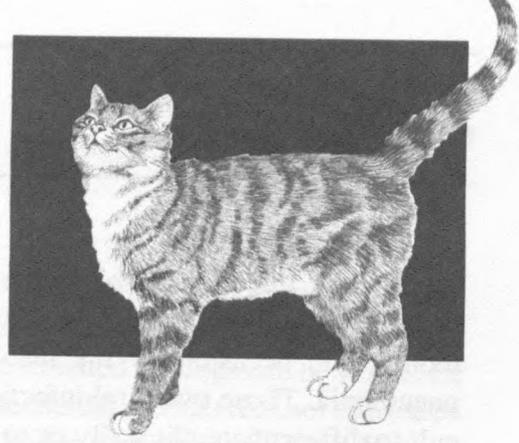

Perspectives On Cats

*A Newsletter for Cat Fanciers
From The Cornell Feline Health Center*

Fall 1996



Choosing and Caring for Your New Cat

In choosing a new kitten or cat, there are several things you should look for as indicators of good health and temperament. First of all, the cat should have clear, bright eyes with little or no tearing. The ears should be clean. A black tarlike discharge may indicate an ear-mite problem; a pus discharge may be a bacterial or yeast infection. The mouth and gums should be pink, with no evidence of ulcers or sores. Sneezing, runny eyes, or nasal discharge can indicate a respiratory virus infection. The hair coat should be glossy with no evidence of baldness, dry skin, dandruff, or external parasites. The animal should not appear too thin or have a protruding belly as this could indicate the presence of internal parasites or a medical disorder. If possible, make sure the cat has normal, well-formed feces.

The cat or kitten should be friendly and comfortable with people. A physically sound animal is very

active, bright, responsive, rambunctious, and eager to join in play. Beware of an animal that frequently runs and hides or sleeps more than normal. Once a kitten has been weaned from its mother (approximately at 8 weeks of age), it is ready for adoption. Before accepting the new cat, a prospective owner should ask questions about vaccinations, nutrition, parasite control, and grooming.

Vaccinations

Cats and kittens need to receive protection against deadly, infectious feline diseases. Therefore if you get a new kitten, it is important to find out what vaccinations it has been given and at what age. If you obtain an adult cat, you should know when it had its last booster vaccinations.

A kitten usually will receive a series of two to four vaccinations. The actual number varies, depending on the kitten's age at the first visit, whether the mother was vaccinated, and whether the kitten came from a potential disease situation (such as exposure to a sick animal).

Feline distemper, or feline panleukopenia, is a severe viral disease that is frequently fatal if untreated. Cats with distemper do not eat, are lethargic, and have a fever. The risk of contracting distemper can be virtually eliminated by appropriately vaccinating your cat.

The feline herpesvirus that causes rhinotracheitis and the feline calicivirus produce teary eyes and nasal discharge. Also, eye ulcers can occur with feline

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herpesvirus infections. The feline calicivirus can produce ulcerations on the tongue and roof of the mouth, and occasionally the infection will cause pneumonia. Those two viral infections can be difficult to differentiate clinically or to cure; many cats become chronic carriers of the viruses. Feline pneumonitis, caused by a Chlamydia organism, is a mild to severe respiratory and eye disease. Chlamydial vaccines are available, often in combination with other vaccines. Although vaccination does not provide complete protection, it will reduce the severity of the disease.

In general, the first vaccination to protect against diseases caused by these organisms is given around six to eight weeks of age, and other vaccinations are given at three- to four-week intervals until the kitten is twelve to sixteen weeks of age. That regime will help to protect a very high percentage of cats from **feline panleukopenia** (distemper) and **respiratory viruses** (the herpesvirus and the calicivirus). Occasionally, your veterinarian may start vaccinations at an earlier age depending upon the kitten's risk of

exposure to these infectious agents. Following initial vaccinations, boosters should be given regularly to keep the cat protected.

Vaccines can help protect your cat against the **feline leukemia virus** (FeLV). The kitten should be tested before vaccinating it, since the vaccine will not provide protection if the kitten is already infected with the virus. If the test is negative for FeLV, the kitten should be vaccinated twice starting at eight to ten weeks of age, with the second vaccine dose given three to four weeks later. Your cat should receive annual revaccinations ("booster" vaccinations) against FeLV. Since the FeLV vaccines will not protect all cats, your veterinarians will discuss additional ways to help prevent infection.

