HEALTH TIPS

PLEASE NOTE: We are NOT veterinarians and this information is not intended to replace the advice and prescriptions of a veterinarian!

PROBLEM SOLVERS | PREVENTION TIPS | DISEASES | FIP

PROBLEM SOLVERS

LITTERBOX PROBLEMS | DIARRHEA | ALLERGIES TO CATS

Litter box problems - use Dr. Elsey's Kitten Attract Cat Litter (found in most pet stores), put down litter boxes in private places and at least one in each room, number of litter boxes should be number of cats plus one, use Simple Solution Cat Stain & Odor Remover or Urine Off Odor and Stain Remover for Cats to clean up accidents (only use Urine Off on hard surfaces), put food bowls or more litter boxes where the cat is having accidents (they don't like to poo or pee where they eat, and they might need more than one litter box - don't forget, litter boxes can look just like another nice piece of furniture!), look for stressors such as another cat guarding the litter box, a "hissing" air freshener, or a lot of foot traffic near the litter box that might scare the cat away from it.

Investigative Cat Journalism 101 from Cat Behaviorist Jackson Galaxy talks about how to figure out WHY your cat is doing what they are so you can figure out what to do about it - check it out!

Diarrhea - take cat to the vet to check for parasites (coccidia, worms, giardia, Tritrichomonas foetus are the most common - links are to the proper treatments of each one). The cat might have a food allergy and if so, do a food elimination diet starting with a grain free food high in protein to see which food the cat is allergic to. Then use a single protein sources of food such as California Naturals. It also helps to give one to three tablespoons of plain cooked pumpkin or plain baked sweet potato either with or without food once or twice a day or add a half teaspoon of psyllium to their wet/canned food (never give dry psyllium!). Switching foods too quickly can cause diarrhea, as can any form of stress, such as moving to a new home, going to the vet, or any interruption of their daily routine.

Allergies to cats - if you are allergic to cats, but cannot part with your furry friend, talk to your doctor about appropriate allergy medications, wipe the cat down with a wet paper towel twice a day, vaccum thoroughly with a HEPA vacuum once a day, keep the cat out of your bedroom where you sleep, put HEPA air filters in your house (whole house types) and in your bedroom (room type), consider getting a spayed female

Siberian or an Abyssinian if you want a cat with less (not none!!) of the allergens (protein in the saliva).

Giving medications - Cornell University has a wonderful video with tips and ideas on how to give medications to your cat.

Helpful tips from cat vets - the American Association of Feline Practitioners has compiled tips to help you with your cat.

Have more than one diet for your multi-cat household? Here are some creative and practical tips on how to manage different diets.

LITTERBOX PROBLEMS | DIARRHEA | ALLERGIES TO CATS

If you have a problem with your cat that needs to be solved, just ask and we will do our best to answer, for free, no charge. We like to help and we learn by helping others, too. Sometimes the best answer is to go to your vet. If we have any ideas or experience with your cat's problem, we will point you toward some possible solutions.

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PREVENTION TIPS

NUTRITION | VACCINATION | WORMING & PARASITES

Nutrition - prevents kidney disease and diabetes due to poor diet - cats are obligate carnivores which means they must eat food high in protein and low in carbohydrates. They are often allergic to grains, especially corn and wheat. The best food for them is a high protein (minumum 40% protein on dry food and 10% on the side of canned food) and no grains food. Cat food manufacturers are slowly wising up to this specific nutritional need and there are many good choices of foods out there now.

For dry cat food we prefer <u>Young Again Cat Food</u> (online only), <u>Orijen</u>, and <u>Pinnacle</u> (found online and at specialty pet food stores). We also feed canned (our favorites are <u>Organics by Nature</u> Turkey & Liver and <u>Weruva</u> Paw Lickin Chicken) and raw (<u>Blue Ridge Beef</u> Kitten Mix with <u>Young Again Raw Food Supplement</u>; <u>Hare Today</u> is also a good source for raw food, but again a supplement to this raw food is very important).

It is vital that your cat gets enough Vitamin A and taurine, or they will have heart problems and go blind. All commercial foods such as the ones mentioned above have enough of these.

Here is a book on nutrition by a feline nutritionist, breeder, and vet: "Your Cat: Simple

New Secrets to a Longer, Stronger Life" by Elizabeth M. Hodgkins, D.V.M. Here is her

site which describes how to feed your cat for a longer life.

NUTRITION | VACCINATION | WORMING & PARASITES

Vaccination - modified live virus vaccines are safer than killed virus vaccines and are specifically recommended by the <u>American Association of Feline Practitioners</u> (Cat Vets). We use and recommend Merial Purevax 3-in-1 (or 4-in-1 with chlamydia).

