

THIS JUST IN

## Environmental Concerns: Clean Up After Your Dog

*Study finds dog waste impacts nature reserves*

A study published in the British Ecological Society journal *Ecological Solutions and Evidence* found that dogs being walked in nature reserves contribute a significant amount of nutrients to the environment through their feces and urine, which researchers warn could negatively impact local biodiversity.

Researchers at Ghent University in Belgium estimated that each year dog feces and urine add an average of 11 kilograms (kg), or 24.25 pounds (lbs), of nitrogen and 5 kg (11 lbs) of phosphorus per hectare (100 acres) to nature reserves near the city of Ghent. The researchers say the nutrients may be detrimental to biodiversity and ecosystem functioning.

The estimates for the amount of nitrogen are significant when compared to the total levels of nitrogen being added through fossil fuel emissions and agriculture, which range from 5 to 25 kg of nitrogen per hectare.

The researchers ask land managers to encourage visitors to remove their dogs' feces and call for leash use to be enforced more stringently. ■

De Frenne, P., et al. "Nutrient fertilization by dogs in periurban ecosystems." *Ecological Solutions and Evidence*, 2022; 3 (1) DOI: 10.1002/2688-8319.12128. *Science Daily*.

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## Disease, Fleas, and Ticks

### *Prevention is your only method of protection*

We hate finding fleas and ticks on our dogs for many reasons, ranging from allergies to home infestations. But many of us forget that these parasites also spread potentially deadly diseases to our dogs, ourselves, and other pets, too. If you're weighing the risks associated with skipping flea-and-tick control vs. the cost of these preventatives, read on. We think you'll find that those pricey monthly flea-and-tick-control products are a bargain.

### Flea Troubles

While tick-borne diseases like Lyme grab the headlines, fleas carry many diseases as well, from simple tapeworms to life-threatening plague. Common everyday fleas act as intermediate hosts for tapeworm, infecting your pet when the dog consumes the flea. Tapeworms are generally not life-threatening, but they aren't pleasant either. You may notice your dog dragging his anus on the rug as if he had anal-gland problems or you may find tiny segments that resemble white rice on fresh stool or hanging around his anus. These are tapeworm segments. And a heavy load of tapeworms could cause weight loss or diarrhea.

Luckily, tapeworms are generally easily treated by dosing with praziquantel, a medication found in some monthly flea-and-tick preventives such as Interceptor Plus and Sentinel Spectrum. Tapes also can be treated with just praziquantel (brand name Droncit), but unless you also target controlling the fleas themselves, the tapeworms can return.

Fleas also generously share harmful bacteria. Once your dog is infected, these bacteria move to intracellular locations on red blood cells, macrophages (important immune cells), and the cells lining blood vessels where they can hide from your dog's immune system and even antibiotics. When the bacteria leave the cells, they move throughout the body and can cause dangerous inflammation of the heart (endocarditis), recurrent fevers, ocular damage such as uveitis, and immune-mediated arthritis.

The bacterial disease bartonellosis is more common in cats than dogs (it's the bacteria known as "cat scratch fever" in human medicine). Luckily, it responds well to a combination of antibiotics, but treatment may be required for weeks to totally clear the infection.

Plague may be rare, but it is the most serious disease spread via flea bites and can be deadly to humans, dogs, cats, and other species (yes, the same plague that was called "Black Death" in the 14th century). The bacterium *Yersinia pestis* causes both bubonic plague with large abscesses and infection of lymph nodes as well as pneumonia. Dogs develop fevers, lose their appetite, and have swollen, painful lymph nodes.

Plague is endemic in the Southwestern United States. Diagnosis is done via examination of a

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Summer is a time to keep your whole family safe from parasitic infections.



# Put the Joy Back in a Car Ride

## Motion sickness makes everyone miserable

**M**otion sickness in dogs is so closely tied to fear and anxiety that it doesn't really matter which comes first. Dogs who get nauseated and vomit in the car frequently suffer anxiety when it comes to getting back in the car, as they remember the unpleasant experience. And dogs who are anxious in the car can work themselves up so much that they vomit.

