



# Cat Watch

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



## INSIDE

- Short Takes** 2  
The surprising impact of free-ranging domestic cats on birds and wildlife.
- What Happens If You Go First?** 3  
A pet trust will provide continuing care according to your wishes.
- Common Grooming Mistakes** 4  
These safe, stress-free alternatives will help ease the way to success.
- Ask Elizabeth** 8  
Deconstructing the reasons for cats endearingly tilting their heads.

## IN THE NEWS ...

### Indoor Cats Can Get Heartworm Disease

The American Heartworm Society and American Association of Feline Practitioners have partnered to educate pet owners and veterinary professionals about the need to protect cats from heartworm disease. One misconception that they would like to correct is that indoor cats aren't at risk for heartworm disease. In fact, one retrospective study found that 25 percent of the cats diagnosed with the disease were indoor cats. The reason: mosquitoes, which transmit the disease, can get indoors.

Among other myths the campaign debunks at <http://knowheartworms.org/> is that it's a heart disease. It chiefly affects blood vessels of the lungs, and signs can be mistaken for respiratory diseases.

The recommendation: Ask your cat's veterinarian about a preventive. For more information, visit the Cornell Feline Health Center website at [www.vet.cornell.edu/fhc/](http://www.vet.cornell.edu/fhc/) and click on Health Topics. ♦

## Protecting Against a Deadly Virus

*Kittens and newly adopted cats should be vaccinated to prevent the spread of contagious feline panleukopenia*

Young kittens may seem fearless when they demonstrate their acrobatic talents during play, but they're no match for the potentially deadly disease feline panleukopenia. Sometimes referred to as feline distemper, the disease is caused by the feline panleukopenia virus (FPV).

The highly contagious, hard-to-kill virus can spread from infected cats or kittens to other kittens or adult



Kittens are especially vulnerable.

cats who haven't been vaccinated against it. In addition, recent studies confirm that there has been crossover of the infectivity between cats and newer types of parvovirus usually found in dogs.

### Parvo Crossover.

While some newer canine parvovirus strains can transmit the viral disease to unvaccinated cats, this does not appear to cause disease in most cases, and also does not appear to occur at a rate to cause alarm because

*(continued on page 6)*

## Smart Tactics to Stop Destructive Chewing

*The most important is determining the underlying reason, whether it's boredom, lack of exercise or a medical problem*

Pipper loved to lick plastic and crawled eagerly into every plastic bag she could find. But the longhaired black cat's fascination with plastic eventually progressed to a big problem — chewing the plastic and ingesting tiny pieces to the alarm of her owner, Pamela Perry, DVM, Ph.D., a lecturer in animal behavior at the Cornell University College of Veterinary Medicine.

While some dogs chew sundry objects from shoes to sofa legs, cats tend to focus on houseplants, thread, string, yarn and electrical cords. Some, though, like Pipper, chew plastic, and Dr. Perry reached a

turning point with the threat to her cat's health. Ingested plastic could lead to an intestinal blockage. "I had to make sure that all plastic bags were put away," she says. "They had to be well-hidden or she would find a way to get them."

**Safer Alternatives.** Instead, she gave Pipper a safe alternative — a strong plastic Elizabethan collar that the cat's teeth couldn't break. "Licking the E-collar seemed to satisfy her. It gave her an outlet for the behavior without putting her health at risk." Dr. Perry developed other tactics

*(continued on page 5)*



# CatWatch

## EDITOR IN CHIEF

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

## EDITOR

**Betty Liddick**

## ART DIRECTOR

**Mary Francis McGavie**

## 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

**Iiona 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/](http://www.vet.cornell.edu/fhc/).



**B**  
**Belvoir**

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](http://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

### The Impact of Free-Ranging Domestic Cats on Wildlife

A study published earlier this year that estimated free-ranging domestic cats annually kill up to 3.7 billion birds and 20.7 billion mammals has stirred controversy and brought renewed calls for action.

The study's three authors from migratory bird centers at the Smithsonian Conservation Biology Institute and U.S. Fish and Wildlife Service conducted a "systematic review and quantitative estimate of mortality." They say "unowned cats," as opposed to owned pets, cause the majority of the deaths.

