common feline heart ailment, can cause aortic thromboembolism.

You Should Know

Drug safety

Always consult your veterinarian before giving any pain medications or anti-inflammatory drugs. Cats are sensitive to many of these drugs due to the way they metabolize many medications. Never use your dog's drugs for your cat without first consulting a veterinarian.

their lighter, athletic bodies quickly adapt to the loss of a limb.

ATE resulting from HCM requires stabilization, treatment of underlying heart disease, and prevention of further embolism.

Your veterinarian will evaluate the degree of blockage by the embolism. While drugs to break up clots are available, their use in cats is commonly associated with adverse effects, and in most cases, the goal of treatment is to prevent the further formation of clots and to allow the cat's own biochemistry to gradually break down existing clots. Sadly, the prognosis is guarded-to-poor for cats with ATE.

Cats who survive the initial phase of ATE may require nursing care and rehabilitation to get back on their feet. Sadly, up to 25 percent of them will suffer another clot, even with anti-clotting medications such as aspirin or clopidogrel (Plavix). Many cats end up being euthanized upon diagnosis of ATE due to its relatively poor prognosis.

Take-Home Message

For any hind-limb lameness or injury, a plan for rehabilitation is important. Many of the techniques used for canine sports medicine can be adapted to cats. Some cats even come to enjoy an underwater treadmill session. Judicious use of treats and toys can entice your cat to "work out" on balance equipment. Gentle massage may help with range of motion exercises to extend and flex injured joints. Many cats recover amazingly well from hind-end injuries, even if they need a few restrictions or added supplements. ■

Saddle Thrombus

This clot can cause paralysis

This type of clot usually originates in the heart and affects both hind limbs. Clots experienced by cats with hypertrophic cardiomyopathy are often referred to as "saddle thrombi." These clots originate in the heart and travel down the aorta until they lodge in the region where this blood vessel bifurcates (divides into two vessels) to feed the two hind limbs. The presence of the clot can block blood supply to the hind limbs, resulting in lameness and/or paralysis. A saddle thrombus is a medical emergency requiring immediate veterinary care.

Brushing Your Cat's Teeth

It involves the right toothpaste, training, and a whole lot of patience

Yes, you can teach your cat to let you brush her teeth! Choose a pet-friendly toothpaste in a flavor that your cat likes, such as tuna or chicken. Start by allowing her to lick the toothpaste off your finger or a toothbrush. Try to do this at the same time every day, such as when you brush your teeth, so it becomes a daily routine.

Next, gently lift your cat's lip before allowing her to lick the toothpaste. Repeat this for several days until she is comfortable, then try lifting her lip and touching her teeth with your finger (touch the side of her teeth rather than sticking your finger between the sharp crowns). Once she is used to that, you can start touching the toothbrush with the toothpaste to her teeth, and gradually work up to formally brushing.

Depending on your cat's personality, this process could take several months. It is better to take your time than to rush and make your cat dread toothbrush time. Most pet toothpastes are enzymatic, so you can rest assured that your cat is getting at least a little help in her fight against plaque and tartar even before she graduates to having her teeth fully brushed.

For more information on feline dental disease visit: <https://www2.vet.cornell.edu/departments-centers-and-institutes/cornell-feline-health-center/health-information/feline-health-topics/feline-dental-disease> ■

Fast Facts

Symptoms of a dental problem

- ▶ Bad breath
- ▶ Bleeding from the gums
- ▶ Chewing with the head turned to the side
- ▶ Drooling
- ▶ Gum swelling
- ▶ Red gums
- ▶ Refusal or reluctance to eat
- ▶ Tooth loss

5 THINGS

Five Great Sources for Feline Health Information

Many unverified websites spout all kinds of feline health advice. We want to keep your kitties safe, so we are sharing our five favorites.

- 1 Cornell Feline Health Center.** Useful, trustworthy health information on a wide variety of topics from the first institute dedicated to promoting the health and well being of all cats: <https://www2.vet.cornell.edu/departments-centers-and-institutes/cornell-feline-health-center>
- 2 American Association of Feline Practitioners.** Yes, it's for veterinarians, but this site also has resources and educational material for cat owners: <https://www.catvets.com/>
- 3 Winn Feline Foundation.** A great supporter of feline research: <http://www.winnfelinefoundation.org/education/cat-health-library>
- 4 Animal Poison-Control Sites.** These two sites provide information and services in case your cat may have had exposure to toxic substances: <http://www.petpoisonhelpline.com/> and <https://www.aspc.org/pet-care/animal-poison-control>
- 5 Tufts University Pet Nutrition.** Useful, fun, and informative information from experts in animal nutrition: <http://vetnutrition.tufts.edu/petfoodology/> ■



Myriad Causes of Mouth Sores

Imagine your cat purring on your lap, she yawns and you see a sore in her mouth. Panic or observe?

