



CatWatch

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



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IN THE NEWS ...

A Promising Drug for Feline Herpes Virus

Eye problems occur frequently in cats with feline herpes virus 1 (FHV-1) and can lead to blindness if untreated. Current medications must be applied several times daily and evidence of their effectiveness is lacking.

Now scientists at the Baker Institute for Animal Health at the Cornell University College of Veterinary Medicine have discovered that the drug *raltegravir* — used to treat human HIV infections — reduces FHV-1 production, even when applied only once every 24 hours.

"The use of *raltegravir* to treat ocular FHV-1 infections would be beneficial in that it would require fewer applications to the eye, which, as any cat owner knows, would be a good thing," says researcher Gerlinde Van de Walle, DVM, Ph.D., at Cornell.

The study was supported by the Cornell Feline Health Center. While FHV-1 is contagious among cats, humans and dogs can't contract it, nor can cats be infected with human herpes. ♦

Smart Strategies for Easy Weight Loss

Keeping them trim can prolong longevity, so start by logging every bite in a food diary — no sneaking treats

Most of us think we give our cats the appropriate amount of food, but let's be honest here: Do we take into account the treats that we slip them? Or people food? A few morsels of canned tuna — at 56 calories per ounce — can add up and we suddenly have an overweight cat.

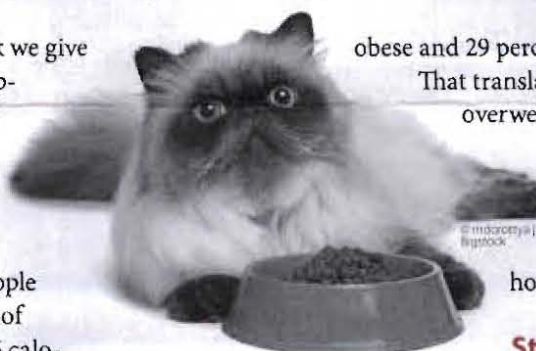
The latest report from the Association for Pet Obesity Prevention estimates that only 38 percent of cats in the U.S. are of normal weight; 28 percent are

obese and 29 percent are overweight.

That translates into 55 million

overweight or obese cats —

some so heavy they're unable to groom themselves and are also vulnerable to a host of illnesses.



Body condition charts can be difficult to gauge on Himalayans. They're big puffs of fur.

Stepping Up. Since we're the ones dispensing food, it's our responsibility to take charge of their health.

"There's a disconnect in that most people don't know how much food they're giving," says Joseph Wakshlag, DVM,

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When Blindness Suddenly Strikes

Immediate veterinary attention may be able to save vision in this rare condition that affects senior cats

If your usually confident cat starts acting confused, bumping into objects and having difficulty finding his food bowl, he could have a rare but serious condition. Sudden blindness can develop seemingly overnight and needs immediate veterinary intervention. Depending on the timing, an ophthalmologist may be able to preserve some vision.

The condition has many causes, from central nervous system disease to inflammation; however, "As a veterinary ophthalmologist, I would say the most common cause of sudden blindness that

I see among cats who appeared otherwise normal prior to the vision loss is a condition called hypertensive retinopathy," says Eric C. Ledbetter, DVM, ACVO, Associate Professor of Ophthalmology at Cornell University Hospital for Animals.

Blood Pressure. Hypertensive retinopathy most commonly affects older cats and is seen in those with high blood pressure (hypertension). Any breed may develop the disease. It develops when long-term elevated blood pressure damages the blood vessels in the retina, the lining at the back of the eye

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CatWatch

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SHORT TAKES

A New Technique to Ease Pain After Spay Surgery

Not too long ago, conventional wisdom held that animals felt little pain and providing relief was unnecessary after spaying and neutering. Veterinary medicine today emphasizes the recognition and management of pain in animals, with professional organizations issuing guidelines, offering courses for members and expanding efforts to educate owners.

Researchers, too, are pursuing pain relief, in one case discovering that a novel method of drug delivery for spayed cats provides relief. Studies have shown that local anesthetics placed directly into the abdomen after surgery control pain in dogs and people, the Morris Animal Foundation says, adding, however, that "No study existed on the use of this pain-relieving technique in cats."