Their findings, published in the journal *Nature*, suggest that, "Free-ranging cats cause substantially greater wildlife mortality than previously thought and are likely the single greatest source of anthropogenic mortality for U.S. birds and mammals. Scientifically sound conservation and policy intervention is needed to reduce this impact."

Research suggests that domestic cats have considerable impact on wildlife in the U.S. and abroad, says Bruce Kornreich, DVM, Ph.D., Associate Director for Education and Outreach at the Cornell Feline Health Center. "Given the impact of free-ranging cats on wildlife, educating owners about the importance of keeping their cats indoors is crucial. In addition, the release of owned cats who eventually integrate into the burgeoning unowned cat population is a significant problem."

Equally important is making it clear that adopting a cat is a commitment for his

15- to 20-year lifetime, Dr. Kornreich says. Support of research on novel means of feral cat population control — such as the development of a contraceptive vaccine being studied at Cornell — is also vital in addressing the problem, he says.

Responding to the study, the CATalyst Council, a national initiative of animal health and welfare organizations, points out that some of the killed mammals "were pests, including mice and rats, which reproduce quickly and pose a public health concern when their numbers are allowed to grow unchecked."

The council's main concern was its belief that some media reports on the study cast a negative light on all cats. "This works to discourage prospective cat owners from adopting one of the hundreds of thousands of healthy, enjoyable cats held in shelters across this nation," says Executive Director Jane Brunt, DVM.

### The Longest Cat Dies

The longest domestic cat in the world — a Maine Coon measuring four-and-a-half feet from nose to tail — has died. Guinness World Records declared Stewie a record-holder in 2010. He died at the age of 8 after a yearlong battle with cancer. The certified therapy cat touched many lives, says owner Robin Hendrickson. In addition to their remarkable size, Maine Coons are celebrated for their playfulness and trilling chirp. ♦

**Robin Hendrickson** of Reno, Nev., shows Stewie's length in 2009.



Andy Barrow/Reno Gazette-Journal



# What Happens If You Go First?

*A pet trust will provide continuing care according to your wishes — and it will be legally enforceable*

Outliving your cat is painful, but it's the natural order, given the comparatively short feline lifespan. More difficult, and more crucial, to contemplate: What happens if you go first? Preparing for that contingency shouldn't be done casually. You need to be specific about your wishes to make sure they're enforceable by law and to back up your plans with money designated for your cat's care. The good news: Most states now have laws recognizing pet trusts.

Quite simply, a pet trust is a legal arrangement that lets you designate assets, such as insurance policies, real estate, cash or a retirement fund, for the care of your cat in the event of your disability or death. You can leave assets only to a living person, says Gregory S. Alexander, J.D., Robert Noll Professor of Law at Cornell University and an internationally renowned expert in property law and theory. As a result, "You have to find someone to receive the legal title to the property [the assets] that you're going to use to benefit the pet, and you have to find somebody willing to use that property to look after the pet."

**Several Hurdles.** Prof. Alexander points out that pet trusts are not without difficulties. For one thing, the law considers pets to be property, akin to inanimate objects. Because inanimate objects can't



**Looking to the future,** owners can designate a trustee to manage and distribute money for a caregiver to supervise feeding, exercise, and medical treatment for their cat.

receive an inheritance, a trustee and caregiver must be assigned. In addition, in standard trusts, the beneficiary is the only one with standing to enforce a trust — to complain to the court, for example, that the conditions aren't met. Obviously, cats can't do that. For an arrangement benefiting a pet to be enforceable, a type of trust called an "honorary trust" must be established. Participants include:

- ◆ **The settler or grantor, the person who creates the trust:** That's your role.
- ◆ **The trustee:** the person who will manage and distribute the funds.
- ◆ **The caregiver:** who may or may not be the same person as the trustee. It's always wise to choose more than one caregiver in case circumstances change.
- ◆ **The beneficiary:** your cat.

