



CatWatch

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



INSIDE

Short Takes 2

Tracking a parasite's path in the body;
alerting first responders.

Weight Loss: Cause for Concern 3

It can reflect disease from cancer
to liver, kidney and heart disease.

Why Do They Cover Litter Boxes? 5

Are they being fastidious or hiding
their presence from predators?

Ask Elizabeth 8

This unusual syndrome commonly
results in skin rippling on the back.

IN THE NEWS ...

A study of stem cells to improve kidney function

A clinical trial under way at Colorado State University is using stem cells to treat cats with late-stage chronic kidney disease (CKD). "There's a lot of hype around stem cells right now," says lead researcher Stephen Dow, DVM, Ph.D. "Unfortunately, a lot of the claims are unsubstantiated. We hope to show whether the cells make a difference in cats with CKD."

The researchers want to determine if the injection of stem cells in 20 cats will improve kidney function, reduce side effects such as inflammation and fibrosis, and delay the disease's progression.

Researcher Jessica Quimby, DVM, Ph.D., DACVIM, says the study is about one-third completed, too early for results. "I can say, though, that the cats have all been tolerating the stem cell treatments very well."

For more information, please visit the Feline Health Center at www.vet.cornell.edu/fhc/. ♦

Enhance His Coat, Improve His Health

Regular grooming and a high-quality diet keep hair and fur in top condition to prevent infection and protect against the elements

A cat's coat is his glory. Whether it's soft, thick fur, long flowing hair or the suede-like skin of a hairless breed, the coat is more than an adornment. "The skin and hair buffer the animal from his environment — heat, cold, sun, wind — and make it more difficult for the skin to get infected," says



Selkirk Rex boast distinctive curls.

dermatologist William H. Miller, Jr., VMD, Medical Director of Cornell University's

Animal Hospital. "A dull, dry and unkempt coat doesn't offer as much protection as a healthy one."

The message is inescapable: Enhance the coat and you enhance your cat's well-being. The two most important elements to consider are diet and grooming.

Quality Protein. A

high-quality diet results in gleaming fur with a resilient texture. Cats are obligate carnivores, meaning that their diet

(continued on page 4)

The Most Common Neurological Disease

Many illnesses can cause epilepsy, but an array of medications will help manage this difficult disease

Advances in medications have given veterinarians and cat owners more choices for controlling seizures with fewer side effects. The most commonly used medications are phenobarbital and the newer drugs zonisamide and levetiracetam. "These anti-epileptic medications modify neural transmission in the brain to reduce the number of seizures an animal experiences," says neurologist Sofia Cerda-Gonzalez, DVM, Assistant Professor of Neurology and Neurosurgery at the Cornell University College of Veterinary Medicine.

Phenobarbital can cause problems if a cat has an allergy to it. In addition, potential

side effects include liver disease and increased thirst, urination and appetite. Thankfully, these reactions are rare in cats. Zonisamide and levetiracetam are prescribed on their own or as "add on" medications to lower the amount of phenobarbital needed. Both have relatively few side effects. Potassium bromide, which is frequently prescribed to treat seizures in dogs, cannot be used in cats because it can lead to life-threatening allergic airway disease.

A Daily Dose. Zonisamide has relatively few side effects and a lower level of sedation compared to phenobarbital, Dr. Cerda-Gonzalez

(continued on page 6)

Cat Watch

EDITOR IN CHIEF

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

EDITOR

Betty Liddick

ART DIRECTOR

Mary Francis McGavic

ADVISORY BOARD

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

Marc S. Kraus, DVM, Dipl ACVIM,
Senior Lecturer, Clinical Sciences

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

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

Ilona Rodan, DVM, Dipl ABVP
Wisconsin Cat Care Clinic,
Madison, WI



Cornell University
College of
Veterinary Medicine

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/.



CatWatch (ISSN: 1095-9092)
is published monthly
for \$39 per year by
Belvoir Media Group,
LLC, 800 Connecticut
Ave., Norwalk, CT 06854-
1631. 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.
©2012 Belvoir Media Group, LLC.