The foundation funded research on the technique at the University of Montreal, and it showed that administering the anesthetic bupivacaine into the abdomen along with opioid drugs was indeed effective.

Anesthesiologist Seagall Paulo, DVM, MS, Ph.D., ACVA, and his team successfully tested the combined drugs' efficacy in postoperative pain relief for client-owned cats who had undergone spay surgery. Bupivacaine is not a controlled substance, is readily available and cost-effective for shelters and rescue groups that spay millions of cats each year, the foundation says.

The study was reported in the *Journal of Feline Medicine and Surgery*, and Dr. Paulo now says, "We are currently finishing a third study on the subject."

Dr. Paulo is a member of the Global Pain Council and International Veterinary Academy of Pain Management. Various theories have been put forth about the basis of cats' hiding pain, one being that they were alone in the wild and had only themselves to rely on. The academy explains it this way: "Sick and injured animals in the wild are the most vulnerable to predators so they hide their pain. Our



Administering the cost-effective anesthetic bupivacaine in combination with opioids was effective and could be a boon to shelters and rescue groups.

companion and farm animals have inherited this same instinct."

Hope for Heart Disease

Cats with heart disease frequently suffer blood clots as a potentially fatal complication. Because the survival rate when clotting occurs is less than 40 percent, and some cats often develop a second clot, many are euthanized rather than treated.

Several studies are underway to prevent the clots from forming, including these two:

Cardiologist Pamela M. Lee, DVM, at Washington State University College of Veterinary Medicine is the lead researcher investigating how cats metabolize clopidogrel and its effect on platelets — the cells that help blood clot.

Clopidogrel is commonly used in people to prevent coronary arterial thromboembolism — a clot's blockage of an arterial branch in the heart. The drug is also being increasingly used to prevent clots in cats, but limited research has been done to assess its effect. The goal of Washington State's study is to enable veterinarians to use the drug more safely and better prevent blood clot formation.

In another study, cardiologist Gregg Rapoport, DVM, at the University of Georgia College of Veterinary Medicine is evaluating a new orally administered anti-clotting drug called rivaroxaban, which has shown promise in treating people with heart disease. His aim, like Dr. Lee's, is to identify a drug that would safely prevent blood clots in cats with heart disease. ♦

When the Weather Outside Is Frightful

It can become chilly inside, too, with safety hazards like this silent killer in the garage



A heated bed can soothe an aging cat's arthritic joints. Just make sure it doesn't overheat, and best keep it off the floor to avoid drafts.

With good care from loving owners, indoor cats can enjoy a great life, but when the temperature plummets, they can benefit from some extra TLC.

The most valuable advice from a specialist in emergency and critical care: "Come winter, the most important thing is to keep pets indoors where it's warm," says Elisa Mazzaferro, MS, DVM, Ph.D., ACECC, at Cornell University Veterinary Specialists in Stamford, Conn.

Indoor cats can become uncomfortably cold in a drafty house, especially young kittens and seniors. If you set your thermostat lower at night and during work hours you need to know that, "Arthritic cats may feel stiffer and have difficulty walking then," Dr. Mazzaferro says.

Warmth for Naps. Consider creating some warm napping places. Warm air rises, so move your cat's bed off the cold floor, ideally to a semi-enclosed spot. If he likes to lounge on a favorite window-sill, draft-proof it and line it with a towel.

Many different heating pads for animals are available for cold-weather comfort. Some are electric or micro-waveable. Others are thermal pads that capture the cat's own body heat. Whatever you choose, make sure the pads won't overheat — they can cause thermal burns, Dr. Mazzaferro says.

While you may keep litter boxes out of sight in basements and garages, these places can become chilly and damp. Relocate the litter box to a warmer spot, and you will be less likely to deal with unwanted outside-the-box behavior.

Potential Poison. Carbon monoxide, a colorless, odorless poison gas, is the No. 1 indoor winter hazard — a silent killer. It can be released from a dysfunctional furnace or heater. "Like people, cats are highly sensitive to carbon monoxide poisoning. Signs of carbon monoxide

intoxication include stumbling, nausea, vomiting, lethargy and unconsciousness," Dr. Mazzaferro says. "Know these signs, and have a working carbon monoxide detector and alarm in your home."