Feline infectious peritonitis (FIP) is caused by a coronavirus. The first FIP vaccine was introduced in 1991. The vaccine is administered intranasally to cats at 16 weeks of age, with boosters in three to four weeks, and then yearly. Cats in multiple cat facilities have a much greater risk of developing FIP than most household cats. If used appropriately and in conjunction with proper management, this vaccine has been found helpful in reducing the incidence of FIP in certain multiple cat environments. If your cat resides in a high-risk environment, you should discuss the vaccine with your veterinarian.

Feline immunodeficiency virus (FIV) is a feline virus that affects the immune system, similar to human AIDS. There are diagnostic tests available to determine if a cat is infected with the virus. Usually it is advisable to test after the kitten is four months or older to obtain the most accurate test results.

Your cat should be vaccinated against **rabies**. The first vaccine should be given at age twelve to sixteen weeks, followed by booster shots.

Intestinal Parasites

Intestinal parasites can be worm-like organisms (e.g., roundworms, hookworms or tapeworms) or microscopic organisms called protozoa (e.g., *Toxoplasma*,

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The ultimate purpose of the Cornell Feline Health Center is to improve the health of cats everywhere, by developing methods to prevent or cure feline diseases, and by providing continuing education to veterinarians and cat owners. All contributions are tax-deductible.

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Giardia). Intestinal parasites deprive the infected cat of important nutrition, causing weakness and susceptibility to viral or bacterial infections. Therefore, keeping your cat free of parasites is important for its long-term health.

Intestinal parasites can be diagnosed by having a veterinarian analyze a fecal sample. Occasionally, an owner may see an intestinal parasite in vomit or in feces that resembles a white, threadlike worm, or the parasite may resemble a rice grain near the cat's tail. If the cat does have intestinal parasites, proper medication should be obtained from the veterinarian. A fecal sample should be checked after treatment to ensure that the parasites have been eliminated. Because many of the intestinal parasites can also infect human beings, have your cat checked at least annually for intestinal parasites.

External Parasites

External parasites include a variety of small to microscopic arthropods that derive their nutrients from the cat's blood, tissue fluids or skin cells. Fleas, ticks, lice, fly larvae and mites are external parasites that can be source of much irritation to a cat. External parasites cause the most common skin disorders of cats and help transmit other diseases (e.g., bubonic plague, hemobartonella, Lyme disease). Common signs of external parasitism include intense itching, red crusty lesions or scaly skin. Your veterinarian can provide effective treatments and control methods for feline external parasites.

Fleas are the most common external parasite of cats, and thus deserve additional attention. Fleas are small brownish insects that are wingless, but are powerful jumpers. Although fleas are small they are visible with the naked eye. Adult fleas suck blood from the host animal, and a heavy infestation can cause anemia. In the process of sucking the blood, the flea's saliva enters the cat's skin at the bite site. Some cats are allergic to the flea's saliva resulting in a condition called flea-bite hypersensitivity. Effective control of flea infestations requires simultaneous

treatment of the cat and its environment. Use products that are specifically formulated for use on cats. (Flea products formulated for dogs can be very toxic to cats.) Most insecticidal products cannot be used on kittens less than two to three months of age. Finally, do not use insecticides from the same class (e.g. organophosphates) in different forms on the cat or in the environment, because of cumulative toxic effects.

Nutrition

What to feed, how much to feed, and how often to feed are common concerns of first-time cat owners. First, you should find out what the new cat has been eating. Even if you don't expect to stay with that diet, you should continue feeding it some of its old foods as you gradually switch it to a different diet. Whether you feed dry, canned, or semimoist food, be sure to purchase a product that conforms to the recommendations of the Association of American Feed Control Officials (AAFCO), preferably by animal-feeding trials.

Never give more than 5 to 10 percent of the cat's diet in the form of table scraps. Remember that raw meat may be a source of parasites (*Toxoplasma gondii*) and bacteria. If you feed a diet that meets the AAFCO standards you can be assured your cat is receiving an adequate supply of vitamins and minerals in the diet. Therefore, the use of vitamin and mineral supplements is unnecessary. The addition of a supplement without a veterinarian's approval may actually harm your cat.

General Grooming Hints

Grooming is much easier if you begin doing it when your cat is young. The cat will grow to accept grooming as a pleasant, normal routine rather than as a desperation-based chore. A good brush or a steel comb is a necessity for any cat owner. By brushing or combing your cat regularly, you can keep its hair coat clean, shiny, and sleek. The cat will also have fewer problems with hair balls accumulating in the stomach.

