# Catlalatch

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

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They can appear suddenly and, if left untreated, can become infected.

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Will two ionic cleaners in her apartment pose a health risk to her cats?

### IN THE NEWS ... Cats With Diabetes Mellitus Have Fair to Good Prognosis

The results of studies on the life expectancy of cats with diabetes mellitus have varied widely. Now research among several European veterinary colleges, including the University of Zurich, has found cats with the disease have fair to good prospects for survival.

The retrospective study of 114 cases, reported in the Journal of the American Veterinary
Association, showed the median survival time of cats newly diagnosed with the disease was one year and 46 days, while 70 percent lived longer than three months, 64 percent lived longer than six months and 46 percent lived two years.

Cats with high concentrations of creatinine, a waste product normally filtered from blood by the kidneys, had shorter survival times. Surprisingly, ketoacidosis, a lifethreatening condition common in diabetes, didn't significantly impact survival time.

## **The Team Approach to Success**

Specialists at the Cornell referral service use the latest scientific advances to help patients beat the odds

Steffi Loomis awoke in the middle of the night to the sound of painful meows from Dave, her normally mellow 16-year-old female cat with a male name. When Loomis turned on the light, she discovered bloody diarrhea and vomiting and her orange tabby getting weaker and sicker by the minute.

Loomis, who lives in

New Canaan, Conn., contacted the veterinarian, who advised her to take Dave immediately to Cornell University Veterinary Specialists



Dave spent several life-saving days at the hospital.

in nearby Stamford, Conn. CUVS, the largest university-affiliated veterinary referral service in the country, has been referred to as the Mayo Clinic of veterinary medicine. Loomis rushed Dave there, and a team of specialists quickly worked to save her life.

**Touch and Go.** "It was touch and go with Dave," says Susan Hackner, BVSc, MRCVS, Chief Medical

Officer at CUVS and a specialist in both emergency and critical care and internal

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### 'Stranger Danger'? It's Genetic

A study has found that friendly male cats produce less fearful kittens, even if they never meet their offspring

Scout was camped out under the sofa, refusing to eat. The cat's fearful behavior began when Richard and Sue-Ellen Stillwell Jones' daughter and her husband came to visit. When they walked into the Fort Collins, Colo., home, Scout looked terrified and disappeared under the sofa.

She didn't emerge for most of the day, and Jones was afraid that the stress of having strangers in the home, combined with her lack of appetite, would cause the cat's pancreatitis to flare up.

Scout's fear of strangers isn't uncommon, says Katherine A. Houpt, VMD, Ph.D.,

behavior specialist and professor emeritus at the Cornell University College of Veterinary Medicine. It's a natural reaction to people who don't smell familiar. "It's not surprising that cats are fearful," she says.

Mothers' Effect. The reason: Cats who experience "stranger danger" carry the trait in their genes. Researchers have discovered that friendly male cats produce friendly kittens, Dr. Houpt says. In two separate colonies, according to a 1992 study by Dr. Houpt, Ilana S. Reisner, DVM, Ph.D.; Hollis Erb, DVM, Ph.D.; and Fred W. Quimby, Ph.D., VMD,

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## **Cat Watch**

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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/.



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### **SHORT TAKES**

### Toward Cat-friendly Veterinary Clinics

The sad truth about cats' access to veterinary care in the U.S.: They don't have much. Surveys show that nearly twice as many dogs visit the veterinarian as cats, even though the cats outnumber dogs

— 86 million versus 78 million. Thirty-nine

— 86 million versus 78 million. Thirty-nine percent of owners say they would take their cat to the veterinarian only in the event of illness; and 60 percent report that their cat hates going to the veterinary clinic.

The visits may stress both owners and cats, says the American Association of Feline Practitioners. To offer a more calming, encouraging environment, it has launched an initiative to improve cats' treatment, handling and overall health.

At the same time, the AAFP, based in Hillsborough, N.J., hopes to reverse the decline in clinic visits by owners. "The initiative addresses barriers to feline veterinary visits, including an aversion to cat carriers, sensitivity to new sights and smells, and the stress of an unfamiliar location or experience."