Running the car in an attached garage while warming it or unloading groceries with your cat inside the house can also result in carbon monoxide poisoning. "Run your car outdoors, not in a garage, to prevent carbon monoxide from accumulating," says Dr. Mazzaferro.

Cats love heat, but it can be too much of a good thing. "A good rule of thumb is that anything that would be too dangerous for a child, too hot to touch or any open flame might also pose a risk to your cat," she says. "Old radiators can get too hot. If a cat jumps on them, they can cause burns. Space heaters can also topple over if jumped on. And rolling logs or flying sparks from a fireplace are equally dangerous. Use a fire screen to keep them at a safe distance."

Candles can be hazardous, too. "Cats may want to play with the flickering flame," Dr. Mazzaferro says. "They can singe their whiskers and get second- or third-degree burns on their paws. Candles also can be knocked over, and melted wax can also cause serious burns. And needless to say, knocked over candles can also start fires." Battery-operated candles are a better option.

Stash Those Cords. Modern life is such that everyone has electric cords — more of them during the holidays. Run them through a PVC pipe, behind a couch or taped along a baseboard. "Anything that stops wires from dangling, such as clipping them to the wall, will make them much less appealing to your cat," Dr. Mazzaferro says.

Otherwise, they can invite chewing, causing burns, electrocution and devel-

opment of a severe syndrome known as noncardiogenic pulmonary edema, a buildup of fluid in the lungs that prevents them from absorbing oxygen. "This condition can be life threatening," says Dr. Mazzaferro.

If your cat can access a basement or garage, store antifreeze, de-icers, cleaning fluids, pesticides and other chemicals out of reach. It's not unusual for antifreeze to leak from cars or spill from loosely sealed containers. "It takes less than a teaspoon of antifreeze to intoxicate a cat. The minimal lethal dose for a cat is one-fourth teaspoon per kilogram (2.2 pounds) of weight," Dr. Mazzaferro says.

Unfortunately, traditional antifreeze tastes sweet and can be enticing. Be sure to clean up spills or puddles immediately. If you think your cat has ingested any poison, immediately call his veterinarian.

Winter is cold and flu time for humans, "but both prescription and over-the-counter medications — everything from acetaminophen to ibuprofen to naproxen to pseudoephedrine — can cause feline seizures, destruction of red blood cells, kidney failure and even death," says Dr. Mazzaferro. "Keep your medicine cabinet closed, and ask your visitors to zip up their suitcases."

When visitors come bearing holiday gifts, be sure to remove wrappings of yarn, string and curly ribbons. "They may be too enticing for a cat, and end up causing intestinal blockages if ingested," Dr. Mazzaferro warns. ♦

WEIGHT... *(continued from cover)*

Ph.D., ACVN, Associate Professor of Nutrition at Cornell University College of Veterinary Medicine.

His tough-love advice: "You have to figure out the best approach and find out why your cat is overweight. I suggest keeping a food diary before going to see the veterinarian," says Dr. Wakshlag, president of the American College of Veterinary Nutrition. "Count the treats, how much kibble or canned food, any people food, how much chicken breast. Count everything that goes in your cat's mouth."

One unexpected benefit: "You'll save yourself some decent money on tests if

you take a food diary to the clinic," Dr. Wakshlag says. "It will help the veterinarian determine if your cat is really overeating. If not, then tests can be conducted to determine if your cat has a medical problem causing weight gain."

In this Q. and A., Dr. Wakshlag addresses other challenges — and solutions — to help your cat safely lose weight. "If the reason is not metabolic, let the veterinarian figure out ideal body weight. The bottom line is calories in and calories burned."



Cats need more than 32 percent protein in dry food as labeled, says nutritionist Joseph Wakshlag, DVM, Ph.D., ACVN, at Cornell.

Q: What are the health risks of obesity?

A: Skin problems, joint problems getting worse and more urine/bladder stone problems. Unlike dogs, cats can get the equivalent of Type 2 diabetes in which the body is resistant to the insulin produced.

Q: How does weight impact my cat's longevity?

A: A normal weight equals longevity. The reality is that there was only one study on this topic and it was in dogs, but it applies to cats, also. The study says that with 25 percent more weight, a dog will die two years before his littermates who have a healthy body weight.

