



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

THIS JUST IN

Dogs for ER Staff

Therapy dogs help lower stress

New research published in *Academic Emergency Medicine* indicates that for staff working evening shifts in the emergency department, interacting with a therapy dog may lower stress.

In the 122-participant study, emergency providers randomized to a five-minute interaction with a therapy dog had a significant reduction in self-reported anxiety compared with patients randomized to coloring mandalas for five minutes with colored pencils. At the end of the shift, emergency providers had lower salivary cortisol (a stress hormone) with either coloring or therapy dog interactions compared with controls.

"Many health-care workers and laypersons believe that dog-assisted support can improve emotional well-being in the health-care setting, but little hard data exist to scientifically evaluate this belief, especially in emergency care," says author Jeffrey A. Kline, MD, of the Indiana University School of Medicine. "We still do not know the extent to which the benefit was from the dog."

Kline, JA, et al. Randomized Trial of Therapy Dogs Versus Deliberative Coloring to Reduce Stress in Emergency Medicine Providers. Academic Emergency Medicine, 2020; DOI: 10.1111/acem.13939



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Open-Heart Surgery at Cornell

In four minutes, a tumor was removed and a life saved

A 7-year-old yellow Labrador Retriever named Lucy was referred to the Cornell University College of Veterinary Medicine due to frequent fainting. She also wasn't enthusiastic about going on a walk.

A 3D echocardiogram showed the cause was a tumor blocking the right ventricle of her heart. "Lucy was periodically collapsing and essentially blacking out because of her heart's failure to oxygenate," said Dr. Galina Hayes, Cornell assistant professor of small animal surgery. "The mass was blocking the outflow of blood . . . There is maybe a total of three such reported cases in veterinary literature."

Dr. Hayes contacted Dr. Luis Campoy, associate clinical professor and section chief of anesthesiology and pain medicine, for assistance, who contacted his counterparts at Weill Cornell Medicine's Department of Anesthesiology in New York City to brainstorm options.

"We knew this would be a high-risk procedure, riskier than it would be with a human patient because it was not possible to use cardiopulmonary bypass for Lucy," said Dr. Maria Walline, a cardiothoracic anesthesiology fellow with Weill Cornell Medicine.

Open-heart surgeries are more common in human patients, and human hospitals have access to cardiopulmonary bypass machines, which can redirect blood flow for an extended period of time. Most animal hospitals lack this technology, Cornell's included, so Lucy's surgical team was left with one option: open-heart surgery without the safety net of a cardiopulmonary bypass machine.

Racing The Clock

The amount of time a body can survive and recover when the heart is not

functioning is limited, so the surgeons had only a four-minute window to stop the blood flow into the heart, remove the mass, close the ventricular wall, and release the blood so it could flow again.

"Someone called a countdown every 30 seconds once we occluded the vessels," said Sara Cantini, a fourth-year veterinary student who observed the surgery. "If the procedure lasts longer than four minutes, she could have permanent damage due to prolonged decrease in oxygen supply."

The surgeons removed 90 percent of the mass during those four minutes (the complete procedure lasted five hours). Lucy spent the first night after surgery in the intensive care unit, and three days later, she was able to go home.

Road to Recovery

After her operation, Lucy stopped fainting and returned to her former self. "When we go out for walks today, she never tires—she's back to the way she was two or even three years ago," owner David Baginski said.

Pathology showed Lucy had ectopic thyroid carcinoma. The remaining 10 percent of the tumor can be removed with targeted therapy.

This story, by Melanie Greaver Cordova, appeared in the Cornell Chronicle <https://tinyurl.com/DW-heart>.



Lucy after her surgery with Cornell fourth-year veterinary student Sara Cantini.

Vet-LIRN Investigates Pet-Food Illnesses

This FDA organization will follow up on adverse reports

Veterinary Laboratory Investigation and Response Network (Vet-LIRN), a program from the Food and Drug Administration's (FDA) Center for Veterinary Medicine, is a special network that connects laboratories around the country looking for clues that might solve animal illness mysteries.

Vet-LIRN typically works with animal owners and their veterinarians to investigate cases of potential foodborne illnesses, similar to how the FDA investigates foodborne illnesses for human food. The process starts when a pet owner or veterinarian reports a suspected food- or drug-related illness to the FDA. FDA veterinarians review each complaint and determine whether it should be referred to Vet-LIRN for follow up.

