



CatWatch

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



INSIDE

Short Takes 2

Social relationships and their impact on wild cats' brain size and volume.

End of Life Guidelines 2

They call for a written treatment plan and teamwork among all parties.

When to Treat Vomiting 3

It may be isolated, but it's always wise to check with the veterinarian.

Ask Elizabeth 8

Help! A 2-year-old has begun pulling out his fur in clumps.

IN THE NEWS ...

Could Supplementation Help Cats With Diabetes?

Diabetes mellitus commonly strikes older, obese male cats. In its most common feline form, the pancreas doesn't produce any or enough insulin, a hormone that regulates the flow of glucose used as fuel for a variety of metabolic processes. The patient lacks nourishment, and excess glucose remains in the bloodstream, potentially damaging organs and blood vessels.

DM is believed to involve oxidative stress, an imbalance between the production of free radicals, which can damage cells, DNA and other molecules, and the body's ability to counteract or detoxify their harmful effects through neutralization by antioxidants.

Craig Webb, DVM, Ph.D., at Colorado State is leading a clinical trial of a novel treatment funded by the Morris Animal Foundation. He's evaluating a nutraceutical antioxidant's effect on the signs and biochemical abnormalities of the disease. ♦

Defending His Turf, Toys, Food and You

As part of his evolution eluding danger as a solitary hunter, your cat is hardwired to guard prized resources

You see your indoor cat purring, even cackling while nestled on a window perch, eying the birdhouse on a tree limb in your back yard. But he suddenly becomes agitated and then angry when your other cat dares to share his window perch. Your otherwise sweet cat taps into his wild ancestry as he stalks, hisses and swats the other cat who dashes to another room.



Food can be a source of conflict among cats defending their resources.

Your cat is probably exhibiting his territorial nature that has been genetically hardwired for countless generations. Like his ancestor, *Felis lybica*, the African wildcat, your cat will aggressively defend his turf, toys, food, bedding and even favorite people inside your home he

regards as coveted resources.

It is important to recognize that cats are solitary hunters who spend much of their day

(continued on page 4)

Caring for the At-home Cancer Patient

You and the veterinarian will need teamwork and a plan to minimize your cat's pain and maximize quality of life

Thanks to medical advances and improved nutrition, our cats are living longer than ever. However, longer life increases the likelihood of age-related diseases, including cancer. The Animal Cancer Foundation estimates that 6 million cats are diagnosed with cancer annually. They present a challenge to owners and veterinarians to provide the best quality of life with a minimum of pain.

While cancer doesn't appear to be as prevalent in cats as in dogs, the disease is generally more aggressive in them. Compounding the difficulty is the fact that fewer cats, compared to dogs, get routine veterinary care. Veterinary

oncologists in specialty and teaching hospitals and private practice use treatments similar to those used in people, including surgery, chemotherapy and radiation therapy. The goal for both veterinarians and owners is to minimize side effects and discomfort.

Devoted to Care. Meeting this goal demands a high degree of partnership among specialists and their staffs, and for owners a deep commitment to their at-home patients. Caring for a cat with cancer is a team effort.

Veterinarians stand ready with individualized help. "Since we often know what side

(continued on page 6)

Cat Watch

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SHORT TAKES

'Sociality' and Its Impact on Wild Cats' Evolution

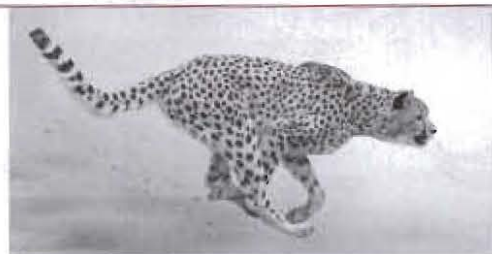
Scientists have identified many factors that affect a species' survival — from diet and weather to the size of breeding groups to social relationships. However, researchers at Michigan State have found that some wild cats don't necessarily respond to the same evolutionary pressures as other mammals, including humans and primates.

In a preliminary study supported by the National Science Foundation, they describe what they call a surprising result of evaluating the relationship between brain size and volumes and "sociality" in 13 species of cat families. One explanation for large brains in humans and primates is the effect of sociality. It's believed that dealing with social relationships is more demanding than living alone and results in bigger brains, especially a bigger frontal cortex.