The association will award Cat Friendly Practice (CFP) certificates to those with staff members trained in how to approach and handle cats in a "gentle, empathetic and caring manner." More than 1,000 veterinary clinics worldwide have earned or are on track to receive a Silver Standard certificate, meaning they meet essential criteria, or a Gold Standard, meaning they meet the optimum level. The standards include:

- Waiting and examination rooms appropriate for cats.
- Suitable equipment, including anesthesia and X-ray machines.
- At least one cat advocate, a knowledgeable professional who ensures that cats' care is guided by feline-focused standards.
- One veterinarian who is an association member.

A veterinary practice can provide beneficial services beyond simply treating cats when they're sick or having an emergency, the association says. "By



The American Association of Feline Practitioners recognizes veterinary practices with staff members trained in handling cats in a gentle, empathetic and caring manner.

carefully advising you on unique feline needs in areas such as nutrition, routine checkups, environmental enrichment, behavior and other essential issues, your skilled CFP team can help your cat to be healthy and happy."

### Extensive pet food recall

Natura Pet Products has voluntarily recalled all Innova, California Natural, EVO, Healthwise, Mother Nature and Karma dry pet food and biscuit/bar/treats with expiration dates before June 10, 2014. The foods, intended for dogs, cats and ferrets, are sold online and through veterinary clinics and pet food stores in the U.S. and Canada.

"We made this decision in part due to a single positive salmonella test by the FDA," the company says. "Normally, this would have resulted in retrieval of product manufactured over just a few days. However, we are taking the additional precautionary measure to recall all products in the marketplace. Our first priority is the well-being of the pets we serve."

For information on requesting replacement vouchers or refunds: www.naturapet.com/about/contact-us or (800) 224-6123. •

## Quick Action at Home Can Stop the Growth of Hot Spots

Untreated, they can become infected, and deep infections can result in scarring

Within hours, you notice that your cat has developed a red, raw, damp, hairless spot and it's spreading. It looks like a scrape you'd get falling off your bike. The likely diagnosis: a hot spot.

Cats with underlying skin diseases — usually allergies — are candidates for quickly developing hot-spot-type lesions, says dermatologist William H. Miller, VMD, Medical Director of the Companion Animal Hospital at the Cornell University College of Veterinary Medicine. Allergic animals feel itchy but may focus on a particular spot as they lick, rub, scratch, and bite, and in the process can pull out fur. The bare patch can quickly grow in size. What to do?

"The lesion usually is uncomfortable," Dr. Miller says, "so not treating it causes needless discomfort. If the lesion isn't treated, it can become infected and deep infections of the skin can cause scarring."

A hot spot treated within the first six hours after it appears can be resolved this way, Dr. Miller says:

- Clip the hair in the region so a sticky mat does not form.
- Wash the area with a cleansing solution or dab it well with cotton soaked in antiseptic solution.
- If advised by your cat's veterinarian, treat the spot with a thin layer of topical steroid cream. Some pets are so tender in the area that oral steroids or pain medications are prescribed.

Any condition that causes sudden, intense itchiness or pain can trigger a hot spot, which is generally the same thickness as the surrounding skin. The lesion is damp from serum leaking from the broken skin. "Fortunately, true hot

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

Hot spots differ from acute moist folliculitis and furunculosis where the raw skin is thicker than the surrounding skin, Dr. Miller says. Small raised skin bumps or even pus-filled bumps are seen surrounding the sore when the area is clipped. "Many cases of 'hot spots' in long-coated cats are actually this," Dr. Miller says, adding that owners might not notice the cat's pre-existing bacterial disease because it's hidden by the long coat. "Bacterial infections are itchy in animals and it's not uncommon for an animal with an infection to suddenly attack one infected area because the itchiness there becomes intolerable."

Prevention Tips. If fleas or ticks trigger hot spots in your cat, try a different form of flea and tick control, such as a monthly preventive sold at veterinary clinics. If poor grooming is a problem, step it up. Brush your cat weekly, and do it more often during shedding season to get rid of excess dead hair, says the American Animal Hospital Association's website (HealthyPet.com).

Regular brushing removes dirt and spreads natural oils throughout the coat, preventing tangles. If your cat doesn't like to be brushed, ease him into it. Give him a small treat after each short brush stroke. Gradually over several sessions, lengthen the brush strokes and brushing time.

On the bright side, "A hot spot has a cause," Dr. Miller says, "and if that cause is identified, it should be corrected."



A study of medical records of 1,407 cats diagnosed with skin problems at Cornell's teaching hospital found that Himalayans were much more likely than other cats to have dermatological disease.