An oral ulcer is almost always a reason to visit your veterinarian. While causes can range from treatable to serious, it can be difficult for you to determine at home. Your veterinarian may do a swab to examine under the microscope or possibly sedate your cat for a thorough oral examination.

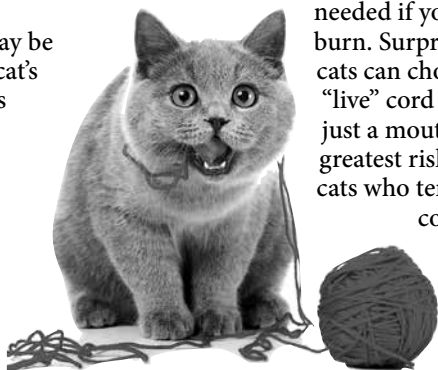
Some oral ulcers may be visible even with your cat's mouth closed if her lips are involved. Typical signs include drooling, a decrease in appetite, and a bad odor from the mouth. Cats may approach their food bowls then back away due to the pain in their mouths. Some areas may look raised, with a distinct border, as is seen with eosinophilic granuloma. Cancers often have rough edges, are obvious "growths" that occupy space, and may emit a foul odor.

While feline calicivirus is considered primarily a respiratory pathogen, some infected cats will only show sores in their mouths. Other symptoms of calicivirus include sneezing and ulcers on the tongue, roof of the mouth, or lips/gums.

Stomatitis secondary to dental problems, such as feline gum disease or

specific immune-mediated inflammation, may respond to dental care and medical therapy. For many cats, permanent relief is only achieved by the extraction of most of their teeth. While this may sound drastic, once healed, these cats usually eat well and are more comfortable.

Home-detective work may be needed if you suspect an electrical burn. Surprisingly, sometimes cats can chomp on a plugged-in "live" cord and walk away with just a mouth burn. Kittens are at greatest risk, but there are older cats who tend to chew on electric cords as well.



tanitue | Deposit Photos

Eosinophilic Granulomas

Eosinophilic granulomas can

look very aggressive

but tend to be self-contained. According to William H. Miller Jr., VMD, Professor of Medicine, Section Chief of the Dermatology Service, and Medical Director of the Companion Animal Hospital, Cornell University College of Veterinary Medicine, the eruptions can include "oozing masses, yellowish-pink ulcerations, or big tumor-like bumps," depending on their specific source. The lesions are typically raised, linear, clearly defined, and yellowish-pink in color, but there are variations in appearance.

"It can be a bump," says Dr. Miller, "or a great big ulcer that looks like a tumor." These lesions can emerge anywhere on a cat's body, he says, but appear most frequently on the rear legs and in the mouth. They can sometimes be seen on a cat's lips even when the mouth is closed.

These sores may disappear spontaneously, but treatment with steroids is often recommended for faster healing. If secondary infections develop, antibiotics may be recommended. These growths are usually reactions to allergens, such as insect bites or possibly foods. Repeated exposures to the allergens can lead to recurrence of the lesions, so owners need to minimize contact with biting insects (including fleas and mosquitoes) and avoid any known food allergens.

Strings and Things

Foreign bodies can also cause sores in feline mouths. Common causative items include sewing needles and string. Cats like to play with strings, tinsels, yarn, and threads. Sometimes as cats bite or chew on these items, they may be swallowed, but leave an end stuck under the tongue.

Fish hooks can also get stuck in the mouth but are usually easily visible. You may not notice a string under your cat's tongue until an abscess develops and the swelling becomes noticeable or there is a foul odor.

Your veterinarian may need to sedate your cat and possibly do surgery under general anesthesia to remove the item. Long, linear foreign bodies that are ingested often require abdominal surgery with multiple intestinal incisions since these can cause "purse-string" injuries to the intestines. Luckily, once the offending item is removed, cats often undergo a complete recovery.

Oral Cancers

The mouth is the fourth most common site for feline cancers, with about 10 percent of all feline tumors occurring in this region. Squamous cell carcinomas account for close to 80 percent of these oral masses. Sadly, most of these cancers are malignant.

All cancers require veterinary evaluation/treatment, but not all cancers are malignant (i.e. characterized by uncontrolled growth and spread to other areas of the body).

Sometimes an external swelling is present—including around an eye. Bad breath is common, and eventually affected cats will show weight loss. If your cat allows you to inspect her mouth, you can sometimes see the growth. You might notice your cat drooling or avoiding food.

Cancer Prognosis

Surgery is often the first line of attack for oral cancers. Your veterinarian may recommend a biopsy first to determine the exact cancer type or simply suggest removal and pathology of the specimen.