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

For Customer Service
or **Subscription information**, visit
www.catwatchnewsletter.com/cs
or call toll free: 800-829-8893.

Express written permission is
required to reproduce, in any
manner, the contents of this issue,
either in full or in part. For more
information, write to Permissions,
CatWatch, 800 Connecticut Ave.,
Norwalk, Connecticut 06854-1631.

SHORT TAKES

Tracking a parasite as it invades the brain

It's common knowledge that pregnant women should avoid litter boxes to avoid contact with toxoplasma. The parasite found in cat feces can cause toxoplasmosis, a disease that may cause a number of developmental abnormalities in developing fetuses and neurologic, ocular and other potentially severe problems in people with compromised immune systems.

Research in recent years has shown an association between toxoplasmosis and schizophrenia, depression and anxiety. Studies also suggest that the disease can influence levels of human aggression, extroversion and risk-taking. Now a study by the Karolinska Institute in Sweden suggests a mechanism by which toxoplasma may influence the behavior of its hosts.

In this study, researchers found that human dendritic cells — an important part of the immune system — secreted the chemical gamma-aminobutyric acid (GABA) after being infected with toxoplasma. GABA inhibits feelings of fear and anxiety. Abnormalities of GABA metabolism have previously been demonstrated in people with depression, schizophrenia, bipolar diseases, anxiety syndrome and other mental health disorders. Previous research has also shown that rats infected with toxoplasma become unafraid of cats and are attracted by their scent, making them easy prey. The role of GABA in this toxoplasma-induced behavioral change in cats was not investigated.

"For toxoplasma to make cells in the immune defense secrete GABA was as surprising as it was unexpected, and is very clever of the parasite," says study leader Antonio Barragan, MD, Ph.D., a researcher at the Center for Infectious Medicine at

Karolinska Institute and the Swedish Institute for Communicable Disease Control. "It would now be worth studying the links that exist between toxoplasmosis, the GABA systems and major public health threats."

In another study, scientists infected mice with toxoplasma and then traced the

movement of infected dendritic cells through the body, where it spread and continued to affect the GABA system, according to the results published in the scientific journal *PLoS Pathogens*.

"We've shown for the first time how the parasite behaves in the body of its host, by which I mean how it enters the brain and

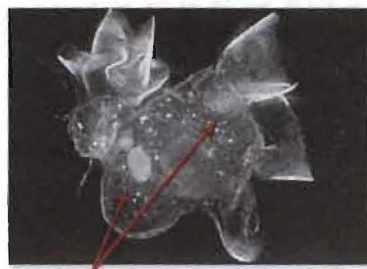
manipulates the host by taking over one of the brain's neurotransmitters," Dr. Barragan says.

However, he is careful to point out, "At the same time, it's important to emphasize that humans have lived with this parasite for many millennia, so today's carriers of toxoplasma need not be particularly worried."

People contract the parasite by eating the undercooked flesh of infected animals or through contact with cat feces, but the immune system usually prevents them from becoming ill. Although cats usually shed the organism only for a few days after being infected, and the chance of human exposure is relatively small, a number of precautionary measures are recommended to reduce the chance of exposure, according to the Cornell Feline Health Center. For more information, please visit the center's website at www.vet.cornell.edu/fhc/.

Keeping Them Safe

Pet owners who sign up for email alerts from the ASPCA will receive free Pet Safety Packs. They include an ASPCA Animal Poison Control magnet and a window decal alerting rescue personnel that pets are inside the home. For more information, use the keywords "pet safety pack" at www.aspc.org.



Arrows indicate toxoplasma that infected a dendritic cell, which is part of the immune system.

Antonio Barragan, MD, Ph.D.

IN CASE OF FIRE OR EMERGENCY

ANIMALS INSIDE!