"We wanted to know if this idea, called the 'social brain' hypothesis, applied to other social mammals, especially carnivores and, in particular, wild cats," says lead investigator Sharleen Sakai, Ph.D. She and colleagues examined 75 wild feline skulls, representing 13 species from museum collections. They used computed tomography scans and software to digitally fill in the areas where the brains would have existed.

Of the 13 wild feline species examined, 11 are solitary and two — lions and cheetahs — are social. These are some of the key findings, published in the journal *Frontiers in Neuroanatomy*:

- ◆ Female lions had the largest frontal cortex. They're highly social, working together to protect and feed their young, hunt large prey and defend territory. Males may live alone and may be dominant in a pride for only a few years.
- ◆ The cheetahs had the smallest overall brains and smallest frontal cortex. Small brains weigh less and require less energy, which might contribute to or be the result of other adaptations, such as the cat's remarkable running speeds. "Cheetah



Cheetahs are the fastest land animals, capable of reaching 70 miles per hour in seconds.

brain anatomy is distinctive and differs from other wild cats," Dr. Sakai says. "The size and shape of its brain may be a consequence of its unusual skull shape, an adaptation for high-speed pursuits."

- ◆ Leopards' frontal lobes were relatively large. Although the leopard is solitary, it's noted for adaptability, which is associated with enhanced brain processing.

The researchers acknowledge that the frontal cortex's function in wild animals requires further investigation. Dr. Sakai's lab is devoted to uncovering factors that influence the evolution of the carnivore brain, but no plans are in the works for studies on domestic cats — fascinating as that may be. ♦

End of Life Treatment

The American Animal Hospital Association and the International Association for Animal Hospice and Palliative Care have collaborated to produce the 2016 AAHA/IAAHPC End-of-Life Care Guidelines. It's available online using the title and AAHA as keyword.

End-of-life care and decision making are as important and meaningful as the sum of the clinical care for all prior life stages, the association says. The guidelines are intended for professionals, but owners will find help, such as information on working with the veterinarian to develop a treatment plan.

This plan should consist of evaluating the caregiver's needs and goals for the pet, involving the clinical staff and client, and a team to implement palliative and hospice care. The goal: a focus on maximizing patient comfort and minimizing suffering while providing a supportive partnership. ♦

When to Seek Treatment for Vomiting

An episode may prove to be an isolated event, but it's always smart to err on the side of caution and check with the veterinarian

Sometimes a cat's bout of vomiting simply needs to run its course, similar to food poisoning or a viral GI bug in people. However, vomiting could indicate a significant medical problem, and if you're concerned, it is always better to err on the side of caution and check with the veterinarian. Vomiting can be due to factors that directly affect the gastrointestinal tract or to indirect effects from other conditions, says Meredith L. Miller, DVM, ACVIM, a lecturer in small animal medicine at Cornell University College of Veterinary Medicine.

The most common reason, though, is dietary indiscretion. It can be due to eating something that passes normally but irritates the GI tract or causes an obstruction. "Cats in particular like to eat string or yarn, which have a high risk of becoming stuck in the intestines and causing a surgical emergency," Dr. Miller says.

Underlying Diseases. Other common causes are gastroenteritis, intestinal parasites, food sensitivity/allergy, inflammatory bowel disease and gastrointestinal cancer. Secondary GI Diseases that may cause secondary vomiting include kidney and liver disease, pancreatitis and hormone imbalances.

Excessive vomiting can lead to dehydration and electrolyte imbalances, which can affect normal cell function in a number of body systems. "Untreated, this can be seen as lethargy and potentially shock," Dr. Miller says. As a board certified specialist in veterinary internal medicine, she offers the following advice:

Q. At what point should a vomiting cat see a veterinarian? Is it number of times vomited or the volume?

A. If your cat vomits and his belly seems painful, or he becomes listless or vomits for more than 24 hours, see a veterinarian. If your cat vomits but seems other-

wise normal, withhold food for about six hours before offering his next meal. If your cat continues to vomit or doesn't eat, then take him to the veterinarian.