You can add a provision in your will stating your intentions for your cat, but that language is not legally enforceable. You have no guarantee your cat will receive the care you envisioned.

Recently, more states have enacted pet trust laws that function as

honorary trusts. According to the ASPCA, 46 states and the District of Columbia have these statutes. Only Kentucky, Louisiana, Minnesota and Mississippi do not. Prof. Alexander points out that an honorary trust can exist even without legislation under the state's common law. "Technically, it's what lawyers call a power of appointment, meaning that the person to whom the money for the pet's care is given is legally free to use the property for that purpose but cannot be compelled to do so."

**The Critical Steps.** You will need to make sure the potential caregiver(s) understands the details of your cat's care, including feeding, medical needs, exercise requirements and contact information for his veterinarian.

The amount of money to set aside for that care depends on your cat's age, health and any extreme measures you want administered in case of illness. A rule of thumb is to multiply his average annual cost of care by a reasonable life expectancy, adding extra money for the caretaker's time. (Be sure to include money for cremation or burial.) The trustee is in charge of giving the money to the caretaker according to a prearranged schedule, generally annually.

If the trustee and caregiver are different people, give the trustee a photo of your cat, microchip information and a DNA sample to protect against fraud. There have been cases of a caregiver getting a replacement cat to continue receiving money when the cat died prematurely.

Be sure to give copies of the trust to the trustee and caregivers, and stay in touch with them to update your trust in case circumstances change. You can fill out forms for a pet trust on the Internet or consult an attorney. The most important thing is to get the paperwork done, so you can have peace of mind about your cat's future if you're not around to guide it. ♦



# Seven Common Grooming Mistakes

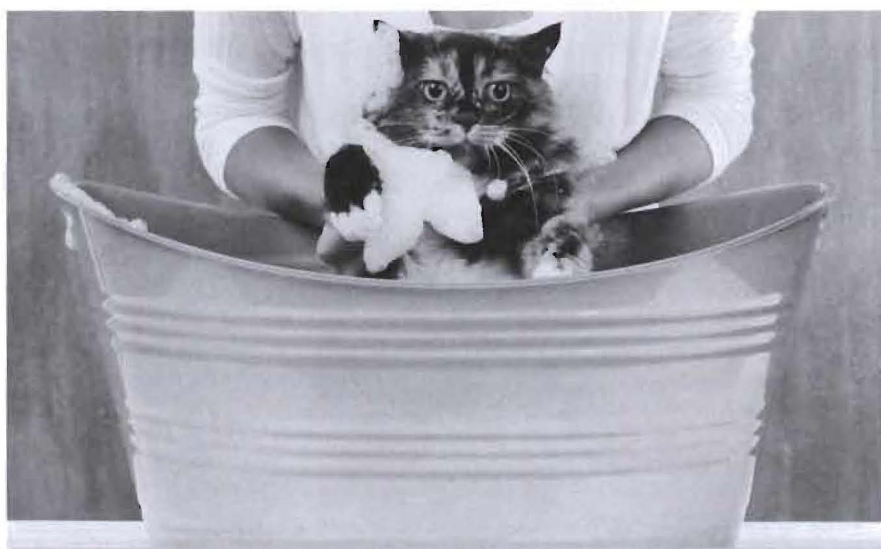
*These safe, stress-free alternatives will help ease the way to successful at-home sessions*

Cats enjoy a reputation for being stellar self-groomers, but they reap enhanced health benefits by having their nails trimmed, their coats brushed and, yes, even receiving the occasional bath.

To ensure successful at-home grooming, Hayley Keyes, Executive Director of the International Professional Groomers, Inc. and an international master certified professional cat groomer, shares seven tactics to avoid common mistakes.