Check type of pets in the home:

☐ Cats ☐ Dogs

☐ Other (please specify) _____

Please call _____



THE AMERICAN SOCIETY FOR THE PREVENTION OF CRUELTY TO ANIMALS
424 East 92nd Street • New York, NY 10128 • www.aspc.org

When Weight Loss Is Cause for Alarm

It can reflect a serious underlying condition from cancer to liver, kidney and heart disease, especially among seniors

Most owners know that an older feline who has turned into a fat cat may be ill or, at the very least, may have a shorter lifespan than his thinner counterpart. However, owners whose senior cats appear to have lost weight for no discernible reason need to be concerned, too.

"If the weight loss in a senior cat is visually apparent, it is time to contact the veterinarian," says Andrea N. Johnston, DVM, DACVIM, an Instructor in Clinical Sciences at the Cornell University College of Veterinary Medicine. "Weight loss often reflects an underlying disease process, not aging itself. Minor fluctuations in weight are to be expected with variations in feeding and activity level, but if there has not been a lifestyle change or the weight loss is progressive, a thorough physical exam and lab testing should be pursued."

Among the conditions Dr. Johnston cites as the most common causes of weight loss in senior cats:

- ◆ **Kidney disease.** This condition, also known as renal failure, occurs when the kidneys' filtering system breaks down and toxic wastes accumulate in the bloodstream. Symptoms include increased water consumption and urination, appetite loss, and vomiting. Diagnosis involves a blood chemistry panel and urinalysis. Treatment is directed at slowing the loss of kidney function and may include intravenous or subcutaneous fluids and a low-phosphorus, reduced-protein diet.
- ◆ **Hyperthyroidism.** This common condition occurs when the body increases thyroid hormone production. Symptoms may include increased appetite, thirst and urination, hyperactivity, vomiting, diarrhea, and a matted or greasy coat. If the thyroid glands are enlarged, the veterinarian

If weight loss has been progressive, with no change in lifestyle or activity, a thorough physical exam and lab tests are warranted.

may order blood and thyroid hormone tests. Treatment can include anti-thyroid drugs, removal of the thyroid gland or injections of radioactive iodine. These injections can cure hyperthyroidism but must be administered at specialized facilities. In addition, the cat must be quarantined for at least five days after the injection so radiation levels in bodily secretions/excretions drop to acceptable limits before leaving the facility.

- ◆ **Diabetes mellitus.** This occurs when the body either fails to produce insulin or doesn't use it properly, causing

(continued on page 4)



A WARNING ON CANNED FISH FOR HUMANS

It's best not to feed your cat canned fish products meant for humans as a way to encourage him to eat. While small amounts of these products may be harmless, some cats have developed serious neurological disorders after consuming them, according to the Feline Health Center at Cornell University College of Veterinary Medicine.

ENCOURAGING YOUR CAT TO EAT

While weight loss is directly attributable to a medical problem in most cases, some cats are naturally picky eaters. If your cat appears to be among these finicky felines, you can take steps to encourage him to eat.

"I generally ask owners to try modifying the diet by adding something the pet likes into the food," says Andrea N. Johnston, DVM, DACVIM, at Cornell. "They can also try a different type of cat food or a balanced home-cooked diet that's formulated by a veterinary nutritionist. We can also try appetite stimulants."

Dr. Johnston and other specialists also suggest:

- ◆ Adding yogurt, chicken or low-fat cheese to your cat's food. If he's not lactose-intolerant, yogurt or cheese shouldn't cause a problem. If diarrhea

occurs, then discontinue the addition of yogurt or cheese.

- ◆ Enhancing flavor by adding broth.
- ◆ Heating food to increase palatability and promote an inviting scent.
- ◆ Washing the food bowl daily for the fastidious cat. This will also inhibit bacteria from growing in the bowl.

In the end, a fussy eater who's losing weight might have a more serious problem than a finicky palate. "I would worry if there is a noticeable weight loss," says Dr. Johnston. "Even picky eaters seem to maintain their body weight." If the problem persists, however, then a veterinary consultation is warranted.