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A second necessity for any cat owner is a good set of nail clippers. Trimming the nails regularly will help eliminate broken claws and decrease the possibility of wounds caused by neglected nails growing into the pad of the foot and abscessing. Again, if you start that routine when the cat is young, you will find the task easier as it gets older.

Spaying or Neutering

Traditionally, cats have been spayed or neutered at six months of age or older. However, many veterinarians recommend performing the procedure at an earlier age.

Spaying (ovariohysterectomy) is the surgical removal of the female reproductive organs (ovaries, oviducts, uterus). It is a recommended procedure for all female cats that will not be used in a breeding program. The removal of the reproductive organs eliminates the behaviors associated with the heat (estrus) cycle (i.e., kneading, howling, restlessness); greatly reduces the incidence of mammary cancer; and helps to decrease overpopulation.

Neutering (castration) is the surgical removal of parts of the male reproductive organs (testes, epididymis, parts of the vas deferens). The benefits, besides preventing impregnation of a female cat, include the reduction of excessive aggressiveness, urine spraying, and the pungent odor of intact-male urine.

In Sickness and in Health

A sick animal often has a dull and patchy hair coat, because the skin is one of the first systems to be affected by disease. Another sign of illness is a lack of appetite. Persistent and severe vomiting (with or without diarrhea) and prolonged diarrhea alone are sure signs of illness. Red, watery eyes, which may be accompanied by nasal discharge or sneezing, also can indicate problems. Straining to urinate, bloody urine, or frequent urination signify disease. Any swelling that appears rapidly or continues to increase in size over time is a cause for concern.

Injuries such as those caused by car accidents, falls, being bitten by another animal, or being shut in the door are all potential hazards for cats and usually require veterinary treatment. Those injuries can be greatly reduced by keeping your cat indoors. If you want your cat to enjoy the outdoors, train it to a harness and leash.

In short, use good judgment regarding your cat's health. When in doubt, a simple telephone call to the veterinarian can usually determine if your cat should be examined. ■

Feline Health Center Funds New Studies

Faculty and clinicians who are participants of the Feline Health Center applied this summer for funding of their feline studies. Grant awards were given to those projects that could be most beneficial to the veterinary practice of feline medicine. Three awards were granted by the Center—

Examination of Blood Pressure in Cats with Cardiac Disease (Dr. Anna Gelzer, Dr. N. Sydney Moise)

Kitten Temperament Test: Value as a Predictor of Adult Cat Behavior (Dr. Katherine A. Houpt, Dr. Soraya V. Juarbe-Diaz)

Elicitation of Infection of Humoral Immune Response by Direct Inoculation with FIV Proviral DNA Clones (Dr. Margaret C. Barr, Dr. Roger J. Avery)

The projects are funded by the generous contributions made by veterinarians, alumni, cat owners, and cat breeders. Progress reports on these and other projects will be published in future newsletters. ■

Mail Bag

What type of risks are associated with the FIP (feline infectious peritonitis) vaccine? Can the vaccine trigger the onset of the disease?—B.S., New York

Primucell-FIP has been on the market since late 1991 and has proven to be a safe vaccine. There is no evidence from either laboratory or field studies that the vaccine is capable of causing FIP. Depending on the nature of the study, vaccine efficacy ranges from 0 to 75 percent if administered to healthy cats over 16 weeks of age prior to exposure to a coronavirus.

There is no absolute right or wrong decision regarding the vaccine's use. FIP is a fairly uncommon disease in the general cat population, and given the vaccine's limited efficacy, its routine use is probably not justified. If a cat has been exposed to a coronavirus, vaccination does not offer any additional protection against FIP. However, there are those that argue that regardless of the vaccine's limited efficacy and uncommon appearance of FIP, vaccination should still be strongly encouraged because of the routinely fatal outcome of the disease. The decision to vaccinate or not to vaccinate must be made after weighing all of these factors.

I am a cat breeder and I have two concerns regarding the health of the feline respiratory system: (1) What are the known or possible irritants (i.e., pollen, smoke) which may affect the health of the feline respiratory system? (2) How dangerous are the new clumping litters to a cat's respiratory system?—N.G., Pennsylvania

Virtually any airborne particle could have adverse effects on health. For a healthy cat the inhalation of various pollens, dust or other particles may be inconsequential; however, if the cat's respiratory system is compromised due to inhalant allergies, then airborne particles could create respiratory distress. Fortunately, most cats are not prone to bronchial disease. Routine housekeeping is a sufficient preventive measure in most cases.