"There are different techniques when it comes to brushing and bathing a cat versus a dog," says Keyes, who operates the Nanhall Pet Spa/School of Grooming in Greensboro, N.C. "But the bottom line is that you want these grooming times to be safe and stress free for the both of you." She offers alternatives to these grooming miscues:

- ◆ **Picking the wrong shampoo.** Read the label carefully. Never bathe your cat in shampoo formulated for dogs. "Some ingredients in dog shampoos can be harmful to cats," she says. "Cats also have more sensitive skin than dogs. Most cats tend to have oily coats, so consider cat shampoos containing oatmeal and aloe."
- ◆ **Getting soap in your cat's eyes.** Never use a spray nozzle to wet your cat's face. Instead, clean his face with a warm, wet washcloth with a dab of shampoo. And if you do accidentally get soap in your cat's eyes:



A large tub or bathroom sink is a better choice for bathing than the bathtub. Its running water can unnerve cats.

"Rinse, rinse, rinse and do not freak out," Keyes says.

- ◆ **Bathing the cat in the bathtub.** Opt for the bathroom sink or a large bucket instead, Keyes says. "Many cats do not like running water so set them up for success by using a bucket large enough to fit your cat and partially fill it with warm, soapy water. Put your cat's rear feet in the bucket first. Cats like something to grab onto so they can use their front paws to grab onto the top of the bucket, and always bathe them with the door closed to prevent escapes. Lightly turn on the water to get him used to hearing it before rinsing."
- ◆ **Failing to thoroughly rinse the coat of shampoo.** "If you do not rinse completely, the cat can end up with skin issues. The cat may start to chew his coat and develop skin irritations," says Keyes. "One way to tell if you have rinsed thoroughly is to bring your ear down to the coat and squeeze the wet hair. If you hear a squeaky clean sound, that means you have rinsed out all the shampoo."
- ◆ **Using a hand-held blow dryer.** Better: Have two thick bath towels within reach. Towel-dry your cat well with the first towel. Then snugly wrap him in the second towel and hold him closely. "Walk around with him in your arms for about 10 to 15 minutes to hasten drying and use this time to speak sweetly to him to help him feel calm and secure," says Keyes. "If you do use a hair dryer, brush the coat first and then use the dryer at a low setting to avoid burning your cat's skin."
- ◆ **Cutting the nails too short, causing bleeding.** Cats typically have five nails on each front paw and four nails on each back paw. It's safe to use human nail clippers, Keyes says, but always start by pushing the paw pad to expose each claw — they're retractable. Trim the back paws first and then the front. Trim just below the quick — the pink area in the middle of the nail — to avoid accidental pain and bleeding. "Keep styptic powder within reach in case you do nick the quick," she says.
- ◆ **A final tip: Never try to groom or bathe your cat when you're in a hurry or your cat is agitated.** You risk escalating his stress level, Keyes says. "Make these at-home grooming sessions inviting." A follow-up treat helps. ♦



**CHEWING** ... (continued from cover)

to keep her cat safe as they shared a blissful life together before Pipper succumbed to cancer at 13½. Her sanity-saving advice for coping with these hazards can help anyone who lives with a relentless chewer:

◆ **Houseplants:** *Cats enjoy chewing them, so you face a challenge.* The ASPCA Animal Poison Control Center lists 400 plants from Adam and Eve (*Arum maculatum*, prompting drooling, vomiting and difficulty swallowing) to Yucca (*Yucca* sp., which can cause vomiting and diarrhea) as being toxic to cats. "Lilies are also taboo around cats because they are highly toxic. Ingesting even a small amount of the plant can result in kidney failure within hours," Dr. Perry says.

Safe plant options include rye or oat grass. Dr. Perry advises clients to plant grass in large, shal-

low containers, such as aluminum baking pans. The seeds sprout fairly quickly. If a container is big enough, some cats like to sleep atop the grassy bed. "They really seem to enjoy it," Dr. Perry says. "It gives them a piece of the outdoors."

More than 500 indoor and outdoor plants are listed at ASPCA.org as nontoxic to cats, including common houseplants such as Boston fern and African violets. If your cat chomps these leaves, try misting leaves with water and a sprinkling of cayenne pepper, or spray leaves with a commercial pet repellent such as bitter apple. The odor of mothballs in the soil also could ward off your pet, as advised by the Cornell Feline Health Center's webpage on destructive behavior (<http://bit.ly/catshredtip>).