WEIGHT LOSS ... (continued from page 3)

the body to break down fat and protein stores for energy. Possible signs are increased appetite, water consumption and urination. A physical examination and laboratory tests — especially those showing persistently elevated levels of sugar in the blood and urine — will confirm the diagnosis. Treatment can involve oral

medication, insulin injections and/or dietary modification.

- ◆ **Cancer.** Signs include external lumps and bumps, a rough coat, vomiting, diarrhea, lethargy, and labored breathing. Diagnosis is generally confirmed with a biopsy. Veterinarians may recommend surgical removal of the tumor, radiation and/or chemotherapy.

Sometimes it's difficult to tell whether a cat is losing weight, especially if the loss occurs gradually. "Regular weight checks are a great way to monitor and track changes," says Dr. Johnston. Most cats won't voluntarily hop onto a scale, but if you weigh yourself with your cat in your arms and subtract your weight when stepping on the scale alone, you can easily determine his weight. ♦

COAT

HAIR ... (continued from cover)

must contain quality protein in the form of meat. The ideal diet is high in calories and protein. Depending on the type of food — dry or canned — protein content ranges from 34 percent to 53 percent.

Diets lacking an adequate amount of protein for hair production, growth and fat — which provides shine and aids absorption of fat-soluble vitamins — produce a dull, dry, rough coat. "A poor diet will give you a poor coat," Dr. Miller says.

It's debatable whether you can improve a coat by adding essential fatty acids or oils such as sunflower or safflower to the diet. High-quality com-

mercial cat foods have all the ingredients needed for a healthy coat. Adding supplements won't help, Dr. Miller says. They can even unbalance the diet if given in large amounts.

Sometimes the fat in the diet may be rancid or the food doesn't contain enough protein. In these cases, supplements can correct the deficiencies, but it's more efficient for the body and likely more cost-effective to simply upgrade the food you give.

When supplements are called for, it's usually because the cat has a disease that must be treated with a low-fat diet or a disease that alters his ability to digest and absorb food. If so, ask your veterinarian to recommend an appro-

priate supplement. Store-brand products made for humans can sometimes be used; however, many of the dosages in products for humans are too high for a cat, Dr. Miller says.

Care of the Coat. Brushing and combing the fur removes dirt and loose
(continued on bottom of page 5)

HOW TO READ YOUR CAT'S COAT

Clues to your cat's health are evident in the coat's texture and appearance. Signs of trouble and their possible causes:

- ◆ Scratching, licking and biting the skin, or rubbing against the floor or furniture: parasites such as fleas or mites; food or contact allergies.
- ◆ Coarse, greasy, dull, dry or brittle coat: internal disease, external parasites.
- ◆ Hair loss: compulsive grooming related to stress or allergies.

Scratching and licking can indicate fleas.

- ◆ Painful, pus-filled sores: abscesses from bite wounds.
- ◆ A lump or bump: a bite wound resulting in hematomas or abscesses; harmless cysts with a cheesy discharge; possibly cancerous tumors.
- ◆ Tiny black and white specks on the coat or skin: flea dirt.



Bigstock

A FIELD GUIDE TO FUR

Your cat's coat consists of three types of hairs: the medium-size awn hairs that form the main part of the coat; the downy secondary hairs that make up the undercoat; and the coarse, thick, straight guard hairs that provide insulation and protection. All the hair types are made of keratin, which also forms the claws and the outer layer of skin — the epidermis.

A cat's coat can be short, medium length or long. Several breeds such as the Devon, Cornish and Selkirk Rex have wavy or curly coats. The American Wirehair has fur with a crimped or bent texture. The Sphynx is known for being hairless.

A cat's coat changes with the seasons. It becomes thicker in winter, lighter in summer. The amount a cat sheds depends on the natural light available to him. Indoor cats shed year-round because their shedding cycle is affected by indoor lighting.

Why Do They Cover/Uncover the Litter Box?