If you get a kitten, make sure the last kitten booster is at 16 weeks old or older so the maternal antibodies the kitten gets from its mother during the first two days of life will not interfere with the vaccine. The boosters as adults should be at 12 months old, then every three years afterward until about 10 or so years old, then the vaccines will have done their job and are no longer needed.

Studies have shown that the vaccine works for 3 to 7 years at a time after the cat is an adult. Over-vaccinating is just as bad for the cat as not vaccinating enough.

Unless the cat is going to be an outside cat from a young age, the Feline Leukemia (FeLV) vaccine is not necessary. If you do get the FeLV vaccination for your cat, please ask for the recombinant Merial Purevax FeLV vaccination. There is a new injectable version that is less dangerous for your cat.

Likewise, rabies vaccines can be dangerous and have bad side effects. The **Merial Purevax rabies vaccine is the best** one. Rabies vaccines should be given around 4 months old (most local laws require this), but can be given as early as 3 months old (no younger!). After that, follow your local laws regarding rabies vaccination.

NUTRITION | VACCINATION | WORMING & PARASITES

Worming and parasites - ask your vet to worm your cat with Panacur (fenbendazole, which also treats giardia if given at twice the worming dose for 3-5 days) at your cat's yearly check-up (when the rabies vaccine can also be given).

The only treatment for TF is ronidazole given once a day at 30mg/kg (Please note: 1kg = 2.2lbs) Roadrunner Pharmacy is an excellent source for the ronidazole and the best method is giving them capsules, not the liquid, since it tastes very bitter and will make administering the treatment very difficult.

The best treatment for coccidia is ponazuril and our preferred prescription from our vet is 40mg/kg twice, a week apart (again, Roadrunner is an excellent source).

Worms are zoonotic (able to live in humans too), including tapeworms. Tapeworms come from fleas, so to eliminate several parasites at once, use Revolution drops for cats from your vet (or Rx from your vet to buy online if your vet will help you do that).

Revolution also kills ear mites, ticks, and heartworms.

Mosquitoes transmit heartworms, and although cats can usually fight off heartworms, some don't and heartworms kill cats, so that is yet another danger an outdoor cat faces. There are heartworm preventives for cats, such as the Revolution drops mentioned above

Heartworms are not transmissible to humans, but mites, fleas and ticks are. Giardia can be transmitted to humans, but coccidia and TF cannot. Parasites your cat can pick up and are zoonotic/transmissible to humans: toxoplasmosis, giardia, fleas, mites, ticks, roundworms, tapeworms, and ringworm (which is a skin fungus, not a worm). **The most likely parasites a human can get from a cat are fleas.** The others are much less likely to be transmitted to humans. Parasites your cat can get and are not zoonotic: coccidia, heartworms, TF (Tritrichomonas foetus). Your cat is much less likely to get a parasite if they are kept indoors only and treated once a year for parasites at their annual vet checkup.

NUTRITION | VACCINATION | WORMING & PARASITES

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DISEASES

HERPESVIRUS | CALICIVIRUS | PANLEUKOPENIA/DISTEMPER

Herpes virus (rhinotracheitis) - is one of the three viruses in the primary vaccinations as a kitten and boosters as an adult cat. Almost all cats in the U.S. have it, but almost all are able to suppress it so that there are no symptoms (researchers think it hides in the spinal cord near the neck, similar to chicken pox - think shingles later on in life - and human herpes virus). The main symptoms are sneezing and watery eyes, and sometimes severe infection in the eyes. There is a PCR DNA test that can confirm it. The best treatment is to reduce stress in the environment - a happy cat with a regular schedule is usually a healthier cat. Additionally, you can supplement with an amino acid given as a treat or mixed in their food - L-lysine. The easiest and least expensive lysine to give is Carlson Labs from LuckyVitamin.com, and get three jars at a time because the

shipping is the same and you get a price break when you buy three. There are also treatments for flare-ups.

If your cat has a serious eye infection due to herpesvirus go to your vet or to an eye specialist for cats and talk to them about giving your cat **famciclovir**, an oral antiviral drug you can get from your pharmacy (only if the symptoms are severe, usually prescribed at 125mg twice a day for an adult cat), and **cidofivir** (an antiviral eye drop used twice a day in each eye) if the symptoms persist for more than just a few days in the eyes or become severe. If cidofivir is prescribed, Roadrunner Pharmacy is a good choice, and if more than just a small amount is needed, buy three bottles for \$75 instead of one for \$50. The bottles are very tiny! Herpes is forever in cats too, but it can easily be controlled. If the eye is inflamed, **flurbiprofen** may also be prescribed, which you can get at your local human pharmacy.