It can be difficult to even tell the difference between signs of motion sickness and anxiety, as both include restlessness, panting, pacing, drooling, yawning, and lip licking. If you're seeing any of these signs, it's important to address the possibility of both motion sickness and car ride anxiety for your uncomfortable travel companion.

### Start Out Right

Slowly acclimating your new puppy or dog to the car can go a long way toward a lifetime of comfortable, confident traveling. Make the car a "happy place." Have your pup spend time in the car with you with the car off, and feed lots of treats for relaxed behavior. Eventually, start the car without moving it, rewarding the same behavior.

When you start moving the car, make short trips (like 30 to 60 seconds in the driveway) with similar rewards. Work your way up to longer trips. Slowly increasing travel time helps desensitize the dog's system to the motion that may cause nausea and allows for frequent, well-timed rewards for relaxed behavior.

### Combat the Nausea

Dogs who get sick in the car do better with an empty stomach. So, if you know you have travel planned, don't feed them for at least four hours before the ride. Cracking a window, even in winter, so the dog has fresh air may help. A half teaspoon of grated, fresh ginger given by mouth 30 minutes before the ride will settle some stomachs.

### Pharmaceutical Help

The first thing to try is the prescription medication maropitant (Cerenia by Zoetis). Cerenia is a safe, highly effective, centrally-acting antiemetic (anti-vomiting medication). It is FDA-approved for prevention of vomiting due to motion

sickness in dogs 16 weeks and older, and it has been a godsend. The dose should be given two hours before travel, and its effect lasts for 24 hours. It is non-sedating and has few, if any, side effects (mild hypersalivation is occasionally reported).

Antihistamines will sometimes help with carsickness because histamine receptors are involved in the process of nausea stimulating the vomiting center in the brain. Response to antihistamines is highly individual so if one doesn't work it is worth trying the others. Meclizine (available over-the-counter as Bonine) is a good first choice. Like Cerenia, it should be given a couple of hours before the motion and is dosed once a day. It can be mildly sedating and may cause dry mouth.

Dimenhydrinate (Dramamine) and diphenhydramine (Benadryl) are other antihistamines worth a try (one at a time, not together). They should be given an hour before travel and repeated every eight hours. Like meclizine, they may be mildly sedating and cause dry mouth. Talk with your veterinarian about the proper dosages of these medications for your size dog.

### Still Restless?

It's time to talk with your veterinarian about anti-anxiety meds if the above



Options abound to help your dog learn to enjoy car trips as much as you do.

## What You Can Do

- ▶ Introduce or re-introduce car rides gradually with plenty of rewards.
- ▶ Keep air flowing through your car.
- ▶ Combat nausea due to motion sickness with medications.
- ▶ If anti-nausea remedies don't help, consider Adaptil or a prescription anti-anxiety medication.

mentioned remedies didn't help. Trazodone, a serotonin antagonist/reuptake inhibitor (SARI), is a good first choice. It is highly effective for short-term relief of anxiety, well-tolerated, inexpensive, and may help with nausea/vomiting. It should be given one to two hours before the event and can be repeated every eight hours.

Gabapentin is a neuropathic pain reliever that is mildly sedating at higher dosages. This makes it potentially useful for easing car anxiety. It is commonly used in combination with Trazodone if either medication alone does not provide enough relief. Gabapentin is very safe and has few, if any, side effects.

A product worth trying is dog appeasing pheromones (DAP-Adaptil by Ceva Animal Health). This synthetic pheromone (a feel-good hormone) mimics the natural pheromones produced by nursing mothers that calm and soothe pups. It is available as a collar or a spray you can spritz in your car 10 minutes prior to travel. The spray's effect lasts four to five hours. There are many anecdotal positive reports regarding the use of Adaptil for car-ride anxiety.

### Bottom Line

Our dogs are our companions. Best friends. Trusty sidekicks. We like having them with us whenever possible, wherever we go. In our dog-friendly society, they are allowed to accompany us in many places, including hotels when we travel and short trips to pet stores and home-improvement stores. How awesome for us!