### THE MOST VULNERABLE BREED

When Cornell dermatologist William H. Miller, VMD, and his colleagues researched the medical records of 1,407 cats with dermatologic diagnoses made at the college's teaching hospital from 1988 to 2003, they saw a pattern: Himalayan cats were much more likely than other cats to be diagnosed with a skin disease. The reason for the high frequency in Himalayan cats is unknown but probably related to breeding practices that can increase the frequency of genetically-influenced diseases like allergy.

According to their study published in April 2013 in the Journal of Feline Medicine and Surgery, the most common diagnoses were allergies (inhalant or environmental) and bacterial folliculitis/furunculosis.

"The high frequency of allergic diseases not only shows that allergies are fairly common in the cat, but that they are also frustrating to manage," Dr. Miller says. "Allergies are forever, which means they have to be treated forever. Many of these cases are referred to specialists so that the cat receives the most up-to-date treatments."

## When a Marauding Bee Strikes

Your first step is to remove the stinger to stop the spread of poison in the body

Cats, even those who live strictly indoors, are never completely safe from venomous insects. All it takes is a wayward bee or wasp to slip through an open door or window and catch your cat's attention. His innate prey drive can kick into gear as he leaps and tries to swat and eat the flying insect. In reaction, the bee delivers a painful sting.

"Most bee or wasp stings occur on a cat's front paw or face," says Elisa Mazzaferro, DVM, Ph.D., who specializes in emergency and critical care at the Cornell University Veterinary Specialists Center in Stamford, Conn.

If your cat does get stung, don't panic. In most instances, mild swelling or tenderness will develop at the sting site. Your first step is to remove the stinger as quickly as possible to slow the spread of venom in your cat's body. The stinger, which combines a poison sac with sharp lancets that deliver the venom, can pump it into a cat for up to three minutes after being separated from the bee, Dr. Mazzaferro says.

If the stinger is visible in the coat, use a credit card to scrape it out. Never try to squeeze the stinger out with tweezers because the venom sac may rupture, further exposing your cat to venom. Try to keep your cat quiet and calm, and apply a cool compress — a wet washcloth wrung of excess water — to the sting site to reduce swelling. "Do not use icy cold compress ice wrapped in a towel because the

ing. "Do not use icy cold compresses or ice wrapped in a towel because they can cause the pet to shiver — stick with cool compresses," Dr. Mazzaferro says.

OTC Remedies. Monitor your cat and contact his veterinarian if the swelling grows and spreads. Most likely, you'll be advised to give an over-the-counter antihistamine. Select one that contains only diphenhydramine, such as Benadryl. Keep the medication in your pet first-aid kit to be prepared for such an emergency. Ask the veterinarian for the correct dose for your cat's weight. Some OTC products for people contain acetaminophen, a commonly used pain reliever that can be



Local gardening experts can advise on flowers, fruit and vegetables that won't attract bees in your yard.

toxic to cats. Others may contain xylitol, which has been shown to cause liver failure in pets. Still others may contain cherry flavoring and are meant for children, not pets, who do not like the flavor.

**Going Into Shock.** Some cats, like people, are extremely allergic to insect bites. The area around the sting site balloons in size, and within five to 10 minutes, the gums change from pink to white. Cats can start vomiting and drooling, have difficulty breathing, become confused, and go into anaphylactic shock. They can die if they do not receive immediate veterinary care.

Taking a pet first-aid class can teach you the steps to take when minutes count and the best way to stabilize your cat to transport him to the veterinary clinic. Dr. Mazzaferro highly recommends that you call the clinic en route so that the veterinary team can have an exam room ready when you arrive.

Cats with severe reactions to insect stings often require treatment with IV fluids to prevent shock. Veterinarians administer steroids that act as anti-inflammatory agents and antihistamine injections to reduce the swelling. Expect your cat to remain under supervised care at the clinic for one to three days until his veterinarian says he's healthy enough to return home.

### ATTRACTING BUTTERFLIES, NOT BEES IN THE GARDEN

If you love to garden and have a cat who has access to your backyard — supervised on leash and harness — be sure to select flowers, such as red roses, zinnias and jasmine, that attract butterflies more often than bees.

That's the advice from Judy Macomber, a master gardener from Vista, Calif.