Q. Should you be concerned about occasional vomiting?

A. Yes, even vomiting once a week is not normal and may indicate a chronic disease process. Vomiting very infrequently or only after a new food or getting into something are likely just isolated incidents.



Dietary indiscretion, such as ingesting string or yarn, is the most common reason for vomiting, sometimes causing an intestinal obstruction that requires emergency surgery.

Q. Are hairballs that cats ingest in grooming considered vomit?

A. Yes. This is typically a problem in longer-haired cats and can be treated by brushing frequently, trimming hair and giving hairball treats or diets. Hairballs can cause cats to feel ill or affect their appetite if it occurs often.

Q. What's a cat's posture when vomiting?

A. Vomiting usually has three phases: nausea in which a cat may withdraw, become quiet or drool; retching or stomach contractions; and finally forcefully expelling stomach contents.

This last point is important because it must be distinguished from regurgitation, a passive process in which esophageal contents are spit up. If you don't see the cat doing it, we often assume it is vomit and not regurgitation. Vomiting

is active and regurgitation is not. Generally, there is a delay between the start of retching and forceful expulsion of GI contents. Regurgitation occurs quickly with no warning. If you can't tell the difference, film an event to show your cat's veterinarian.

Q. Will a cat become sicker when vomiting is accompanied by diarrhea?

A. The same differential diagnoses can apply when diarrhea is involved. Cats may become dehydrated more quickly when they are experiencing vomiting with diarrhea. This is particularly true when the diarrhea and/or vomiting is bloody, as indicated by pink- or red-tinged vomit with fresh blood or diarrhea or vomit that resembles coffee grounds or dark tarry stools with digested blood.

Q. What should an owner do if there is blood in the vomit?

A. Vomiting blood can be seen with irritation from gastritis from things like dietary indiscretion. Persistent vomiting of blood may indicate a more serious problem like a bleeding disorder, gastric or small intestinal ulcer, bleeding tumor, or severe inflammation. Blood in vomit is a good reason to have your pet seen by a veterinarian.

Q. If the veterinarian finds bile in the vomit, what can be learned from testing the vomit?

A. Not much. Bile usually is more indicative of true vomiting than regurgitation. The pH can be tested, as stomach contents are very acidic, whereas esophageal contents should have a more neutral pH.

Q. What diagnostic tests are typically used for a pet that is vomiting?

A. Primary GI causes like an obstruction can be generally ruled out by taking

(continued on page 5)

RESOURCES ... (continued from cover)
searching for hunting opportunities in their environment. They feel the need to protect themselves from perceived dangers.

"Resource guarding stems from the normal desire to maintain access

to valuable resources," says Pam Perry, DVM, Ph.D., a resident in behavior at Cornell University College of Veterinary Medicine. "It involves threatening behavior directed toward any individual — human or animal — that

approaches the cat while he is in possession of or near something he does not want to relinquish."

Resource guarding arises from underlying anxiety, so, when your cat displays aggressive behavior — hissing,

THE FOUR TOP TARGETS IN RESOURCE GUARDING

By addressing your cat's physical and emotional needs, you can reduce his resource guarding tendencies and bolster his health and quality of life. A cat's resources should be located in areas of the home that have at least two ways for a cat to enter or leave and they should not be in areas where a cat may feel threatened or stressed.

Here are key resource guarding concerns and ways to work with them:

RESOURCE: Litter box

Basis: It can be a site of aggression — not as much as a resource to guard as an easy place for a cat to ambush another cat when the latter is in a vulnerable position.

Behavior: One cat in the house may lie down across the hallway, blocking access to the room where the litter box is located. The cat may also hide and then pounce on the other cat while using the box or when he exits it, scaring him away and potentially making him reluctant to use it again.

Possible solutions: Locate litter boxes in different rooms to prevent the resource-guarding feline from being able to block access. He can't be in two places at one time. Make sure your cats can view any possible threat easily while in a litter box, so that may mean not having hooded litter boxes that block their view. Remember, the recommended number of litter boxes is one per cat plus one. So, if you have three cats, you should have four litter boxes located in different rooms to minimize resource guarding behavior.