Q: How can I get my cat to lose weight?

A: When given feeding instructions, clients may be told "just feed one-quarter of a cup," but the actual amount of food will vary tremendously depending on who is serving it. Is it precise, rounded off, eyeballed? The portions should be based on weight.

Q: How many calories does the average 8- to 10-pound cat need daily?

A: About 180 to 200 kilocalories (calories).

Q: Is kibble or canned better for weight loss?

A: It's easier to lose weight on canned. From a volume basis, canned food is less calorically dense. It's a great way to stimulate early weight loss in a cat.

Q: My cat has a long coat so the body condition chart isn't useful. How can I check him for extra weight?

A: That's the problem with body condition scores. They're not good for pets with long coats like Himalayans. They're just a big puff of fur. Beyond the ribcage, you have to feel the hips and abdominal area, all the specific points. You have to feel for each and every prominence through the fur.

Q: What is a safe rate of weight loss for a cat?

A: A safe rate is one to two percent of body weight per week.

PLACING THE BLAME: NEUTERING, INACTIVITY, EXCESSIVE TREATS AND CALORIE-DENSE FOOD

Brian G. Collins, DVM, Section Chief of Cornell's Community Practice Service, is unequivocal about the extent of obesity in pets. "I'm sure at least half of the animals we see should lose a significant amount of weight. If a cat should weigh 10 pounds and he's 12, that's 20 percent excess body weight."

If a cat is a little overweight at the age of 1 year, Dr. Collins advises clients to be watchful because weight gain tends to snowball. If he sees the pet is overweight, he notes it on the discharge statement: "Fluffy could stand to lose a little weight, and if you'd like, we'd be happy to calculate a diet for you."

The best diet depends on the needs of an individual cat, Dr. Collins says. It could be low calorie, high protein or high fiber. High-fiber diets produce a higher volume of stool. Some cats lose weight using almost any type of canned food.

Owners are more likely to try expensive therapeutic diets when the one they're using isn't working. In the long run, Dr. Collins says, owners will save money because they won't have to treat a medical condition related to obesity.

The amount of food to give is the biggest problem, followed by inactivity, and being neutered or spayed, which affects metabolism. Weight gain from altering is not a myth, Dr. Collins says. "Other factors are a sedentary lifestyle, excessive treats and today's calorically dense pet food formulations.

"Most over-the-counter diets today are made with good quality ingredients, are very nutritious and are loaded with calories. Modern diets combined with an indoor lifestyle are the perfect recipe for obesity."

Exercise is important in weight loss, but the most significant issue is the number of ingested calories, Dr. Collins says. "Some cats are so heavy it's almost impossible to exercise in a healthy way."

Most people have had an overweight pet, he says, and he counts himself among them. He has three cats and estimates that "1.5 of them are overweight." They all eat a low-calorie diet.

Q: What is the most common mistake owners make in trying to get their cat to lose weight?

A: One of the bigger mistakes is using over-the-counter (OTC) foods that aren't calorie restricted. I recommend therapeutic foods or talking to a veterinarian or manufacturer about which foods are truly "lite" because there are regulations for foods that are called light: anything less than 3,100 calories per kilogram, or 2.2 pounds.

The OTC weight maintenance or weight-control diets are not designed for weight loss. They are a companion product to a regular calorie product but don't have to be very calorie restricted, so weight loss is pretty difficult. Many of the weight maintenance or weight-control diets have more calories than light food.

Q: Do you advocate using commercial therapeutic diets?

A: I recommend therapeutic for two reasons: They're probably higher in protein and possibly carnitine — a substance that helps turn fat into energy — that will help maintain a lean body and not fat mass. The other is that there is something to be said about the formulation of therapeutic diets, knowing that

the manufacturers will put in the right amount of vitamins and minerals. They have jacked up vitamins and minerals so they meet the cat's requirements.

Q: What should be the essential ingredient and its percentage?

A: Cats need more than 32 percent protein in dry food as labeled and more



One smart way to reduce your cat's weight is to ignore pleas for food and instead provide attention and play.

than eight percent as labeled in most canned foods. You have to pick your way through food labels, as these percentages can be hard to find.