But it's not so awesome for your dog if getting there means being sick along the way. Remember, both nausea and anxiety are possible players in car discomfort. Be sure to talk with your veterinarian about addressing both issues, because as you've seen here, solutions abound. ■



# When You Suspect Abuse

## Gather evidence and contact the authorities

**W**ithout question, seeing a dog who appears unkempt, hungry, and unloved wrenches your heart.

Wanting to help him is understandable, but it's absolutely important for everyone involved that you go about it properly.

Every state has rules aimed at keeping animals safe and reasonably comfortable. Some states also look at neglect. Laws against animal abuse have penalties ranging from fines to misdemeanors or felonies with jail time.

### Know What You're Seeing

Some cases of abuse and cruelty are obvious. Dog fighting is one example. Others are more nuanced. An Alaskan Malamute outside covered with snow but with access to shelter, food, and water is likely comfortable and happy. The same situation would be unsafe and cruel for a Toy Poodle. A thin older dog with a poor haircoat may be under care for chronic illness and doing well. On the other hand, it could be a case of an owner not giving the dog necessary food and health care.

Abuse also needs to be distinguished from hoarding, though both can initially present as similar. In almost all cases, animal hoarders want to do right by the animals in their care; they simply get overwhelmed.

"I can't stress how important it is to recognize that animal hoarding, while also a crime, is a mental disorder; helping the individual who is hoarding is just as

important as helping the animals and may prevent future animal suffering," says M. Erin Henry, VMD, DACVPM, assistant clinical professor, Maddie's Shelter Medicine Program at Cornell University's College of Veterinary Medicine.

When reporting cruelty or abuse, the Animal Welfare Institute suggests you collect information first if possible: "Provide as much detail as you can: location, time, description of perpetrator(s), number of times incident occurred, types of animals involved. Take notes of what you observe. If you can do so without risking personal injury, take a photo or video of the animal—either while it is happening or after. Provide the names and contact information of other witnesses if there are any." That information could be invaluable for an investigation into the person(s) involved. Rarely should you step into the situation directly, as you risk harm and interfering with the investigation.

### Tell the Authorities

Where to report suspected abuse can vary with your location. Law enforcement may become involved, but in many communities, the ideal first contact is your local animal-control officer. If you have an active Humane Society in the area, that may also be a good choice and likely has a person dedicated to animal cruelty investigations. Without these resources, your best option is local law enforcement.

Animal abuse can stem from a variety of causes. In some cases, it may be ignorance such as people not knowing things like dogs only fed muscle meat will develop serious health problems. Some abuse may be

### What You Should Do:

- ▶ Know what abuse is: inadequate nutrition, sanitation, care, and/or shelter
- ▶ Remember that hoarding can be due to mental illness and that some abuse is due to a lack of knowledge
- ▶ Document what you see in writing and with pictures/video, if possible
- ▶ Contact the department of animal control or a local animal-welfare group for help; do not try to handle the situation yourself

unintentional, such as an older owner who becomes ill and is not able to take care of their animals.

Animal abuse can be a symptom of mental illness or pathological behavior. It may be tied in with domestic violence. Animal and child or elder abuse often go hand-in-hand, which is another reason why it is important to get knowledgeable professionals involved.

If you suspect animal abuse, collect as much information as you can. Determine the proper authorities to contact, it can't hurt to contact more than one place if you aren't sure. Ask when to follow-up with your contacts, just to be sure the animals aren't forgotten.

Remember, these groups are often extremely busy and under-staffed. In some cases, the authorities may make plea deals with the people involved simply to get access to the injured animals faster.

As horrifying as animal neglect is to see, it's extremely important to remember there are laws that, sometimes sadly, protect the animal owner, too. That's why the very best thing you can do is report your concerns to the authorities and then follow-up with them if you don't notice any action being taken. If nothing happens, and no one explains why, contact another animal-abuse agency or a rescue association to help you. ■



A happy, healthy dog is easy to spot. Abuse isn't as clear cut.

### Social Media Evidence

Abuse is often spotted on social media. Do not engage the person online because that person may simply remove the offending material but not stop. Removal of the evidence can hamper an investigation into the situation. Instead, take screen shots and document the host of the incriminated site, so you have proof.