◆ **Electrical cords:** *If your cat chews electrical or phone cords, make them*

*inaccessible.* As with pieces of plastic, if a cat swallows a piece of the cords, it can cause intestinal blockages. Worse yet, if the cat chews through the cord, he can be electrocuted. Hard-plastic cord caddy organizers or automatic rewind extension cord reels can keep phone and electrical cords out of reach.

Chewing behavior in cats can be due to a number of reasons — exploration, hunger, owners' inadvertent reinforcement or a compulsive disorder. Pipper's habit of licking plastic started as play and exploration, but later developed into a compulsive behavior aggravated by stress, such as a visit to the veterinary clinic or delayed mealtimes.

In addition to providing free access to the plastic Elizabethan collar, Dr. Perry managed the behavior by feeding Pipper part of her meals from food-dispensing toys.

The activity gave her mental enrichment and slowed her eating, providing a bonus for the other cats. Previously, Pipper would quickly finish eating and take food from their dishes. An alternative for stimulating exploratory behavior is to hide food or treats around the house for your cat to find.

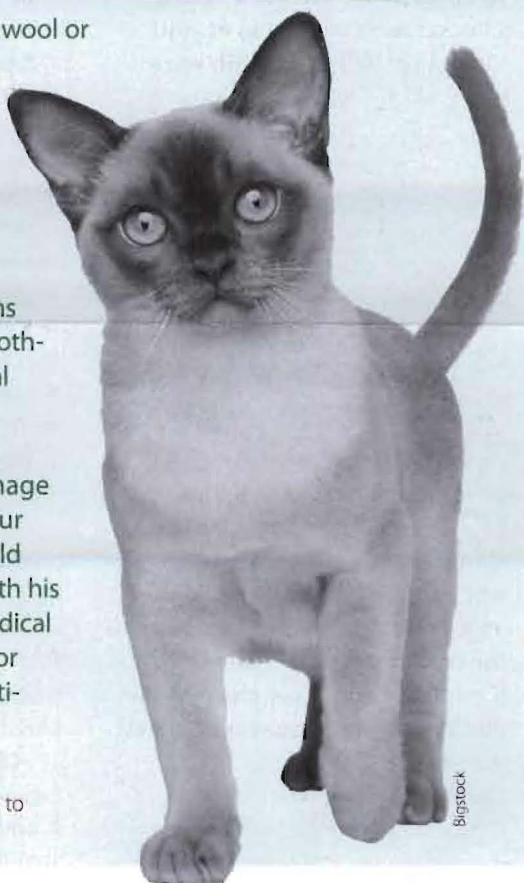
Determining the reason for excessive chewing is paramount. It's not for spite, as some owners believe. "Animals are expressing themselves when they chew," Dr. Perry says. "They are not doing this to get back at us, so it is important not to punish them. Instead, we need to identify the cause and deal with it appropriately." ♦

**THE COMPULSIVE FORM: SUCKING WOOL**

Any cat can indulge in sucking wool or other fabrics, but Siamese and Burmese breeds are more prone to the compulsive form of the behavior, says Pamela Perry, DVM, Ph.D. The cause of wool sucking is unknown, but some experts believe it develops when kittens are taken from their nursing mothers too early — before the ideal time of 12 weeks.

If the behavior is causing damage to items, or you're worried your cat is ingesting fabric that could cause an obstruction, check with his veterinarian to address any medical problems and treat the behavior appropriately, possibly with anti-anxiety medication.

**Burmese breeds** are especially prone to sucking wool and other fabrics.

**WHAT YOU SHOULD KNOW**

The ASPCA Animal Poison Control Center offers advice around the clock for a \$65 fee at 888-426-4435. For a list of plants toxic to cats, use the keywords Poison Control Center at [www.asPCA.org](http://www.asPCA.org).



## FPV ... (continued from cover)

the current vaccines used in cats provide protection. However, the fact that these viruses are very widespread in nature and can pass from one species to another justifies the need to ensure that all kittens and newly adopted cats are promptly vaccinated, says Colin Parrish, Ph.D., Professor of Virology at the Cornell Baker Institute for Animal Health and Director of the Cornell Feline Health Center.