Q: What treats can I use for a dieting cat?

A: I am a huge fan of vegetables as treats, by which I mean salad vegetables other than garlic and onions, which can cause gastrointestinal irritation and could lead to red blood cell damage. About 50 percent of cats will eat zucchini and squash if the veggies are cut up and mixed into their food, usually lightly cooked but remaining crunchy.

Q: How often should I weigh my cat?

A: It's most important during weight loss, but even when not dieting I recommend about every four weeks. If you do it too often, you'll get frustrated. Plus, in cats, a big bowel movement can be one percent of the body weight. Give them time, and see the trend over time.

Q: Finally, how can I resist those insistent meows and wide eyes begging for more food?

A: This is when you have to be strong. Even if your cat is bothering you, close the bedroom door and put your headphones on. Cats are persistent as we all know. ♦

CATS ON A DIET WILL LOVE YOU MORE

Some owners may be reluctant to put their overweight cats on diets because they worry that their cats will hate them, says behaviorist Katherine Houpt, VMD, Ph.D., professor emeritus at Cornell and a founder of the American College of Veterinary Behaviorists.

However, research that Dr. Houpt and her colleagues conducted found that cats became more affectionate when on a diet. While eating less, the cats in the study begged and meowed more, followed their people and rubbed around their legs more. Owners regarded the behavior as being more affectionate rather than appetitive — a desire to eat that Dr. Houpt compares to looking for that box of chocolate you got during the holidays. In the end, the cats lost weight and owners were happier, according to the study published in the *Journal of Veterinary Behavior*.

Dr. Houpt's advice to reduce your cat's weight is to ignore the pleas for food and play with him instead. "Harden your heart but also give your cat attention that is not fattening — that is, play with him or her."

What seems to work best, she says: fishing pole-type toys and food-dispensing toys.

OBESITY'S IMPACT ON HEALTH

The Association for Pet Obesity Prevention cites these risks associated with excess weight:

- ◆ Osteoarthritis
- ◆ Insulin resistance and Type 2 diabetes
- ◆ High blood pressure
- ◆ Heart, kidney and respiratory disease
- ◆ Cranial cruciate ligament injury
- ◆ Cancers
- ◆ Decreased life expectancy, up to two-and-a-half years

BLINDNESS...*(continued from cover)*

that converts signals to the brain to produce images. The blood vessels then leak fluid, which can accumulate under the retina, causing it to detach and result in the abrupt onset of bilateral blindness.

Perhaps the second most common cause of sudden blindness is uveitis, an inflammation of the uvea, the dark tissue within the eye containing blood vessels. An inflamed uvea is painful and affects the iris, the colored part of the eye; the ciliary body, the structure

SCREENINGS CAN IDENTIFY PREDISPOSING CONDITIONS

The best way you can try to prevent sudden blindness in your cat is to regularly inspect his eyes. Take time to see if any changes have occurred in the appearance of either eye. For example:

- ◆ Has the color of the iris changed?
- ◆ Does either eye seem cloudy?
- ◆ Are the pupils the same size?

Such changes can reveal problems before they reach an irreversible stage. In addition, says Eric C. Ledbetter, DVM, ACVO, at Cornell, "Regular veterinary care, including appropriate screening tests and annual examinations, may identify the conditions that can lead to sudden blindness early on — before they cause blindness."

Healthy eyes should be free of cloudiness.



"Some causes of sudden blindness, such as hypertensive retinopathy, are readily treatable and either curable or controllable," says ophthalmologist Eric C. Ledbetter, DVM, ACVO, at Cornell.

in the eye that releases a clear liquid; and choroid tissue, the layer of blood vessels and connective tissue — all threatening eyesight.

"Other causes of sudden blindness include acute glaucoma, optic neuritis (inflammation of the optic nerve) and central nervous system diseases," says

Dr. Ledbetter, who researches feline eye diseases. He advises owners to be alert to these signs a vision problem is developing:

- ◆ Cats with uveitis may have ocular cloudiness, discharge or redness as a result of hemorrhage.