# Diet Choices During Cancer

*It's as simple as a complete-and-balanced food*

**Y**our dog has cancer, and you want to do everything you can to help him. You may be concerned he'll need a different food to battle the nausea that so many human cancer patients suffer when undergoing chemotherapy. Fortunately, dogs do not experience this side effect.

You may wonder if you should up his immune system with antioxidants. Science does not support that choice. Or you may read an article about carbs and canine cancer . . .

Fortunately, it's most likely that your dog does not need a radical diet change due to a cancer diagnosis. "I do not recommend a diet change unless there is a specific medical indication (e.g., decreased kidney function)," says Kelly R. Hume, DVM, DACVIM, associate professor of oncology at Cornell's College of Veterinary Medicine.

The most important thing to do when your dog is battling cancer is to feed a quality, nutritionally balanced diet that provides enough calories.

## All About Balance

Your dog is probably already eating a complete and balanced diet. Good commercial dog food labels have an American Association of Feed Control Officials (AAFCO) Statement on the label. (AAFCO is a non-profit organization that develops standards for animal-food nutritional adequacy.) The AAFCO statement on the bag tells you that the food is complete and balanced for either all life stages or for adult

maintenance. Both are nutritionally correct for an adult dog.

The one place where you may need to adjust feeding is volume. If your dog begins to lose weight, he likely simply needs to eat more (increased calories). If he cannot consume more food, your oncologist may suggest a higher-calorie, but still complete and balanced, food.

## Home-Cooked Diets

If you are considering cooking at home for your dog, choose your recipe(s) carefully. While there are plenty of recipes available online, many are not nutritionally adequate. Choose a recipe that has been evaluated by a veterinary nutritionist to make sure that your dog is getting everything that he needs to keep his body in working order.

"I think balanced, homecooked diets, formulated by a veterinary nutritionist, can be beneficial for pets that are not used to eating a balanced, formulated commercial diet," says Dr. Hume. "I do not think dogs that are doing well on their normal diet see benefits from a sudden change to a homecooked diet."

An even better choice is to do a consult with a board-certified veterinary nutritionist to come up with recipes that are tailored to your dog's needs and preferences. This is especially important if your dog has specific nutritional needs, such as food allergies, a history of pancreatitis, kidney disease, or diabetes.

The Small Animal Clinical Nutrition program run by the Loftus Lab at Cornell

## What You Should Ask Your Veterinarian

- ▶ Can my dog continue eating his normal diet of dog food?
- ▶ Should I feed my dog more than twice a day?
- ▶ Do I need to increase (or decrease) the amount I feed my dog?
- ▶ Can you refer me to a board-certified veterinary nutritionist to help me make up a home diet?

University's College of Veterinary Medicine ([www.loftuslab.vet.cornell.edu/nutrition-service.html](http://www.loftuslab.vet.cornell.edu/nutrition-service.html)) will work with you and your veterinarian to formulate diets for your dog.

## Avoid Sudden Changes

If you need to make a change in your dog's diet, do so gradually over the course of several days. Start by feeding 75% the old diet and 25% the new diet, then slowly adjust the proportions until your dog is completely switched over to the new diet over five to seven days.

A rapid diet change can make things difficult for your dog's veterinarian. "Oncologists strive to maintain quality of life. If a cancer patient switches to a raw diet and develops gastrointestinal upset, it can be difficult to know if that is related to the diet change, a side effect of the cancer, or a side effect of the cancer treatment," says Dr. Hume. ■

## Skip the Raw Diets

"I do not recommend a raw diet in pets undergoing cancer treatment," says Dr. Hume. "Some cancers are associated with immunosuppression and therefore pets may be more susceptible to infection from bacteria in the raw diet. Some patients receiving chemotherapy have times when their immune cell counts are low, also making them more susceptible to infection."

While there are owners who have successfully fed their dogs raw diets even during cancer treatment, it just isn't worth the increased risk. Your dog is battling cancer—he doesn't need bacteria like salmonella from raw meat added to his list of worries.



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*Of all the worries associated with cancer, diet does not need to be one of them.*