This occasional series explores the reasons for cats' often intriguing behavior. If you would like to suggest a topic, please write CatWatch Editor, 800 Connecticut Ave., Norwalk, CT 06854, or email catwatcheditor@cornell.edu.

One of the enduring mysteries of cats' behavior is why they cover their feces after eliminating. One theory is that they're trying to hide their presence from predators, as cats in the wild are believed to do, but no studies support that idea. Another suggests that the behavior is an indication of cats' fastidiousness, but that doesn't explain fastidious cats who leave urine or feces uncovered. The real answers are far more complicated.

"Kittens instinctively cover their eliminations by 1 month of age by raking loose dirt over the excrement," says Pamela J. Perry, DVM, Ph.D., a graduate of the Cornell University School of Veterinary Medicine and lecturer on small animal behavior there. "The specific site and substrate tend to be learned from the queen. It is believed that the odor of the feces initiates the burying behavior. In fact, some cats will cover the feces of other cats in the household."

Leaving a Message. Feral cats usually bury feces within their core area — the area where they spend most of their time — but do so less often in other areas,

Dr. Perry says. "Uncovered feces tend to be found along frequented routes or on elevated areas, which may send a message to other cats about a particular cat's sex or state of health. Feral cats also tend to use multiple areas for eliminating, which may help prevent parasite transmission. It is possible that domestication has affected this burying behavior and that may explain why some household cats don't cover their feces."

Having a cover on a litter box doesn't affect whether cats bury their feces, but it can determine whether they will use the litter box, Dr. Perry says. "Most cats prefer uncovered litter boxes, probably because they have more room to move around and because the odor isn't trapped inside the box. In addition, cats cannot see out very well in a covered box, making them more vulnerable to being ambushed by another cat." In this case, instinct prevails. ♦

COAT

HAIR ... (continued from page 4)

hairs that can lead to tangles. Beneath the skin are specialized glands that produce sebum, an oily substance that protects it from moisture. Brushing helps distribute those healthy oils throughout the coat, making it shine.

Grooming is also a preventive health measure. Regular brushing or combing gives you a close-up view of the cat's skin and coat condition, allowing you to spot the early signs of skin disease.

Cats groom themselves, using their spiked tongue to moisten fur and then lick it dry, in the process removing dirt and dead hair. Cats ingest the fur as they groom. They usually hack up the hair in the form of a hairball. (If your cat retches without producing a hairball, contact his veterinarian for treatment and ask about providing a commercial food intended to prevent hairballs.) Brushing or combing the coat helps remove fur before the cat swallows it, reducing the incidence of hairballs, a plus in any owner's book.

Regular Brushing. A weekly brushing suits most shorthaired cats. Long-haired cats usually need more frequent attention. Some can get by with twice weekly grooming, but expect to spend at least a few minutes daily caring for longhaired breeds like Persians and Maine Coons.

Giving a cat a bath may seem contrary to all the rules of successfully living with one, but occasionally they're necessary, although in the cat's view that may be a matter of opinion. Cats may be bathed before shows or therapy visits to nursing homes, hospitals or other facilities. Bathing removes dander, which contributes to allergies in people. It's also necessary if a cat has gotten into something sticky or smelly or if a cat with oily skin attracts dust and dirt. It's not unheard of for owners to bathe cats monthly or even weekly if they're sensitive to dander or have cats who leave oily spots on furniture or clothing.

Weekly bathing can be excessive in some cases, however, especially when humidity is low. Cats have thin skin that is easily damaged, so it's important to use a gentle shampoo. Unless his veterinarian recommends it for a skin condition, choose one that isn't medicated. A medicated shampoo, such as one for dandruff, is usually too harsh and may cause more problems than it solves.

"Bathing even with very mild shampoos can remove some of the surface lipid layer, which helps to waterproof the skin," Dr. Miller says. "This waterproofing helps keep the good stuff in and prevents bad stuff from getting in. If frequent bathing is needed, the mildest shampoo should be used."