AN ELDERLY CAT ENCOUNTERS BLINDNESS

The first sign that 16-year-old Gertie had a problem was when her owners saw her urinating in a potted houseplant. They snatched her and headed for the litter box in the laundry room. But Gertie bolted and ran head-first into the wall. They realized their sweet old cat was suddenly blind in both eyes.

Gertie already had high blood pressure that can cause detached retinas, and her veterinarian prescribed medication to reduce it. Her owners moved her litter box to another room, which she immediately found and adapted to for the next four years, coping with blindness and a mostly sympathetic dog in a large, two-story home where she died peacefully at the age of 20.



High blood pressure caused Gertie to lose her vision.

- ◆ Those with hypertensive retinopathy can have pupils that may appear dilated, unresponsive or poorly responsive to incoming light.

However, other causes, such as retinal detachment or optic neuritis, can develop suddenly, with no warning signs, Dr. Ledbetter says. "A diagnosis requires a thorough history, physical examination and complete ocular examination by your cat's veterinarian," Dr. Ledbetter says. "This is adequate to achieve a diagnosis for many cats. However, in instances including hypertensive retinopathy and uveitis, additional examinations or testing, including neurologic examination, blood pressure measurements and blood work, may be required." Referral to an ophthalmologist may be required in some cases.

Treatment can include a variety of medications or surgeries. The key is often the owners' quick response. Veterinarians may be able to preserve the remaining vision or reverse vision loss, depending on the underlying cause and response to treatment.

For hypertensive retinopathy, veterinarians typically first prescribe an oral medication called amlodipine to lower blood pressure. Depending on the cause, other medications and long-term medical management may be required.

If infection is found, the veterinarian will prescribe an oral antibiotic and, if the cause is a fungus, anti-fungal drugs. Administering medication to a cat can be challenging, so ask the veterinarian for a demonstration and enlist help if needed.

Variable Prognosis. The veterinarian will examine your cat's eyes at regular intervals. The long-term prognosis for cats with sudden blindness is highly variable, says Dr. Ledbetter. "Some causes, such as hypertensive retinopathy, are readily treatable and either curable or controllable. Others, such as optic neuritis or acute glaucoma, carry a more guarded long-term prognosis or are not readily treatable."

RESEARCH ON CATS UNDERGOING DENTAL WORK: 'A WAKEUP CALL'

Keeping a cat's mouth open too wide during general anesthesia may result in reduced blood flow and sudden blindness, according to research by anesthesiologist Manuel Martin-Flores, MV, ACVAA, and his colleagues at Cornell University College of Veterinary Medicine.

Veterinarians use mouth gags, either simple plastic tubes or more complicated spring-loaded devices, to allow access to the oral cavity during dental procedures and surgeries such as cleaning, tooth extraction and endoscopy. In cats, the maxillary arteries — those that reach areas of the face, including the mouth, teeth, nose and muscles — are the main source of blood supply to the retinas and brain.

The location of the maxillary arteries predisposes them to compression when the cat's mouth is fully opened, possibly leading to the development of central neurological problems, including blindness, Dr. Martin-Flores says.

Authors of the study, funded by the Cornell Feline Health Center and published in *The Veterinary Journal*, studied six healthy cats undergoing anesthesia, opening their mouths fully or less than fully with the gags. They used electroretinograms, or ERGs, to test retinal function and found that retinal function was decreased when the mouth was open wider, suggesting that blood flow to the retina or brain was decreased or even absent. However, they saw no changes in the ERGs when they opened the cats' mouths less than fully.

In a guest editorial in *The Veterinary Journal*, Alexander M. Reiter, Dr med vet, chief of the Dentistry and Oral Surgery Service at the University of Pennsylvania School of Veterinary Medicine, wrote that such studies should be a wake-up call for those working in feline dentistry and oral surgery. "Martin-Flores et al. not only provide further evidence of reduced maxillary artery blood flow when cats' mouths are opened wide, they also offer a simple strategy to reduce the risk of post-anesthetic blindness by using custom-made plastic gags ... This is a fine example of applied research that can readily be tailored to everyday veterinary practice."

The outlook for retinal detachment associated with hypertensive retinopathy relies primarily on the early administration of medication to lower blood pressure. If the retinas remain detached for more than several days, the prospect of the return of normal vision is guarded.