Depending upon the type of cancer, follow-up radiation therapy may help, while chemotherapy is often not very effective. While recovering, most cats need a feeding tube to work around the healing mouth.

Sadly, the prognosis is guarded-to-poor for many oral cancers, and many families elect euthanasia upon diagnosis. ■

© DID YOU KNOW?

Vaccine Consideration

Feline calicivirus is primarily a respiratory pathogen, but some cats only show sores in their mouths

The American Association of Feline Practitioners considers the calicivirus vaccine to be one of the "core vaccines," which means it's recommended for all cats. While vaccination may not prevent all cases of this virus, it can minimize symptoms and shedding of virus. Many strains of calicivirus cause upper respiratory-tract disease and oral ulcerations. ■

Have You Heard?

Cleaning your cat's ears is easier than you might think

Your cat's ears can get dirty for a variety of reasons: ear mites, bacterial infection, yeast infection, or just plain old wax buildup. Routinely check your cat's ears to determine if she needs cleaning. Any chronically gross ears or ones that smell bad should be checked by your veterinarian, including having a swab checked out under a microscope to identify the cause of the problem. Regular ear cleaning, however, is something you should be able to tackle at home.

Materials Needed:

- ▶ Pet-safe commercial ear cleaner
- ▶ Cotton balls
- ▶ Cotton-tipped swabs

Choosing a Cleaner

You can find a pet-safe ear cleaner solution at your veterinarian's office, local pet stores, or online. A generic ear cleaner is fine for routine ear cleaning, but if your cat has a problem in his ear, your veterinarian may suggest a medicated cleaner.

Avoid things like vinegar, alcohol, and hydrogen peroxide unless specifically recommended by your veterinarian—no matter what someone advises you. These solutions can be irritating to your cat's skin—alcohol in particular stings when it contacts an open scratch.

Some ear cleaners work by loosening up debris and drying out the ear



It may be easier if you get the help of a friend.

canal, which helps to prevent bacterial accumulation. Others break up tough chunks of earwax to make them easier (and less painful) to remove.

General Steps

- ▶ Soak a cotton ball with a few drops of ear cleaner.
- ▶ Place the cotton ball inside your cat's ear and gently compress the ear so that the solution drips into the ear canal. This will loosen up the debris farther in.
- ▶ Use a clean cotton ball to gently wipe out the ear.
- ▶ Use cotton-tipped swabs to remove debris from the crevices of the ear. Don't reach the swab farther into

the ear than you can easily see. If you go in any deeper, you may damage your cat's ear drum.

- ▶ Continue until the cotton swabs come back clean.
- ▶ Do a final wipe with a clean cotton ball to dry out the ear.

Helpful Tip: You can also apply ear cleaner directly into your cat's ear. However, most cats seem to find the cotton-ball method a little less offensive than the liquid going into the ear.

Restraint

You may be thinking that those instructions are missing the step where you seek medical attention after your cat scratches your arm to ribbons. There are a couple of options for safely restraining your cat for an ear cleaning.

Less is more. Active restraint will get many cats on edge, especially if they are not handled often. Approach your cat when he is relaxed and comfortable, and gently rub his face. Then casually start to clean his ears. You might be surprised—many cats will just sit there and let you do your job.

Kitty burrito time. Wrapping your cat up in a towel or thick blanket will help to keep his claws contained. There's a trick to it, though, so see our February 2018 "Emergency Cat Restraint" article for more details (available at catwatchnewsletter.com).

Phone a friend. You may need a friend to hold and pet your cat while you clean his ears. Brief your helper on the best restraint method for your cat and take precautions to make sure that everyone stays safe. ■



Ear Medications

Even a course of medication begins with cleaning the ears

If your cat's ear or ears are infested with mites, bacteria, or yeast, a proper ear cleaning will be the first step to remove as much debris as possible. Then your veterinarian will prescribe an appropriate medication.

While systemic medications given orally can sometimes work, topicals that are put directly into the ear are generally more effective and have fewer side effects. Some medications only need to be applied once a day, while others require more frequent dosing. Continue to treat for as long as you have been instructed by your veterinarian—even if the infection appears to have resolved sooner. There may be some stubborn hangers-on that require those extra days to fully treat the infection.

When placing an ear medication in your cat's ear, try to get the tip of the bottle as far down as possible, then massage your cat's ear immediately after applying the medication. This will help to ensure that as much of the medication as possible gets into the ear and is not shaken out. Never use ear medication without consulting your veterinarian first, as many medications can be dangerous to your cat if your cat's eardrum is perforated.