A bath is probably necessary if an odor is present or the coat is greasy to the touch, Dr. Miller says. "If the bath removes the grease or odor, but it returns shortly afterward, the veterinarian should be consulted because the animal's skin isn't normal." ♦

EPILEPSY ... (continued from cover)

says. It can be given once daily, a major advantage considering that some cats can be difficult to medicate. Levetiracetam, in comparison, needs to be administered three times a day and can be more expensive than phenobarbital or zonisamide. Among its advantages: It's non-sedating and doesn't have serious side effects.

Numerous diseases can lead to seizures, although the incidence of idiopathic epilepsy (i.e. epilepsy without an apparent cause) in cats is estimated at lower than the 3 to 5 percent seen in dogs. "Typically, we divide them into causes outside the brain (for example, metabolic disease — renal, hepatic, hematologic) and those inside the brain," Dr. Cerda-Gonzalez says. Many seizures are caused by problems inside the brain, such as primary metabolic derangement, storage disorders, idiopathic epilepsy, birth defects, poisoning, diseases such as cancer and infections, and injury.

Causes outside the brain can arise at any age. Generally, idiopathic epilepsy strikes young to middle-aged cats. The trigger is unknown. Some cats have seizures after becoming excited and others while sleeping. The two types of seizures are generalized, affecting the entire body,

and partial or focal, affecting only a small part or one side of the body.

Unmistakable Signs. Generalized seizures are further classified as simple (without loss of consciousness) or complex (with loss of consciousness). During a generalized seizure, the cat may fall on his side, involuntarily move his legs, urinate, defecate and be unaware of his surroundings — although not all cats show all these signs.

The symptoms of a partial seizure vary. "For example, they may involve twitching of the facial muscles and chomping movements of the jaw, or may instead involve movements of one or more limbs," Dr. Cerda-Gonzalez says.

Before a seizure, a cat may sense a change and stay close to the owner for comfort. He needs help to avoid harm that may occur during a seizure, such as a fall down stairs or injury from sharp or hard objects. He'll also need to be kept safe afterward, as he becomes aware again of his surroundings.

As a seizure begins, the owner should not try to pick up the cat and definitely should not try to move his tongue. Cats do not swallow their tongues and may inadvertently bite an owner who tries to ma-



After taking a medical history, veterinarians may order tests, such as an MRI of the brain, in an effort to diagnose epilepsy.

nipulate the tongue during a seizure. A cat bite requires medical treatment because of the high potential for infection.

The potential for dangerous consequences of seizure activity depends on the length, number and severity of seizures. "We typically consider generalized seizures to be an emergency if they last more than five minutes or if their number exceeds two in a row," Dr. Cedra-Gonzalez says. "Also, repeated seizure activity has the potential to engender more seizure activity, a phenomenon termed the kindling effect; so in general it is best to limit the number of seizures as much as possible. We apply

(continued page 7)

THE MOST COMMON ANTI-SEIZURE DRUGS

Several medications are available to control seizures, so that if one doesn't work well for your cat, his veterinarian can prescribe another. "Most of these medications can also be compounded into either oral suspensions or flavored tablets," says Sofia Cerda-Gonzalez, DVM, DACVIM (Neurology), at Cornell. The following drugs are most often prescribed:

Phenobarbital

- ◆ A barbiturate with anticonvulsant properties.
- ◆ Long history as first choice to manage seizures.
- ◆ No veterinary formulation but

legally prescribed by veterinarians.

- ◆ Available as tablets, liquid and injection.
- ◆ Common side effects are drowsiness, increased thirst and urination, and increased appetite. More rarely: itchy skin, liver toxicity and hematologic changes.

Zonisamide (Zonegran)

- ◆ Used with phenobarbital or alone.
- ◆ Available in capsules.
- ◆ Common side effects are mild drowsiness and loss of appetite.

- ◆ Liver toxicity is a rare side effect.