RESOURCE: Cat furniture tree or scratching post

Basis: Cats feel safe when they can survey their environments from a high, sturdy place. They also need to mark their territories by releasing scent from glands in their claws when they scratch on surfaces like cat trees.

Behavior: One cat will be lounging or even sleeping on the cat furniture when a second leaps up and attempts hissing, swatting or body positioning to take over that spot. Or a cat will block access for another cat to scratch a post.

Possible solutions: Increase the number of cat trees, scratching posts and position them in different rooms. These measures can aid in shifting your cat's mindset of scarcity of resources to one of abundance.

RESOURCE: Food bowl

Basis: Some cats who are more food motivated may be more apt to resource guard at mealtimes, especially when food is being prepared.

Behavior: One cat may quickly gulp his food and then push another cat away from his bowl. Or he may block the entrance to the kitchen while you prepare the meals. He may hiss or even attack the other cat when food is present. An intimidated cat may hide and wait until the bully cat leaves to enter the kitchen and attempt to eat his meal. And some cats may swat or bite a person if they perceive that person will take the food away before they've finished eating.

Possible solutions: In multi-pet households, feed the pets in separate areas of the kitchen or even different rooms so that they can enjoy eating meals at their own pace without the threat or fear of not being able to finish. Quietly position yourself between the two food bowls to block direct eye contact between the cats. Help your cat feel mealtime is safe by refraining from sticking your hands in the food dish or taking the dish away while your cat is eating. Occasionally, swap out food bowls for food puzzles to encourage your cat to earn his food by hunting.

RESOURCE: Favorite cat toy

Basis: The toy contains the cat's scent and has been a dependable resource for play, making it a valuable commodity for the cat.

Behavior: "I have seen my kittens growl at each other if they have a favorite toy or a mouse that another tries to take," says Dr. Perry.

Possible solutions: Disrupt the interaction before it escalates into aggression by calling them away from the toy. Then with the cats separated, engage them in play with separate toys. Also, store and rotate toys and schedule mini-play sessions.



Mine, all mine. Some cats consider toys their property because they've put their scent on them.

swatting and attacking — and the person or animal backs away, the resource guarding behavior becomes negatively reinforced. Without proper intervention, it can become your cat's go-to behavioral response. "Resource guarding is considered a type of aggression because it involves threatening behavior directed toward an individual," Dr. Perry says.

His Perspective. The severity can range from tensing muscles and hissing to lunging and biting. Keep in mind that cats mark what they deem to be their resources by rubbing their faces and bodies on these items. This action releases natural pheromones. Some cats feel so stressed and threatened that they will urine spray to mark their territory as a scent warning to others to back off. "The value of an item will vary between individual cats," says Dr. Perry. It's important to understand "core" resources from your cat's perspective.

To minimize resource guarding in a multi-pet household, strive to create a healthy feline indoor environment. Do not yell at or physically punish your resource-guarding cat because this punitive approach will cause him to want to protect his resources even more and it can damage your relationship with him. While resource guarding is less common in cats than in dogs, it can escalate into a serious behavior issue that requires intervention by a professional.

Here are the key ways to meet the needs of your indoor cats in order of

priority as identified by the American Association of Feline Practitioners. You should provide:

◆ **A safe place.** Each cat needs a safe, secure place where he feels protected. These may include an open pet carrier, a cardboard box or a raised cat perch.

◆ **Multiple and separated key environmental resources in multi-pet households.** These include food, water, litter boxes, scratching areas, play and sleeping areas. These resources should be separated from each other so that cats have free access without being challenged by other cats or pets in the home. Separation of resources reduces the risk of competition as well as stress-associated diseases.

◆ **Opportunity for play and the chance to display predatory behavior.** Cats need to be able to capture "prey" during play. Using food puzzles can also mimic the action of hunting for prey. Be sure to rotate your cat's toys so he doesn't get bored.

◆ **Positive, consistent and predictable human-cat social interactions.** Keep in mind that each cat has personal preferences regarding how much human interaction (petting, grooming, being played with or picked up) they can tolerate. Remind guests not to force interaction and instead allow your cat to initiate, decide and control the encounter with them.