Many fruits, vegetables and flowers rely on the pollinating power of bees to thrive. Consult your county extension office or a master gardener for safe garden choices for your cat to reduce the incoming traffic of bees.

Again, with your cat on leash and harness, steer him away from ground covers, especially during sunny hours when bees gather nectar, says Elisa Mazzaferro, DVM, Ph.D., DACVEC, at the Cornell University Veterinary Specialists Center in Stamford, Conn.

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### TEAMWORK ...

(continued from cover)

medicine. "We discovered that Dave's blood was not clotting, and she was suffering from severe shock and anemia. We needed to give her several blood transfusions."

Dave spent several lifesaving days at CUVS. Its 12 specialists and more than 50 staff members use the latest scientific advances in surgery, cardiology, critical care, internal medicine, ophthalmology, oncology, diagnostic imaging and noninvasive procedures. In cases such as Dave's, specialists

use a state-of-the-art thromboelastography machine that assesses the animal's overall clotting ability. Conventional laboratory equipment provides information on only some aspects of blood clotting.

"We are probably one of 10 or 15 veterinary institutes in the country with this type of machine," Dr. Hackner says. "It's new to medical technol-



Specialists, including Dr. Susan Hackner, used a state-of-the-art thromboelastography machine to assess Dave's blood clotting ability.

ogy and gives us significantly more information on overall clotting that allows better diagnosis and more informed treatment decisions."

Affiliated with the Cornell University College of Veterinary Medicine based in Ithaca, N.Y., CUVS opened its doors in 2011. "Thanks to our cutting-edge medical procedures and team approach to care, many animals

like Dave who wouldn't have made it 15 years ago are now pulling through," says Dr. Hackner. "We are dedicated to open communication with everyone the patient's family, their primary care veterinarian and all the specialists and staff at CUVS. We ensure that everyone is working together seamlessly, that the pet's family is an educated and informed member of the medical team and that the patient has the best possible chance for success."

Courageous Companions. Dave

joined about 30 former CUVS patients who were named Courageous Companions by the staff at a special celebration at the hospital. "It was an intimate reunion with some of our favorite patients who were incredibly sick and not expected to survive, but did so despite all the odds," says Dr. Hackner. "Our staff became quite attached to these animals and many come back for visits. They remind us that extraordinary recoveries are possible and are becoming more the norm for us here."

Loomis was gratified to see so many healthy pets and happy owners. "The whole time Dave was at the hospital, the doctors were in constant contact with us on the phone. They saved her life. Without a doubt, if there is a serious issue with a pet, CUVS is the place to go for care."

Another cat in attendance was Fluff, a now 1-year-old, cream-colored Burmese. Late last year, Fluff arrived at CUVS at about half the weight of her littermates, extremely lethargic and suffering from chronic constipation. Fluff was so critical, says her owner, Kirstin Gard of Darien, Conn., that her veterinarian recommended that she be euthanized because a cause could not be pinpointed and treatment was not working. "I just

Dave's blood was not clotting, and she suffered from severe shock and anemia, requiring several blood transfusions.



couldn't put her down and decided to take her to CUVS to see what they had to say," Gard recalls.

It turned out that Fluff suffered from a very rare condition known as congenital hypothyroidism. This potentially fatal disease prevents the thyroid gland from producing vital hormones for growth, function and metabolism. Elisa Mazzaferro, DVM, Ph.D., a specialist in emergency-critical care, was the first to examine Fluff.

Acting Like a Kitten. "I looked inside her little mouth and noticed that none of her teeth had erupted through the gums," she says. "I was reminded of reports I had read of these congenital endocrine anomalies. We tested her thyroid function and it was almost non-existent. I immediately started thyroid supplementation and within a week or so, her owner was telling me

that Fluff was running up the stairs and acting like a rambunctious kitten."

Congenital hypothyroidism is so uncommon in cats that most veterinarians never see a case during their careers, Dr. Mazzaferro says. Once receiving thyroid supplements, Fluff



To learn more about Cornell University Veterinary Specialists, please call (203) 595-2777 or visit www.cuvs.org.

quickly grew and is now at a healthy size and weight for her breed.

"She is a beautiful kitty who is strong-minded, fearless but sweet tempered," Gard says. "She needs to be on thyroid medicine for the rest of her life, but that's fine by me. We feel so lucky to have her healthy and that we live only about 10 minutes away from a place of this caliber."