Levetiracetam (Keppra)

- ◆ Available in intravenous and oral formulations.
- ◆ Used with phenobarbital or alone.
- ◆ Relatively new, so little long-term information is available, but it appears that over time the drug may lose its effectiveness in some animals.
- ◆ Side effects are rare, though drowsiness is possible.



Some cats have seizures after becoming excited or while sleeping.

these guidelines to our epileptics, who are currently being treated for seizures and whose owners are trying to decide whether to bring the animal to a veterinary hospital for emergency management.”

Loss of Sight. Just as seizures vary from cat to cat, so does their behavior afterward. “Most commonly, following a generalized seizure, animals are frequently blind, so they may bump into things as they try to walk around,” Dr. Cerda-Gonzalez says. “They may also seem to be out of it — less aware of their surroundings. They may be hungry, and they may forget their litter box training.”

These post-ictal, or recovery, signs are usually temporary but can vary in duration from minutes to days. They typically last longer in animals who have had severe or numerous seizures.

A cat should have a veterinary check-up after the first seizure. The veterinarian will take a detailed medical history to try to determine the cause. Most tests can be done within two days, although results of tests to rule out infectious disease can take longer. Tests may include an MRI of the brain, an examination of spinal fluid or a CT scan.

Other tests, such as blood tests, are needed to find non-neurological origins of seizures. “Certain causes of seizures can prove to be more of a challenge than

others, particularly infectious diseases,” Dr. Cerda-Gonzalez says. “With some of them, it can be difficult to differentiate an active infection from previous exposure to an infectious agent. Some diseases may also mask themselves as another disease. For example, infection with a cuterebra larva can at times be difficult to differentiate from a primary vascular accident [a clot or

other interference with blood circulation that affects neurons in the brain].”

Treatment with anti-seizure drugs is usually started after more than one seizure, although exceptions are made depending on the severity of the first seizure. Treatment for an underlying disease is generally started as soon as it is identified. The owner’s detailed observation of the seizures is important in determining treatment.

Reducing Frequency. “The goal of medication is to reduce the frequency and severity of seizures by at least 50 percent,” Dr. Cerda-Gonzalez says. “In addition, we aim for the animal experiencing less than one seizure per six weeks.”

Idiopathic epilepsy can’t be cured. In cases in which a primary cause for seizures is identified, the cause can sometimes be eliminated; but a seizure focus — the area of the cerebral cortex responsible for causing epileptic seizures — may be established, in which case seizures may continue. In either case, cats will need regular veterinary checkups and commonly require medication for the rest of their lives to control seizures. The medication can be discontinued in some cats, but this is a rarity. The encouraging news is that research continues to improve the number of therapeutic options to treat seizures in cats. ♦

PHASES OF A SEIZURE

Epileptic seizures consist of three phases:

Aura: The phase immediately before the seizure, which may last only minutes. The cat may become restless, stay close to you or hide.

Ictus: The phase in which a cat becomes unaware of his surroundings. His eyes may dilate, his face and body muscles may twitch, and his legs may move or become rigid. He may attack invisible objects and run, or collide with objects.

Post-ictus: In this recovery phase, the cat may seem disoriented, even temporarily blind.

WHAT TO TELL YOUR VETERINARIAN

The more details about your cat’s seizures that you give his veterinarian, the better he or she can diagnose and treat them. Here’s a short list to provide at the exam:

- ◆ Your cat’s appearance when he’s having a seizure.
- ◆ The seizures’ frequency and length.
- ◆ His activities before the seizure.
- ◆ Any signs of other illness.
- ◆ Any history of injury.
- ◆ Food consumption and frequency.
- ◆ Changes in behavior.
- ◆ Exposure to toxins or other animals.
- ◆ Note: a videotape of seizure activity may be helpful.



Elizabeth

Elizabeth is thankful for the assistance of **Bruce G. Kornreich, DVM, Ph.D., DACVIM**, Associate Director 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, 800 Connecticut Ave., Norwalk, CT, 06854 or email catwatcheditor@cornell.edu.

COMING UP ...