◆ **An environment that respects the importance of a cat's sense of smell.** Cats use their sense of smell to evaluate their



Competition for a favored spot on the sofa can result in playful swats or more serious reactions. Resource guarding is considered a type of aggression because it involves threatening behavior.

surroundings. Threatening smells to cats include scented products, cleaners or detergents as well as the scent of unfamiliar animals.

A cat is likely to guard a resting spot near a favorite human because he regards this person as a scarce resource to be coveted and not shared. That includes you and other family members. Be forewarned that the cat may hiss or swat at an approaching cat or the family dog who also wants to be on the person's lap or share the sofa with them.

Stand up and leave the room at the early signs of your cat showing irritation as another pet enters the room. This removes your cat's prized resource — your lap. Consider spending one-on-one time with each pet in closed rooms so each gets his share of attention. ♦

HEALTH

VOMITING ... (continued from page 3)

abdominal radiographs (X-rays). If radiographs are questionable or show something abnormal, an abdominal ultrasound may be recommended to further look at the GI tract along with other abdominal organs. Secondary causes can begin to be ruled out with a complete blood count, serum biochemistry panel and urinalysis. Depending on results,

further hormone tests or vitamin levels may be pursued.

Q. What medications are usually given first for a vomiting cat?

A. Most pets are treated with an antacid such as famotidine (Pepcid AC) or a true anti-nausea drug. Examples include maropitant (Cerenia) or ondansetron

(Zofran). It is important to have a cat evaluated if the vomiting is severe or protracted, or he shows other signs of systemic illness before dispensing these medications as they may delay the diagnosis.

Q. How fast does the medication work?

A. Typically within a few hours. If the cat continues to vomit, seek veterinary care. ♦

CANCER...*(continued from cover)*

effects a typical course of chemotherapy may produce, we start our patients on appetite stimulants, anti-nausea, antidiarrheal and pain medications to help prevent and alleviate these undesirable reactions," says Leni Kaplan, DVM, MS, a lecturer in the Community Practice Service at Cornell University College of Veterinary Medicine.

"Veterinarians and their staff will educate owners and provide tips and tricks to get the medications into their pets. Owners are taught how to administer fluids at home or use a feeding tube if that is necessary for the treatment and care of their pet."

Licensed veterinary technician Laura Barlow works closely with owners at the Cornell University Hospital for Animals' Oncology Service. "When we talk about animal companions, we are trying to achieve the best quality of life for the longest possible time. We use treatments that have been shown effective for particular types of cancer and have been shown to be tolerated well in a majority of the population with minimal amount of side effects."

Because there are so many types of cancer, each responding to different types of treatment or combination of treatments, and each cancer patient responds differently, there is no No. 1 side effect, Barlow says. "Each chemothera-

py agent is different, but the most common side effects can be GI signs such as vomiting, diarrhea, nausea, anorexia and bone marrow suppression."

Some Mild Signs

The resulting low white-blood cell count can make it more difficult for a patient to fight off infection. "We will tailor protocols and treatment regimens if needed to reduce the amount of side effects or avoid them altogether," Barlow says. "Many of our patients tend not to experience side effects or have very mild symptoms, but occasionally some will experience one or all symptoms and in some cases even need hospitalization for supportive care."

These are some of the areas where oncologists and owners can work together for the patient.

Improving Nutrition

Loss of appetite is a common side effect of chemotherapy and occurs for a variety of reasons, including nausea, disinterest, flavor changes as a result of treatment or associating food with a

negative experience, says Barlow. Proper nutrition is paramount to maintain strength, maximize treatment and improve survival time.

"Stimulating appetite may be as simple as warming the food or adding flavor enhancers such as chicken broth, or crumbled bleu cheese to food. Yes, it's smelly but it sometimes stimulates the appetite," says Joseph



Let the cancer patient maintain his normal routine if he feels up to it. Otherwise, provide time and a quiet space for him to rest.

Wakshlag, DVM, Ph.D., ACVN, Associate Professor of Nutrition at Cornell.

"If food enhancements don't encourage eating, we use appetite stimulants. Mirazapine is used for both dogs and cats, and cats particularly respond better to this medication."