HERPESVIRUS | CALICIVIRUS | PANLEUKOPENIA/DISTEMPER

<u>Calicivirus</u> - is also in the main vaccinations that cats get. Like with herpes virus, the symptoms (congested nose and throat, possibly sores in mouth and throat, sometimes a sore joint that presents as a limp) are lessened by getting a vaccination (similar to the flu vaccine for humans), but the vaccination does not prevent a herpes virus or a calici virus infection (or the flu in humans). The vaccine helps lessen symptoms and makes getting the disease less likely.

Unlike herpes virus, cats can completely fight off a calici virus infection. They can also get it again from another source or the same source. There is no known cure or treatment for calici virus other than antibiotics to prevent a secondary infection and supportive treatment (force feeding if necessary if they stop eating because they can't smell the food), but most cats fight it off successfully if they do get it.

If the cat is a carrier for calici virus (can't completely fight it off, continue to show symptoms and shed the virus), they are more prone to upper respiratory illness during their life. Immune boosters and good quality food can help. Some anti-virals may also help, such as **interferon**. Research is ongoing. It is not an easy virus to treat.

HERPESVIRUS | CALICIVIRUS | PANLEUKOPENIA/DISTEMPER

Panleukopenia - is the third of the three main all-in-one-shot vaccines that cats get starting as a kitten and boosters as adult cats, and is also called feline distemper. Its symptoms are diarrhea, fever, lethargy, vomiting, & loss of appetite, and can result in severe dehydration that needs immediate treatment. It is highly contagious and often fatal in non-vaccinated cats. Fortunately, the vaccine is 100% protective, if it is given at

least once, preferably two or three times at least two weeks apart as a kitten, with the last vaccination at 16 weeks old or older with a modified live virus vaccine such as Merial. Supportive treatment includes subcutaneous fluids and force-feeding until the kitten is better.

We recommend vaccinations at 8, 12, and 16 weeks old, and again at 12 months old and then every 3 years thereafter, per the <u>American Association of Feline Practitioners</u> vaccination guidelines.

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FIP

WET FORM DIAGNOSTICS | DRY FORM DIAGNOSTICS FIP INFORMATION PAGE FROM UNIVERSITY OF TENNESSEE'S DR. AL LEGENDRE

FIP (Feline Infections Peritonitis) - **is not contagious** (despite its old-fashioned name). It is almost always fatal, is a mutation of the cat "cold virus" coronavirus, and is a combination of genetics, stress, and the individual cat's immune system. Researchers worldwide are working in many directions toward finding a test or treatment for FIP. FIP is **not** caused by a "dirty cattery" or poor breeding practices (although there is a genetic component to it, the disease is so complex that the genetic component is thought to be at least three or four genes that interact in ways scientists still don't understand). It is not contagious to any other species, including humans, or even to any other cats who live with the cat affected by FIP. FIP is found in every breed of cat worldwide, including moggies aka domestic mixed breed cats aka alley cats. The wet form of FIP means the cat has basically no defense against the mutated virus and the average survival time is 9 days. The dry form of FIP means the cat has some defense against the FIPV virus (which there are more cases of in recent years, meaning that cats as a species are slowly putting up a defense to the virus) can take weeks, months or years until the cat dies of it (unless on the experimental treatment PI polyprenyl immunostimulant, then some of them can live good lives for years on the treatment and a couple have survived it and are healthy now without the treatment). There is no FIP test! A coronavirus test only tells you whether the original coronavirus or possibly FIP coronavirus (1-5% of all active coronavirus cases) is present. Here are the latest diagnostics protocols, wet FIP first, then dry FIP diagnostics (please give this

to your vet - I will be happy to provide scientific study sources for the vet if they are interested, contact me and ask for them):

WET FORM DIAGNOSTICS:

Wet FIP - distended belly with fluid, loss of muscle, bony look, or the fluid can also be in the chest cavity instead of the abdomen, or in both areas.

Can also be a mixed form with dry FIP or go back and forth between wet and dry FIP. The two forms are not mutually exclusive and may occur in the same patient, although usually as a transition from one form to the other. Some investigators therefore designate a third, "mixed" form.

Tests done: CBC, effusion fluid analysis, Rivalta test

CBC test results: look for High Total Protein above 7-8, High Globulin above 4.5-4.8 [Sparkes et al, 1994], [Pedersen 1995; Gunn-Moore et al, 1998], High Albumin to Globulin ratio 0.8 or more [Shelly et al, 1988; Rohrer et al, 1993; Hartmann et al, 2003] (0.8 means 92% chance of positive for FIP, A:G ratio below 0.8 means 61% chance cat does not have FIP [Hartmann et al, 2003]), low Lymphocytes below 1.8-2.5. Low albumin is associated with vasculitis (leaking blood vessels due to inflammatory destruction of blood vessels) which is seen in wet FIP [Hartmann et al, 2003.