❖
**INFLAMMATORY
BOWEL DISEASE**

❖
**SEPARATION
ANXIETY**

❖
MANGE

❖
**FIRST AID
FOR CHOKING**

Q I am an 11½-year-old neutered domestic gray tabby. My vet said that I have hyperesthesia. This was my first attack. I see my vet every six months (or more), am an indoor cat, and I have an excellent diet and much loving attention. My human mom rescued me as a kitten in the wild.

What causes hyperesthesia? Is there effective treatment or a cure? How serious is it? Thank you for any help you can offer.

— Sammy

A As you know, we cats are very sensitive creatures, but in your case, as with other cats with feline hypersensitivity syndrome (FHS), this sensitivity seems to be ratcheted up. FHS is a recognized syndrome in the feline world, although the definitive cause is not clear.

While it is not, in and of itself, believed to seriously affect overall health or longevity, a few important points regarding this unusual behavioral syndrome are worth making, especially for our human friends who are commonly puzzled by its manifestations.

FHS, also variably referred to as rolling skin syndrome and atypical neurodermatitis, is characterized by dramatic twitching or rippling of the skin, most commonly on the back between the middle of the spine and the base of the tail or in the flank region, with intermittent jerking of the body and exaggerated tail movements.

Affected cats may vocalize or dart about wildly, and they often appear agitated and may obsessively chew at their back, the base of their tail, or their flank. They are often very sensitive to touch during episodes. In extreme cases, they may appear stuporous or depressed, may become overly aggressive or affectionate, may appear to be seeing things that aren't there, or they may stare off into space.

Cats with FHS may demonstrate dilated pupils during episodes, and the obsessive grooming or chewing that may be observed in affected cats may lead to loss of fur or to abrasion of the skin with secondary bacterial infection. In very advanced cases,

episodes may be followed by grand mal seizures characterized by paddling of the feet, urination and/or defecation and salivation.

A definitive cause for FHS has not been identified, although a number of causes have been proposed. These include persistent flea-bite dermatitis (a hypersensitivity to the saliva of fleas), allergies to other substances including food or inhaled allergens, small scale seizure-like activity, feline obsessive-compulsive disorder, and abnormalities in the muscles along the spine.

It is important that veterinarians rule out a number of conditions, including flea infestation, allergies, spinal cord injuries, hyperthyroidism (which may cause hyperactivity) and central nervous system abnormalities, before arriving at a presumptive diagnosis of FHS.

Behavioral therapy for FHS is usually geared toward minimizing stress, providing exercise and play activities, and enhancing the environment to make it more interesting to the affected kitty. This may involve providing toys, scratching posts, multiple levels for the kitty to enjoy (i.e. a kitty condo), or a fish tank. Many behaviorists think that it is important to focus on spending quality time with cats with FHS. If these measures are not successful, cats with FHS may benefit from anticonvulsive and/or antidepressant drug therapy, although the response to these drugs is variable and may take some time to assess.

While most cats with FHS are not completely cured, appropriate behavioral and/or drug therapy can help them live relatively normal lives. Cats with FHS may require lifelong therapy to control their symptoms, and owners (and affected kitties) may have to be patient while optimizing the combination of behavioral and pharmacologic therapy. Patience is a virtue, though, so please hang in there.

I hope that this is helpful, Sammy. It sounds like you have a great mom who loves you, so please try to remember this if you start feeling stressed and do drop me a line to let me know how things are going. ❖

— Best regards, Elizabeth

CORRESPONDENCE

The Editor
CatWatch
800 Connecticut Ave.
Norwalk, CT 06854
catwatcheditor@cornell.edu

SUBSCRIPTIONS

\$39 per year (U.S.)
\$49 per year (Canada)

Single copies of back issues are available for \$5 each.
Call 800-571-1555 to order.

For subscription and customer service information, visit www.catwatchnewsletter.com/cs or write to: CatWatch, P.O. Box 8535, Big Sandy, TX 75755-8535.

CALL TOLL FREE: 800-829-8893