Dr. Kaplan suggests feeding pets several smaller meals a day versus the usual two to three larger meals and offering human food such as pasta, chicken, turkey or baby food to stimulate the appetite.

Avoiding Discomfort

Pain recognition and management are imperative for cancer patients, Barlow says. "For cancer patients, pain management includes medications (oral, liquid or patch that the owner may administer at home), physical rehabilitation therapy, nerve blocks or acupuncture."

Dr. Wakshlag says it's easier for us to recognize pain in our dogs because we engage more robustly with them and see changes in activity. We don't see pain in our cats unless we really engage them in play. "Our cats sit in our laps. We pet them for a little while. You might bring the feather out for play, but a lot of elderly cats have gotten bored with that or they really don't like it. So how do we actually look to detect pain in an older cat? That's a very hard thing to do."

Barlow reminds us that we should learn to recognize signs of pain in all



Oncologists and owners can work together for the patient's benefit in areas including nutrition to maintain strength and improve survival time.

our pets, not just cancer patients. "A pet's reaction to pain can vary greatly dependent on the degree of pain and the pet's temperament. Signs of pain can include trembling, shaking, panting, rising slowly, decreased appetite, behavior changes, difficulty sitting or lying down, bearing no weight or partial weight on a limb, change in energy level, hesitation to be touched in painful area and seeking out areas to be alone."

Many cancer patients have many underlying conditions in addition to cancer, Dr. Wakshlag says. "They have cancer, cognitive decline, osteoarthritis, etc. It's important to treat the whole animal.

Most older pets have some form of joint discomfort. For example, over 50 percent of older cats have arthritic lesions with a lot of degeneration. We recommend glucosamine and chondroitin oral supplements. Some people like Adequan, an injectable, or fish oil to increase omega 3 intake."

One caution: Some supplements can interfere with chemotherapy and/or



Some cats will need help with grooming — gentle washing, brushing and combing.

radiation. Check with your cat's veterinarian to make sure supplements won't interfere with treatment.

SIX SIMPLE STRATEGIES TO INCREASE COMFORT

Recognizing and alleviating pain, whether from cancer, another disease or an underlying condition is foremost in maintaining quality of life for your cat. Actions can vary from medical intervention to providing comfort. Owners can make accommodations from simple home modifications to complementary therapies provided either in a clinic setting or at home. Among the experts' recommendations:

1. **Complementary therapies** — They include acupuncture, massage, and laser and physical therapy. Some practitioners make house calls. Some veterinary colleges, including Cornell, have rehabilitation services.
2. **Heated beds** — Well-padded beds, with or without heating, help ease pain and enable better rest since patients may sleep more soundly. Heated beds may help ease joint pain for those with arthritis.
3. **Pet stairs or ramps** — These can reduce the stress on joints from jumping up on the bed, sofa or chair. Ramps are the gentler, less impactful choice for elderly, arthritic or disabled pets.
4. **Food, water** — Make palatable foods available; this may mean adding flavor enhancers such as chicken broth, tuna juice and baby food. Always have fresh water available. Place these resources, including a litter box, nearby so the pet doesn't have to use extra energy to reach them.
5. **Hygiene** — Grooming will be difficult for some cats and they will need your help. Gently wash fur, face and genitals with a soft cloth. Brushing and combing also may be necessary. Our animal companions do not often lose their hair like people undergoing cancer therapy. They may experience hair thinning, loss of whiskers, and if they have a shaved area, the hair usually will not grow back until after treatment is completed.
6. **Social time** — Provide cats with attention, affection and perhaps special treats from family members. Remember to handle pets gently as some conditions and handling create pain.

Resting and Recovering

Lethargy and malaise may be common for some cats undergoing cancer treatment; however, let them engage their normal, routine activities if they feel up to it. If a cat doesn't show interest in activities, provide time and a quiet space for him to rest. In some cases exercise restriction may be recommended.

While the cat is undergoing treatment, Dr. Kaplan says it's important to make his life as stress free as possible. "For example, if having company or traveling is stressful for the pet, then ideally this would be postponed until after their chemotherapy is completed."