In one case, says Vet-LIRN Director Renate Reimschuessel, VMD, PhD, five dogs acted dizzy and started falling over suddenly within 15 minutes of eating a food. "Because the pet owners reported these events to us and allowed us to do autopsies, we were able to test the stomach contents, which contained a prescription drug later found in the dog food." This rapid response likely saved the lives of many other pets. ■

The Dilemma Surrounding Pets for Seniors

Plans to assure a pet is cared for after an owner's death

An article in *DVM360 Full Circle*, by Marc Rosenberg VMD, offers simple advice for pet lovers to use when deciding if they should adopt a new pet simply because they're worried the pet will outlive them. Dr. Rosenberg suggests that a person should involve their veterinarian and their family in the decision and consider taking these steps to help ensure your pet is protected and cared for if you pass away first:

- ▶ Find out whether your children, or other family members or friends, would be willing to take on ownership of your pet after you've passed on. This requires serious and thoughtful discussion and would benefit from a legal document outlining the agreement.
- ▶ Formalize a document allowing a portion of your estate (if possible) to assist with upkeep and medical care for your pet.
- ▶ Ask your veterinarian to consider being included in this document as the final arbiter of medical decisions for your pet.
- ▶ If your pet has a chronic illness or behavioral issues and would not do well in another household, you and your veterinarian may need to make the difficult decision to elect humane euthanasia for your pet. ■



Amoxicillin-Clavulanate Is a Better Choice

Amoxicillin alone was not as effective

A study published in the January 2020 *Journal of Veterinary Internal Medicine* retrospectively evaluated urine culture and susceptibility results for dogs and cats in the Midwest to look for trends. Of the 640 dogs with urinary tract infections (UTIs) included in the study, bacterial isolates from the cultures had a high susceptibility to amoxicillin-clavulanate and a low susceptibility to amoxicillin.

What does this mean for owners and veterinarians? At least in the midwestern United States, amoxicillin-clavulanate may be a more effective choice for UTIs in dogs than amoxicillin alone. The susceptibility of an individual dog's infection can (and should) be confirmed with a urine culture and sensitivity/susceptibility to confirm the choice of antibiotic. ■

KuKanich K, Lubbers B, Salgado B. Amoxicillin and amoxicillin-clavulanate resistance in urinary Escherichia coli antibiograms of cats and dogs from the midwestern United States. J Vet Intern Med. 2020;34:227-231.



DOGWatch

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Do You Want a Girl or a Boy?

Considerations when choosing a male or female puppy

Getting a new puppy is always exciting! But do you want a male or female puppy? While every dog is unique, there are some trends among the sexes that may make you prefer one over the other.

Strong Personalities

"Although some people may say that male dogs are more affectionate or that female dogs tend to be 'moodier,' very little research has been done on the difference in behaviors between male and female dogs," says Pamela Perry, DVM, PhD, Senior Resident at Cornell. "However, studies here at Cornell and at Tufts found that more male dogs presented with aggression towards humans whereas more female dogs presented with aggression towards other dogs, particularly towards dogs in their own home."

What does this mean for you on the hunt for your new best friend? Consider your household and the lifestyle that you and your dog will have. If you have lots of people in and out for gatherings or like to take your dog into public places, a female may be a better fit. If you have several dogs or intend to add to your canine family, a male may be a better fit.

Dr. Perry says that these studies also found that, "As compared to male dogs, more females were diagnosed with anxieties and phobias." So if your house is a loud and busy environment with a lot of chaos, a male puppy may be more likely to be content.

Remember that sex is just one factor in a puppy's personality. Genetics play a huge role, so the best thing you can do when choosing a puppy is to meet the parents and ask lots of questions about their temperament and behavior. Does the mother greet you happily, or does she cower and hide or snap and growl to try to prevent you from interacting with the puppies? A calm, friendly, confident dam is much more likely to produce puppies with those qualities. Ask about how both parents handle loud noises, other dogs in the household, strangers coming into their house or encountered in public, and being left alone.

If you are not able to meet or learn about the puppy's parents, ask lots of questions about the puppy itself and how

he or she has been raised. You can even have the puppy evaluated by a behaviorist if you have any concerns.