Dr. Mazzaferro says that working at CUVS often puts the talents of the entire staff to the test to save the lives of animals. "Our job is to provide the best quality care we can at any moment. No day here is the same. The other day, we had multiple critical emergencies simultaneously. The coordination of the team was amazing. One of the sickest patients was a cat who arrested several times and was successfully resuscitated. She was sitting up and grooming herself later that night."

### BEHAVIOR

### STRANGER ... (continued from cover)

the trait "friendliness toward humans" was identified disproportionately in off-spring of the friendlier of two fathers. Of course, the mother contributes, too, both genetically and environmentally, but the sires who never saw the kittens also influenced them.

Early handling by many different types of people, both children and adults, can help, but only if it occurs during the socialization period, when kittens learn to make attachments to people and to other cats. The period is short, beginning at 2 weeks and ending at 7. In one study, kittens handled for five minutes each day until they were 6 weeks old showed less fear of strangers and unusual or new objects than kittens who weren't handled. But by the time most people get a kitten at 8 weeks, Dr. Houpt says, it's too late for socialization to make much difference.

Unfortunately, the problem doesn't have a simple solution. Fraidy cats are



**Hiding under the bed** is a favorite refuge for a cat fearful of strangers. Providing an entire safe room for him would be even better.

most often found hiding under the bed, and that's generally the best place to leave them. Set up a safe room where the cat can feel assured that strangers won't invade his territory. Jones took Scout's belongings upstairs to her bedroom so she could have a cozy, comfortable hideaway where she felt secure. The next morning, she sat with Scout until she started eating. By

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the third and final day with new visitors, Scout felt confident enough to sit on the stairs and watch them for a few minutes. She expresses her fear of strangers by hiding and sleeping more than usual. Other cats may show their anxiety by:

- Behaving aggressively, hissing and, if cornered, even scratching or biting.
- Eliminating outside the litter box.
- Urinating on or spraying items that belong to their owner, such as clothing or bedding. They're not being spiteful. On the contrary, they're helping themselves feel comfortable by putting their scent onto something carrying the scent of a familiar person.

You can't turn a fearful cat into a social butterfly, but you can take steps to help him feel relaxed in the presence of others. Start by providing a guest-free refuge. Then use desensitization and counter conditioning to reduce the cat's fear and help him to be more accepting of strangers in the home.

Both training methods use gradual exposure to a negative stimulus to change the cat's association to a positive one. Desensitization involves exposure to a stimulus at such low intensity that the cat does not respond. Gradually the strength of the stimulus is increased. Counter conditioning is teaching the cat a behavior incompatible with aggression, such as playing

with a toy or lying down or simply sitting watching the owner.

Catnip Can Help. If a newcomer will be around for the long term — a new spouse or a family member who will be a frequent visitor — have that person deliver the cat's meals or offer a favorite toy or treat so that the cat associates the newcomer with good things. He should let the cat approach, however, and not attempt to pet him. Offer catnip to help the cat relax in the person's presence as well as to stimulate the appetite if necessary.

Rather than approaching the cat with treats directly, the person should look away while tossing treats in the cat's direction. If the favored toy is a large peacock feather or a fishing pole lure, have the person dangle it in the cat's direction, again without giving the cat overt attention. Take advantage of the times when your cat is most relaxed or most interested in play for the newcomer to interact. Usually, that's after meals or at certain times of the day — early morning and late at night, Dr. Houpt says.

Be sure to keep the household routine so the cat remains comfortable. A stressed cat is more likely to respond to a not-so-clean litter box by urinating or defecating outside the box. Don't give your cat any reason to be more unhappy than he already is.

The worst thing you can do, Dr. Houpt says, is to pull the cat from un-



Early handling by children and adults can help encourage friendliness in kittens, but only if it occurs between 2 and 7 weeks of age, when they learn to make attachments to people and other cats.

derneath the bed and plop him onto a lap with the admonition to "be nice to Aunt Betsy." There's no good ending to that situation.

Provide Distractions. Instead, when you expect visitors, put your cat in his safe room with access to a litter box, food and water (well separated from the litter box), and toys or other distractions such as a video with birds or fish, or a window seat so he can look outside. Enter the room only at specific times to deliver food, scoop the litter box and give him some playtime or attention. That way, your cat will know what to expect and won't be afraid of any close encounters of the stranger kind.