"The feline panleukopenia virus doesn't change very much, but with the canine parvovirus, we have seen mutations arise every two or three years that become widespread," he says. "We are continuing to keep track of those mutations and examine them to see whether

they might affect vaccine efficacy. Fortunately, these diseases pose no threat to people."

Dr. Parrish has been researching viral diseases in cats and dogs as well as in wildlife for more than two decades. He focuses on devising ways to provide greater protection for several species through effective vaccine protocols.

"Panleukopenia is a widespread virus that is typically found in places where there are lots of kittens, such as animal shelters," says Dr. Parrish. "If you don't vaccinate a kitten, it will almost certainly get infected by panleukopenia within the first several months of life."

In unprotected cats, the virus begins to attack and destroy the white blood

cells, lymph tissues and digestive system, and spark secondary bacterial infections. "The virus affects cells undergoing division that are in the intestines and lymph nodes,"

Dr. Parrish

says. "These are the cells that fight infection."

In very young kittens the virus can infect the cerebellum — the part of the brain that controls muscle movement — and cause cerebellar hypoplasia, resulting in incoordination. "Affected cats will lose their sense of balance and have a hard time walking," Dr. Parrish says.

Cats with panleukopenia disease can display:

- ◆ Frothy vomiting
- ◆ Acute onset of diarrhea with or without blood in the stool
- ◆ A fever of 105 degrees and above. The temperature range for a healthy cat is between 100 and 102 degrees.
- ◆ Loss of appetite
- ◆ Weight loss
- ◆ Dehydration
- ◆ Lethargy
- ◆ Tender, swollen abdomen due to enlarged lymph nodes

A thorough physical exam and blood tests are conducted to confirm the diagnosis. Cats with FPV infection may also display decreased levels of platelets, (blood components necessary for clotting), as well as extremely low white blood cell counts.

There is no specific treatment for the virus. The standard therapeutic plan calls for hospitalization and management of symptoms through supportive therapy.



**"If you don't vaccinate a kitten, it will almost certainly get infected by panleukopenia within the first several months of life,"** says Colin Parrish, Ph.D., Director of the Cornell Feline Health Center.

## HOUSECLEANING TIPS TO STOP A STUBBORN VIRUS

Invisible to the naked eye and virtually odorless, the panleukopenia virus can remain active for months if not properly removed or destroyed by using vigorous cleaning regimens.

"This is a hardy virus, but that does not mean it is indestructible," says virologist Colin Parrish, Ph.D., at Cornell. "This virus can be activated by sunlight, but with the right cleaning protocols, you can effectively remove the virus in your home."

If you have young kittens in your home or a cat infected with the virus, Dr. Parrish advises using bleach diluted with water at a ratio of one part bleach to 32 parts water. A simple conversion rate calls for adding one cup of bleach to a gallon of water.

"Avoid using pure bleach because it can damage surfaces, even stainless steel," Dr. Parrish says. "Fresh, diluted bleach acts to decompose the chemicals in this virus. Be sure to clean the floors, pet beds and feeding bowls thoroughly. Apply the diluted bleach, allow it to dry and then wash it off with water."

Washing surfaces and use of hot water and detergents will remove

the virus particles, but most household cleaners do not specifically inactivate the virus, including those containing ammonia. "The virus is unaffected by the cleaning agents in common household cleaners," Dr. Parrish says.

Fortunately, people are not susceptible to the viruses but can inadvertently put unvaccinated cats and dogs at risk by carrying the viruses into the home on their hands or shoes. "Washing your hands will help remove the virus and reduce the likelihood of exposure," Dr. Parrish says. "If you visit a shelter, be sure to use hand sanitizer and wash your hands thoroughly."

Cats with confirmed feline panleukopenia should be kept in isolation from other cats and should not be reintroduced until they are recovered and the other cats have been vaccinated appropriately. If you bring in a stray cat, prevent interaction between him and your resident cats until a veterinarian performs a thorough exam and administers core vaccines.