Bills, Bills, Bills

No one likes to talk about money, but it needs to be considered. Basic care and vaccinations are the same whether your puppy is a male or female, but a spay surgery is more expensive than a typical neuter. This is because a spay requires the surgeon to open the abdominal cavity, which is more involved. If a male dog is cryptorchid, with one or both testicles failing to descend into the scrotum, the castration procedure will be more involved and come with the higher bill.

If you are planning to keep your female dog intact, you should also have a couple thousand dollars in savings as a safety net in case she gets pyometra (see "Intact Bitches and Pyometra," January 2019 DogWatch), an infection of the uterus. This infection is serious and life-threatening, and requires immediate surgical or medical intervention. No one wants to have to choose euthanasia for lack of finances, so if this is not an option, either choose a male puppy or opt to get your bitch spayed as a young adult to take the risk of pyometra off the table.

Fun with Hormones

"Male dogs are more likely to show mounting and roaming behavior (presumably in search of a mate) but these two behaviors are much reduced

by castration," says Dr. Perry. Intensity of hormone-related behaviors can vary—some dogs are very easy to live with as intact males and don't mark in the house or pick fights, while others start showing signs of being obnoxious monsters at a young age and just get worse. If you are getting your puppy from a breeder, ask about other male relatives and how they behave. While many dogs do become better canine citizens

after castration, it is not a miracle cure for all behavioral issues.

Males are obviously more prone to testicular cancer if kept intact, and are more likely to get prostate cancer if castrated (the good news is that prostate cancer is rare in all cases). Prostatitis is more common in intact males.

Female dogs are not exempt from hormone-related foibles. Bitches come in heat every six to 12 months and are receptive to males during this time. Some behave normally while in heat, but others can be moody, subdued, or even aggressive (aggression is often directed toward other females but can also be generalized). Again, knowing how your puppy's mother behaves when in heat will give you a much better idea of how your puppy will behave when she matures. Spaying eliminates hormone-related mood swings, but will not make a female dog like other dogs more, and can sometimes increase dog aggression.

Females kept intact are more likely to develop mammary and ovarian cancer. "Female dogs are more likely to develop urinary incontinence after spaying (as opposed to male dogs following castration)," says Dr. Perry.

Pack Dynamics

If you already have a dog or two (or three!), your current crew may dictate the sex of your next puppy. Dr. Perry recommends, "Owners wishing to adopt a puppy as a companion for another dog in the home should select a puppy of the opposite sex, particularly if the resident dog is a female." Consider your current dog(s) and dogs they get along with. ■



There's nothing like that "pick me" look on a puppy's face.

A Canine Pastime: Lick, Lick, Lick

It's not just irritating—it can require a veterinary visit

Dogs lick and chew. That's life. But if the dog becomes obsessive about it and develops skin irritation, sores, or infection, you need to go into action!

Skin problems like itching and chewing are the second-most-common reason for canine veterinary visits (gastrointestinal problems are No. 1). The primary underlying causes are parasites, infections, and allergies.

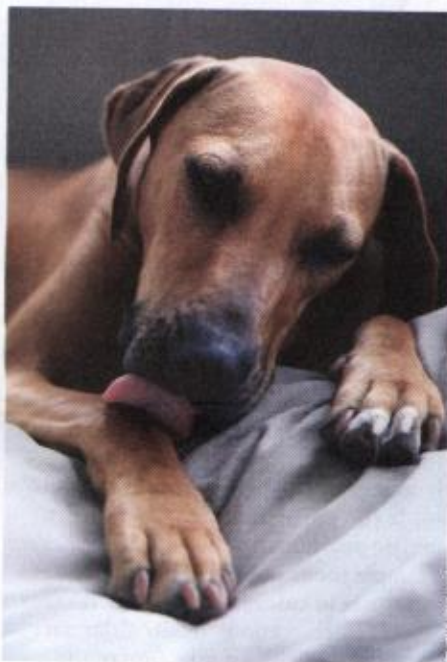
Start by determining if the dog is going after the same area. "Regionalized or generalized chewing and scratching is common, and the question that must be answered is 'Was the skin normal or diseased before the itching started?'" says William H. Miller Jr., VMD, DACVD, Professor Emeritus of Medicine, Section of Dermatology. "It's the old 'Is it an itch that rashed or a rash that itched?' question. The answer to the question isn't always easy to get because some folks don't pay attention to the dog's skin until the itching starts or because the dog has a long or thick coat that makes it difficult to impossible to see the skin."