Currently, there are no confirmed health problems associated with clumping litters. However, for neonatal kittens or cats recovering from surgery you may want to select a newspaper litter or use shredded newspapers. Most manufacturers of clumping litters recommend waiting until a kitten is at least 6 or 7 weeks old before placing clumping litter in the litter box.

I lost one of my Havana Brown cats (almost 10 years old) to cardiomyopathy this spring. Could it be re-

I am unaware of any link between FIP and any form of cardiomyopathy—either the primary forms (idiopathic dilated cardiomyopathy,

(continued on next page)

lated to feline infectious peritonitis? Previously I had lost her two litter mates before they reached one year of age to FIP, the dry form.—L.Q., New York

I have a 13-year-old diabetic cat. Recently blood tests revealed that he also has kidney disease. He is also exhibiting signs of old age, particularly with hind leg weakness. I am interested in any information about physical therapy, diet, etc., that might be helpful to my aging cat.—R.S., Kentucky

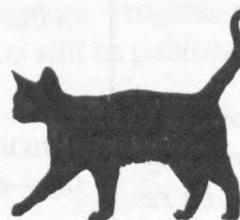
idiopathic hypertrophic cardiomyopathy, idiopathic restrictive cardiomyopathy, or intermediate cardiomyopathies) or the secondary forms resulting from hyperthyroidism, taurine deficiency, or some rare hormone abnormalities. However, a few cats may be genetically predisposed to develop certain forms of cardiomyopathy, and recently it has been shown that some cats may have a genetic predisposition to develop FIP after exposure to a feline coronavirus. The genetic mechanisms involved are likely different in each case, and there is no evidence that if a cat is predisposed to cardiomyopathy, then he/she is also predisposed to FIP. Research continues in both areas.

Your cat's hind leg weakness could be from old age, but another potential cause is poorly controlled diabetes. If the typical signs of diabetes persist—increased thirst, urination, appetite, and weight loss—then he could be experiencing diabetic neuropathy. If he is not demonstrating these signs, then diabetic neuropathy is unlikely to be the cause.

No additional physical therapy should be necessary; however, engaging in regular play activity can be stimulating. He will let you know when he has had enough.

It is unclear as to the most appropriate dietary management for certain disease conditions in cats. In general, high-fiber diets are recommended for diabetic cats, but many cats can be regulated without diet modification. Some cats with chronic renal failure benefit from a protein and phosphorus restricted diet. Either diet is available on a commercial basis through your veterinarian. ■

If you have a cat health question, please send your question to: Cornell Feline Health Center, Att: Mail Bag, VRT 7018, College of Veterinary Medicine, Ithaca, NY 14853. The answer will appear in this column.



Honor Roll

We gratefully acknowledge the following who have contributed \$100 or more during the past three months to support the Center's work (see page 4 for new projects funded by contributions). We also extend a thank you to those individuals who also contributed to our programs, but who are not listed on the Honor Roll. (Contributions to the Cornell Feline Health Center are tax deductible.)

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In the News...

Developing a Genetic-based FeLV Test

Feline leukemia virus (FeLV) is a highly contagious disease. Since its discovery in 1964, it has been a leading cause of cat deaths. It is estimated 1 percent to 3 percent of cats in the United States are affected by FeLV.

Dr. James P. Thompson, at the University of Florida, is investigating the possibility of a genetic based test for FeLV in a Morris Animal Foundation-funded study. According to Dr. Thompson, recent studies suggest that genetic alterations of FeLV can occur during the course of the infection resulting in progression of FeLV infection.

The study uses a polymerase chain reaction (PCR) genetic test. He believes that this sensitive test may pinpoint latent FeLV and variant strains of the virus. The test will also provide information to determine if genetic alterations occur during the course of FeLV infection. Investigators are comparing the strains of FeLV with the symptoms that infected cats display

throughout the course of the disease. Five hundred cats at the veterinary Medical Teaching Hospital at the University of Florida will be screened during this 3-year study. (*Resource: Animal News, Morris Animal Foundation, Volume II, 1996*) ■

Important Notice

Our offices will be closed for the Thanksgiving Holiday from November 28 through December 1.



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