Bigstock

**Veterinarians conduct thorough physical exams and blood tests to confirm a diagnosis of feline panleukopenia.**

Veterinarians often administer antibiotics to counteract the bacterial infection that may follow the virus infection.

An ailing cat may need to spend several days in the hospital and receive intravenous or subcutaneous fluids to replace the electrolytes lost due to chronic diarrhea. The cat may also be given a bland diet to encourage eating, as cats with this FPV may become anorexic. In some cases, blood transfusions may be necessary to save his life.

**The Best Defense.** Prevention, in the form of a vaccine, is the best defense to protect your cat from developing FPV

and you from incurring a costly veterinary bill. No specific cat breed is known to be either prone or resistant to panleukopenia.

Dr. Parrish strongly urges owners not to delay in having a newly adopted kitten receive a three-in-one core vaccination known as FVRCP. This vaccine can protect cats or kittens against three serious conditions: feline viral rhinotracheitis, feline calicivirus infection and

panleukopenia. Viral rhinotracheitis (FVR) and calicivirus can cause upper respiratory infections in unprotected kittens. FVR is a herpes virus that may cause coughing, sneezing and/or nasal discharge in infected cats, while caliciviruses can cause ulcers in a cat's oral cavity and trigger sneezing, runny nose and watery eyes.

"The standard procedure calls for giving kittens three rounds of vaccination to protect them against these viruses," says Dr. Parrish. "This is needed because the queen gives immunity when the kittens first suckle, as the maternal antibodies are transferred during the

first feeding. The maternal antibodies protect them against the viruses for the first weeks of life, and the first vaccine is generally given at around 6 to 8 weeks of age when the maternal antibodies are at a low level in the kittens."

**Safe Vaccines.** The vaccination contains modified live viruses that replicate but do not cause the disease. "These are very safe vaccines that have been used for many years, and there are virtually no side effects to vaccination," Dr. Parrish says.

Booster vaccinations are recommended every three years. Another option after a cat has received his initial series of vaccinations is to request a titer test. The simple blood test can determine antibody levels — how well a cat is protected against these diseases.

"There is no danger of giving these vaccines every year, but every three years is generally adequate for household cats," says Dr. Parrish. "By using the inexpensive and safe vaccine we can control panleukopenia and the other viruses, protecting the kittens against serious or even lethal diseases." ♦

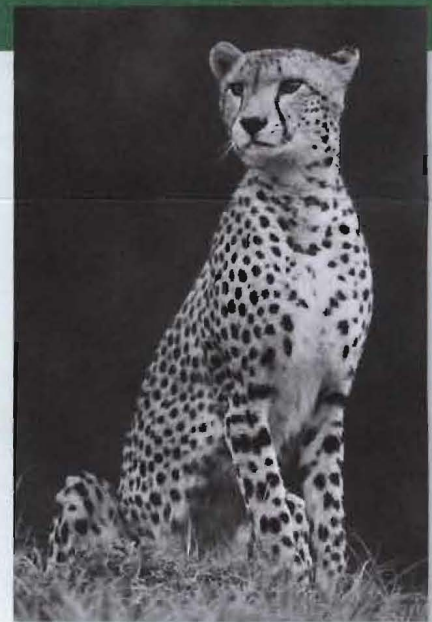
## 'THIS IS NOT JUST A DISEASE OF DOMESTIC CATS'

Your indoor cat has a lot more in common with cheetahs and raccoons than you may imagine. That's because many mammals can contract panleukopenia virus or canine parvovirus.

"There is a global concern because this is not just a disease of domestic cats," says virologist Colin Parrish, Ph.D., at Cornell. "Recently, we've been looking closely at these viruses in wildlife. We've identified cases affecting raccoons, skunks, foxes, cheetahs, as well as other species that are endangered or going extinct. I just read a research paper that indicated some pandas in China may be infected by these viruses."

Last year, Dr. Parrish shared his findings at two international conferences. He presented updates on the canine parvovirus, panleukopenia virus and canine influenza virus as a keynote speaker at a meeting of the International Society for Companion Animal Infectious Diseases in San Francisco. He also traveled to London to participate in an international conference hosted by the Royal College of Veterinary Surgeons. Attendees discussed mutations in canine parvovirus and vaccine efficacy.