If there is effusion, the most important diagnostic step is to sample the fluid, because tests on effusion have a much higher diagnostic value than tests that can be performed on blood. However, only about half of the cats with effusion suffer from FIP [Hirschberger et al, 1995]. Usually the protein content is very high (>35g/dl) and consistent with an exudate, whereas the cellular content is low (< 5000 nucleated cells/ml). Cytology of the effusion often has mostly macrophages and neutrophils.

Effusion fluid analysis results: High Protein in fluid greater than 3.5, High positive predictive value if albumin/globulin ratio is < 0.4 and a high negative predictive value if the ratio is > 0.8 [Shelly et al, 1988].

Rivalta test results: Rivalta test negative means 97% sure the cat does not have FIP and a positive result from the Rivalta test means there is an 86% chance the cat is positive for FIP [Hartmann et al, 2003]. Positive Rivalta test results can occur with bacterial

peritonitis or lymphoma. Those effusions, however, are usually easy to differentiate through macroscopic examination, cytology, and/or bacterial culture.

Rivalta Test - fill a 10ml test tube with 7-8 ml distilled water, add 1 drop of acetic acid (98%) and mix thoroughly. On the surface of this solution, carefully layer 1 drop of the effusion fluid. If the drop dissolves and the solution remains clear, the Rivalta test is negative. If the drop retains its shape, stays attached to the surface or slowly floats down to the bottom of the tube (drop- or jelly-fish-like), the Rivalta test is positive.

The only test that is 100% conclusive is Immunofluorescent Coronavirus Staining of the Effusion or of Tissue Biopsy (or Immunofluorescent Analysis - IFA). However, a negative is only 57% correct.

Immunofluorescent Coronavirus Staining of the Effusion:

In this test the effusive fluid is tested immunologically for presence of coronavirus using antibodies tagged with fluorescent dyes. In a study using a large number of cats, there were no false positives meaning that if this test is positive there is a 100% confirmation that the cat has FIP. Unfortunately, if the test is negative that does not mean the cat does not have FIP (only 57% of negatives did not have FIP).

Immunofluorescent Coronavirus Staining of a Tissue Biopsy
Most FIP cats are too sick for surgery, though sometimes flushing away the belly
effusion surgically provides a "rally" of improvement temporarily. A tissue sample is the
best method for confirming FIP as there are few conditions that create pyogranulomas
throughout the body but if regular biopsy is equivocal, tissues can be stained for the
presence of coronavirus and only in FIP will there be enough
coronavirus within macrophages for positive staining. A positive tissue stain is 100%
accurate in confirming FIP. However, a negative is only 57% correct.

If you do IFA from abdominal/pleural effusion and it shows FCoV antigen (+), then it is FIP. If the test comes back negative, it is a coin toss -- may, or may not be FIP, 57% correct.

The most trustworthy diagnostic method is immunostaining of a biopsied tissue/lesion. It is expensive and not always feasible.

DRY FORM DIAGNOSTICS:

Dry FIP - various symptoms but almost always are: lack of appetite, lethargy - lack of energy/vitality, and losing weight. Loss of muscle is also seen.

Can also be a mixed form with dry FIP or go back and forth between wet and dry FIP. The two forms are not mutually exclusive and may occur in the same patient, although usually as a transition from one form to the other. Some investigators therefore designate a third, "mixed" form.

Tests done: CBC - High Total Protein above 7-8, High Globulin above 4.5-4.8,

Both forms of FIP *can* also have: a high temperature - fever; uveitis - changes in the eye color, jaundice, anemia, diarrhea for over a week after treatment, upper respiratory infection for over a week after treatment, neurological symptoms such as loss of balance or loss of the ability to walk, CBC results that sometimes show up: high bilirubin in the absence of haemolysis and elevation of liver enzyme activity should raise the suspicion of FIP,], High a1-acid glycoprotein (AGP), a serum acute phase protein that is elevated in cats with FIP [Duthie et al, 1997; Paltrinieri, 2008], High serum AGP levels (>3 mg/ml) can support the diagnosis of FIP [Paltrinieri et al, 2007a] but is also seen just with coronavirus infections, which are almost always quite mild when not mutated into FIP virus.

Coronavirus antibody titres must be interpreted with extreme caution; it has been contended that more cats have died of false interpretation of FCoV antibody test results than of FIP [Pedersen, 1995a]. There is no "FIP antibody test", all that can be measured is antibodies again FCoV. The presence of antibodies does not indicate FIP and absence of antibodies does not exclude FIP. Low or medium titres do not rule out FIP and approximately 10% of the cats with clinically manifest FIP have negative results [Hartmann et al, 2003]. In cats with fulminant FIP, titres may decrease terminally [Pedersen, 1995a]. Very high titres can be of certain diagnostic value and increase the likelihood of FIP [Hartmann et al, 2003].

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