Medication usually isn't necessary unless the cat is not responding to the suggestions given above and the visitor is going to be a permanent fixture in the household. Psychoactive medication without sedation can help and your veterinarian will be able to prescribe the appropriate one.

If you're the stranger and the scorned party, don't take it personally. A fearful cat doesn't necessarily dislike you; he's simply genetically incapable of responding with immediate affection. He may just need time.

### **HOW TO ASSESS SOCIABILTY**

Studies have shown that cats typically fall into one of three personality types when they first encounter people: initiative/friendly, reserved/friendly and rebuffing/unfriendly. Some have even been found to have a "resistant temperament" to socialization.

Fortunately, many cats are outgoing and sociable. If you enjoy having a cat who will interact readily with family and visitors, look for one with that type of temperament. The cat who approaches without hesitation or rolls over to show you his abdomen will enjoy learning tricks and showing off for your guests.

If you are choosing from a litter of kittens, ask where and how they were raised. Kittens who grow up half-wild in the backyard aren't good candidates for the job of feline greeter and impresario. It's best to get one who has been in a home from Day One, with lots of handling by different people.



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 ...

∜ BITING ⊹

CONGESTIVE
HEART FAILURE

\*

FINICKY EATERS

BEFORE AND AFTER SURGERY

\*

\*

I live in a three-room apartment with three beautiful, adorable kitties. I have two ionic air cleaners, a large one next to my kitties' litter box and a smaller one in the living/dining/kitchen area. There is a warning on them not to breathe the air that comes out of them. Is there any potential for harm to my beloved kitties from these units?

I understand why you may want to use these devices for cleaning the air with three kitties in the house, and you are certainly not alone in doing this. Although kitties (and their food and waste) smell great to me, households with cats can sometimes generate odors that some people find objectionable, and there are a number of ways that owners choose to deal with this. Ionic air cleaners are one of the newer technologies that have been developed to address air pollutants.

lonic air cleaners work by generating charged particles, or ions, that are dispersed into the environment. The theory is that these ions will attach to pollutant particles that are floating around in the air and, by virtue of their charge, cause the particles to either stick to surfaces (i.e., walls and furniture) or to other particles, causing them to settle on surfaces in the room.

In theory, these units, which are commonly portable, should work fairly well for pollutant particles; and there is evidence to suggest that in some cases, they may decrease the concentration of circulating pollutant particles in rooms in which they are used. This effectiveness appears to be very dependent upon the size of the pollutant particles; however, and to our knowledge, evidence that the use of these units results in a decrease in any particular disease process that is mediated by airborne particles (i.e., asthma, allergies) is lacking. These units are also not effective at decreasing gaseous pollution.

The potentially harmful effects of ionic air cleaners are the subject of debate. The primary concern is

that in the process of producing ions, the units produce small amounts of ozone. Ozone is a molecule composed of three oxygen atoms, and most people are familiar with the importance of atmospheric ozone in protecting the earth from the potentially damaging ultraviolet rays of the sun.

While the ozone layer in the atmosphere is beneficial to us all, ozone at ground level may cause irritation and damage to mucous membranes and respiratory tissues. This effect is dependent upon the concentration of ozone molecules in inhaled air, with greater potential for negative health impacts expected with higher concentrations of ozone. The amount of ozone produced by these units varies considerably, and definitive answers about the effects of ozone on health are still not available.

Having said this, however, it makes sense that the highest concentration of ozone associated with these units occurs in their immediate proximity, so recommendations to avoid directly breathing in air as it leaves them is good common sense. There is no proof that ionic air cleaners will harm your kitties, but there is also no proof that they cannot cause harm. Given the current status of our knowledge concerning this issue, decisions regarding the use of these units will likely remain a personal choice that balances their potentially harmful effects with their perceived effectiveness.

The U.S. Environmental Protection Agency has a website that addresses a number of issues regarding air purification, including effectiveness and the potentially harmful effects of the various methods of cleaning the air. Please see this link for additional information: www.epa.gov/iaq/pubs/residair.html.

In the interim, I think that if you are considering the continued use of ionic air cleaners, taking steps to assure that your kitties (and you) don't breathe in the air that is in close proximity to them is a good idea. •

-Best regards, Elizabeth

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