Keep Communicating

The most important part of home cancer care is open, constant communication with the veterinarian. "If the pet is not eating, experiences vomiting or diarrhea, isn't taking medication, shows signs of discomfort or changes in normal activities, it is not only imperative to report these things to the veterinarian, as they could signal something more serious, but veterinarians want to know how their patients are faring with their treatments," Dr. Kaplan says.

Barlow sums it up: "You know your cat best so it is important to be an active participant in his care. Communication is key." ♦



Elizabeth

Elizabeth is thankful for the assistance of the Cornell Feline Health Center in providing the answer on this page.

PLEASE SHARE YOUR QUESTIONS

We welcome questions on health, medicine and behavior, but regret that we cannot comment on prior diagnoses and specific products. Please write CatWatch Editor, 535 Connecticut Ave., Norwalk, CT 06854-1713 or email catwatcheditor@cornell.edu.

COMING UP ...

❖
NEW TICK
RESEARCH

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Help! A 2-year-old Has Begun Pulling Out His Fur in Clumps

Q My 2-year-old cat, who we took in as a stray after gradually gaining his trust about a year ago, has been having a problem that I wonder if you can help with. He has started to pull his fur out in small cotton ball-sized clumps. I find these clumps all over the house, and it's driving me crazy. He is an indoor/outdoor cat and there are no other pets or kids in the house. Can you provide some insight?

A Thanks for getting in touch, and I understand that this behavior must be quite disconcerting. I think it may be helpful to consider the potential causes as arising from two general categories: medical and behavioral. While there may be some overlap between these two categories with respect to causes of self-epilation (self-removal of hair) in a given cat, breaking this down into two categories can be helpful to understand potential causes in an effort to stop this behavior.

The first thing to do is to visit your cat's veterinarian to rule out medical causes. Perhaps the most obvious cause would be ectoparasites like fleas, mites, or lice. While it may seem that some of these parasites would be easily identified by owners, flea and louse infestations can be notoriously difficult for cat owners to identify even though fleas and lice (and their eggs), although very small, are generally visible to the naked eye.

Mites are generally not visible to the naked eye (they must be visualized under a microscope). In the case of ectoparasites, cats are often itchy. Fungal skin infections such as ringworm may also cause a cat to become itchy and to overgroom himself, thereby damaging his fur.

Allergies to either inhaled allergens or to foods can also cause cats to be itchy and to damage their coats. Allergies to inhaled allergens (called atopic disease) may be seasonal, as the allergens may be more prevalent in the environment during particular times of the year (i.e., when certain species of plants are blooming or when a cat is kept indoors during cold

weather, increasing exposure to indoor molds and/or dust mites).

Allergies to specific components of food can be ruled out by systematically eliminating potential allergens from the diet and monitoring a cat's response. In rare cases, cats may also develop an allergic reaction to various medications or to things that parts of their bodies come into contact with in their environment (i.e., carpet cleaners, other household cleansers).

A number of medical conditions, including hyperthyroidism, anal gland impaction, osteoarthritis and certain neurologic problems, may cause a cat to excessively groom and to damage his fur. It's important to have his veterinarian rule these out before assuming that your cat's problem is behavioral/psychological.

Cats may excessively groom/damage their fur for behavioral/psychological reasons. Stressors such as inadequate exercise/mental stimulation, social isolation, territorial conflict, changes in environment, changes in daily routine, and/or addition or removal of family members or pets can all cause a cat to inappropriately groom. Cats with feline hyperesthesia syndrome that causes rippling of the skin and self-mutilation may also excessively groom.

Managing cats who demonstrate behavioral/psychogenic excessive grooming often involves behavior modification, measures to reduce stressors in the environment and, in some cases, drug therapy (sedatives, antidepressants). Developing the optimal management strategy may require consultation with not only your cat's veterinarian but also with a veterinary behaviorist, and the veterinarian is best equipped to determine whether a behaviorist may be helpful.

I hope this is helpful. While I understand how distressing this behavior can be for you, please know that with careful work-up and the development of appropriate management strategies, most cats demonstrating this type of behavior can be dramatically improved and can live happy, healthy lives.

Best of luck with your baby, and please let us know how things are progressing when you can. ❖

—Sincerely, Elizabeth

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