"It is important that owners always consider sudden blindness an emergency situation," Dr. Ledbetter says. "Medical evaluation by a veterinarian should occur immediately. Prompt diagnosis and treatment may help improve the long-term prognosis. In addition, some of the conditions associ-

ated with sudden blindness — such as hypertensive retinopathy, central nervous systemic disease and some causes of uveitis — are serious systemic disorders, and their rapid identification and treatment are critical to preserve general health." ◆

FOR MORE INFORMATION

Check out "Sudden Blindness" under Health Information on the Cornell Feline Health Center's website — www.cornell.edu/FHC.



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 ...

❖
**HOME CARE OF
THE CANCER
PATIENT**

❖
**LONG-TERM
STEROID USE**

❖
**ATTENTION
SEEKING**

❖
LIVER DISEASE

**What Awaits a Maine Coon Who
Has a Serious Case of Gingivitis?**

Q I have an 11½-month-old Maine Coon who has had a bad case of gingivitis since she was a kitten. I am very worried, as I have been reading about this condition in cats, and I hope that this will not ultimately lead to our having to have all of her teeth removed. Can you shed some light on this condition?

A I am very sorry to hear about your kitty's problems, and I understand your concern completely. Dental disease is fairly common in cats, and diseases of the gingiva, or gums (the part of the soft tissue lining in the mouth that surrounds the teeth) can cause problems ranging from discomfort to tooth loss, depending upon the cause and severity of the condition. Perhaps a brief discussion of what gingivitis is and what may cause it would be helpful.

Gingivitis is defined as inflammation of the gingiva that most commonly occurs in response to compounds produced by bacteria that reside in a film (called the biofilm) that surrounds the teeth. This film is a normal structure found in the mouths of healthy cats, and it contains many beneficial bacteria that protect the tooth from infection by pathogenic (abnormal and disease-causing) bacteria. If these pathogenic bacterial gain access to the biofilm, however, they can release compounds that damage the surrounding gingiva, resulting in swelling, redness and pain that we recognize as inflammation.

The accumulation of these pathogenic bacteria can be promoted if the characteristics of the gingiva are altered so that places for bacterial attachment become available. Such places may arise when plaque, a soft, opaque deposit on the teeth, mineralizes to form dental calculus. This mineralization begins within hours of plaque formation and may be complete within two weeks.

It is important to note that it is not the calculus itself that causes gingivitis, but rather the production of compounds produced by bacteria that reside on the rough surface of plaque.

Prevention of the accumulation of plaque (and subsequent calculus) forms the rationale for the regular cleaning (i.e., brushing) of teeth to prevent the accumulation of pathogenic bacteria in the gingiva.

Gingivitis is commonly diagnosed in cats, and in some cases may be due to infection with the highly prevalent and contagious calicivirus. Studies suggest that inflammation of the gingiva may result from a cat's immune system trying to eliminate the virus in this region, but an important point is that in the vast majority of cases of calicivirus infections that affect the mouths of cats, the inflammation extends beyond the gingiva to include other regions of the lining of the mouth (i.e., the tongue and inner cheeks). Tests to identify the DNA of calicivirus (called polymerase chain reaction, or PCR tests) can be used to rule out the possibility of infection with this common virus. Some researchers speculate that infection with other viruses, such as feline leukemia virus or feline immunodeficiency virus, may play a role in some cases of feline gingivitis, although this has not been proven.

When gingivitis is diagnosed in a kitten, the veterinarian will carefully examine the entire oral cavity. If there is no evidence of inflammation in non-gingival regions of the mouth, calicivirus infection is unlikely. Some breeds, such as the Maine Coon and Siamese, are predisposed to juvenile gingivitis and management may involve surgical resection (removal) of portions of the gingiva and, in some cases, removal of teeth depending upon the severity of the condition.

It is important that you work closely with your cat's veterinarian and perhaps with a board certified veterinary dentist/oral surgeon as needed to most optimally manage your kitty's condition.

Careful monitoring and thorough routine dental home care are vital for the best outcome. Please discuss these issues carefully with your cat's veterinarian. Best of luck to you and your kitty, and please keep us up to date on your baby's progress.

—Sincerely, Elizabeth ❖

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