"Recommendations are still being finalized," he says. "We hope to be able to summarize the state of this field, cross-species protection and the evolution of the viruses later this year."



Bigstock

**Virologists** have been studying the panleukopenia virus and canine parvovirus in wildlife, including cheetahs.





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](mailto:catwatcheditor@cornell.edu).

**COMING UP ...**

- ❖
- COGNITIVE  
DYSFUNCTION**
- ❖
- BLADDER  
INFECTIONS**
- ❖
- YEAR-ROUND  
DISASTER  
PLANS**
- ❖
- HEALTHY  
TREATS**
- ❖

**Q** What is it you and your pals are doing when you tilt your head over to one side? It's adorable. My cats will sometimes do it when looking at something they're trying to figure out. Thanks for your fun column.

Sincerely,  
Chip, Bianca and Molly's mom

**A** Thank you so much for recognizing how adorable it is when we cock our heads to one side. We're only trying to look cute when we do this ... it really serves no function. I'm kidding, although I'd have to think about this, which makes me want to tilt my head to the side, too!

Seriously, though, this behavior is to be distinguished from the dramatic tilting of the head that may suggest an inner ear infection (the inner ear is important for the maintenance of balance) or that may be seen when cats have ear mites or an external ear infection. Cats with abnormalities of the brain, including tumors, may also tilt their heads to one side, and any cat who demonstrates persistent head tilt and/or shaking of the head should be evaluated by a veterinarian promptly.

The behavior may be an attempt to gather more information about the world around them. In many cases, this head motion may be an attempt to more accurately localize the source of a sound (in direction and distance) that they are hearing. Sound results from the alternating compression (increase in density) and rarefaction (decrease in density) of the air (or whatever medium it travels through) in a wave-like fashion. This alternation results in vibrations of the air that displace the eardrums, and these displacements are translated into what is perceived as sound by the brain.

One way (among others) that animals use to determine the location of a sound source is called the interaural time difference (ITD). This is the difference in arrival time of a sound wave between the two ears. Since sound waves take time to travel through air, it

makes sense that a sound that originates from the right of a cat's head will arrive at the right ear before it arrives at the left ear. The cat can use this ITD to help localize the origin of a sound. One difficulty that cats (and other animals with symmetrically placed ears) may have in determining the source of a sound is that each ear is located at approximately the same height and distance from the nose as the other (i.e., the ears are symmetrically placed on the head).

In some cases, depending upon the location of the origin of a sound, the sound waves may arrive at both the right and left ears at the same time with the head in a normal position, making localization by ITD difficult. In such a case, the tilting of the head may alter the position of the ears relative to the origin of the sound (i.e., it may make one ear closer/farther to or higher/lower than the origin of the sound), thus facilitating the use of ITD to better localize its origin.

This head tilt, by altering the position of his ears relative to a sound source, may provide more accurate information about the location of the source. It is interesting to note that in owls, which have one of the most accurate abilities to locate the source of a sound in the animal kingdom, the ears are normally located in asymmetric positions, with one ear located farther forward on the head than the other. This facilitates the use of ITD to improve the accuracy of locating the sound source.

This head tilting behavior is similar, although not exactly analogous to, the up and down bobbing of the head seen in cats before jumping from one perch to another. It is believed that in this case, the kitty is trying to improve his visual depth perception of the target perch by obtaining several views from different perspectives to more accurately localize the landing spot.

I hope this gives you a better understanding of this endearing behavior. Please forward a picture of their head tilting shenanigans if you get the chance. It's just so cute...even to us kitties! ❖

—Sincerely, Elizabeth

**CORRESPONDENCE**

The Editor  
CatWatch\*  
800 Connecticut Ave.  
Norwalk, CT 06854  
[catwatcheditor@cornell.edu](mailto: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](http://www.catwatchnewsletter.com/cs) or write to: CatWatch, P.O. Box 8535, Big Sandy, TX 75755-8535.

**CALL TOLL FREE: 800-829-8893**