Signs that Your Cat Needs an Ear Cleaning

- ▶ Head shaking
- ▶ Scratching at ears
- ▶ Inside of ear looks red or inflamed
- ▶ Visible debris in the ear, ranging from pale brown to dark black
- ▶ Foul or yeasty odor from the ears

Chronic Bladder Infections

Common causes can have infectious, inflammatory, dietary, and behavioral components

Q My cat is 2 ½ years old and is having a problem urinating. He has been on a daily antibiotic for a month and has recurring bladder infections every month or two. One of my concerns is that he's on antibiotics so often that they will kill his immune system. My other concern is whether there's any hope for him. Can you help us?

A Thanks for getting in touch, and I am very sorry to hear of your kitty's problem. Lower urinary tract syndrome (LUTS), which is a disease of the urinary bladder and urethra, the tube that brings urine from the urinary bladder to the outside world. It's a common problem in cats, and surveys suggest that this is, in fact, the most common reason for owners to bring their cats to a veterinarian.

The cause of LUTS is often multifactorial and may involve infectious, inflammatory, dietary, and behavioral components. Affected cats are most commonly middle aged, indoor cats that are overweight, get minimal exercise, and drink less water than other cats. Male cats are at increased risk, and environmental

stresses, such as living in a multi-cat household or changes in routine, such as moving or having family members leave or enter the household, may increase the risk of a cat experiencing LUTS.

Potential causes of LUTS in cats include bacterial infection of the lower urinary tract, urolithiasis (urinary stones), obstruction of the lower urinary tract with uroliths (urinary stones), and feline idiopathic cystitis (FIC), a diagnosis that is achieved by ruling out all other causes of LUTS.

Cats with LUTS may demonstrate difficult or painful urination, increased urination frequency, blood in the urine, inappropriate urination (i.e. outside of the litter box), and frequent licking of the genital region.

Interestingly, affected cats often have problems in other organ systems including the nervous and endocrine systems, consistent with the notion of this syndrome being a complex interplay of as yet not fully understood processes. It is important to note that if a cat is straining to urinate/cannot urinate, this constitutes a medical emergency, and the cat should be brought to a veterinarian immediately.

Veterinarians will often recommend a series of diagnostic tests in cats with LUTS. These may include urinalysis (microscopic and chemical examination of urine), bloodwork, abdominal ultrasound, and/or urine culture.

I am not sure which of these your veterinarian may have already recommended, but it is important that you discuss these potential causes with him/her. Given the fact that you are giving antibiotics, I presume that there may be a bacterial infection of the urinary tract that has been diagnosed, and if this is the case, it's important that you give antibiotics consistently for at least three weeks and that you follow up any antibiotic therapy with a urine culture to make sure that any bacterial infection has been eliminated.

While antibiotics will not usually "kill" the immune system, inappropriate use of antibiotics (wrong antibiotic, too low a dose, too short a duration of administration) may promote resistance of certain bacteria to antibiotics, making



A cat living with constant stress may be susceptible to bladder infections.

treatment with antibiotics difficult or even impossible.

There are a few things that you can do to decrease the frequency and severity of attacks. Firstly, minimize stress by keeping feeding and routines consistent, make sure that your kitty always has access to fresh water, and feed small, frequent meals. Make sure that you keep the litter box very clean, and that you have the correct number of litter boxes in your house (the number of cats in the house plus one). Avoid foods that are high in magnesium, as this mineral can contribute to urinary-stone formation, and make sure to maintain a healthy body weight in your kitty.

Cats with LUTS can often be managed with appropriate preventive measures, careful monitoring, and regular visits to the veterinarian, but they may experience recurrence requiring treatment, so vigilance is crucial.

I hope that this is helpful, and please send us an update when you can.

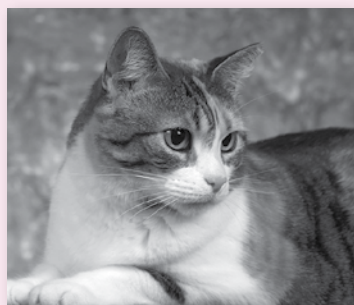
All my best,
Elizabeth

© HAPPENING NOW...

Bobcat Fever Spread by Ticks: Bobcat fever, caused by a protozoa called *Cytauxzoon felis*, is appearing in Arkansas, Oklahoma, and other southern states, reports KFSM-TV (Fort Smith, Ark). It's passed via ticks from bobcats and is often fatal in cats. Symptoms include a fever, jaundice, depression, and vocalization. If your cat goes out, use tick-control. ■



Bobcat



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

Coming Up ...

- ▶ *Managing Incontinence in Cats*
- ▶ *Constant Scratching, Hair Loss, Itching*
- ▶ *How to Combat Malabsorption Issues*
- ▶ *Kittens and Crate Training (Should You?)*