Detective Work

Pay attention to where your dog is chewing and evaluate the skin at that location carefully. First, examine the skin where your dog is chewing. Check to see if the skin is normal even though the hair is wet from your dog's mouth. You are looking for a rash, raised sores, skin discoloration, and/or fleas. Red, inflamed, and moist skin may mean an allergy. Pus or discharge indicates a possible abscess or bacterial infection. A mast cell tumor (see "Mast Cell Tumors Can Be Tricksters," June 2020) can cause red, hot to the touch, raised areas of skin.

Fleas and lice: If you suspect fleas, check the tail head where your dog has been chewing. You will see a red skin with raised redder spots. Roll him over and watch for fleas scurrying across the lightly haired groin. Lice can cause itching. These tiny insects are lighter in color than fleas and move more slowly.

(Note: Not all flea-control products are equal. If you see irritated areas from fleas and/or many fleas, you have a problem. With most flea-control products, the rogue flea might jump on your dog, but he'll be dead within 24 hours, unable to cause problems. But if



If your dog constantly licks the same spot, you need to look more closely for the reason.

you see irritated skin and many fleas, talk with your veterinarian. In some regions, veterinarians have found that one brand of flea control or another doesn't work as well, so they'll recommend using something else.)

Parasites: Cheyletiella mites are often called "walking dandruff." These white mites can be spotted on your dog's fur, especially if your dog has dark hair. They also stir up large flakes of dried skin. Sarcoptic mange mites are not visible but instead burrow into the top layers of your dog's skin. These mites cause intense pruritus (itching). Demodectic mites are normal flora of dog skin, but some dogs, especially older dogs with a weakened immune system or puppies with immature immune systems, may get an overgrowth of these mites leading to rash, itching, and secondary skin infection.

Fungi and bacteria: Yeast and other fungi may cause skin irritation with redness, inflammation, and pruritus. Ringworm can lead to itching, too, but hair loss and chewing may be your only clues to a problem. Secondary bacterial skin infections are common with any of the primary itch irritants.

Your history of clinical signs is important for your veterinarian at this

point. Knowing how much your dog was digging at his skin initially, how things progressed, and if the skin was inflamed and irritated right from the start or the rash and weepiness came later are important clues.

Anal gland problems: Your dog has two glands located just inside the anus that excrete a strongly scented material whenever he defecates (or is really scared!). These glands can become impacted and even infected.

Anal gland fluid is normally oily and runny with a brownish color. If, for some reason, this fluid thickens, the glands can become blocked. Unable to express the fluid, the glands swell, becoming extremely uncomfortable for the dog. Dogs will often lick at their rear ends when this happens.

Bacteria like nothing more than a warm, moist environment, and the anal glands are prime real estate. If bacteria become trapped in the anal glands, an infection can develop. If the glands are still able to drain, you may notice pus or blood oozing down your dog's rear, especially after he defecates. If an affected gland is blocked, it will fill up and form a painful anal gland abscess. These abscesses can rupture through the body wall, creating a nasty open sore on your dog's behind.

Some dogs also can develop perianal fistulas, or painful open sores around the anus. This condition is most common in German Shepherd Dogs but can affect any dog. Underlying autoimmune problems may be involved. Some cases can recur.

Allergies: The three most common causes of allergies in dogs are fleas, atopy, and food. Removing the fleas rules out flea allergy, although some dogs will itch like crazy from one flea bite. Food allergies are generally identified through

Doggy OCD

A separate set of biting, chewing, and licking can occur with some obsessive compulsive behavior disorders (OCD). An example of this is flank sucking in Doberman Pinschers. This is a genetic disorder that can range from mild to severe, with it being difficult to distract the dog from licking and sucking at his flank and the skin becoming inflamed and possibly infected from the constant wetness.

elimination diets. Atopy is an immune-system overreaction to environmental triggers like pollen, molds, and house dust mites. Getting to the bottom of atopy can require a complicated trial to identify the exact culprits, meanwhile the itching can be intense.

Allergies may cause seasonal scratching or can exist all year long. Dogs can have a certain level of allergy triggers, meaning they can deal with some allergic reactions but not all of them. For example, a dog who is allergic to dust mites might be OK most of the year, but when spring pollen onslaughts begin, his immune system goes into overdrive, making him itchy and miserable.

Arthritis: Dogs with pain from arthritis may lick the affected joint(s) in an attempt to dull the discomfort. Licking can be so persistent as to cause staining of the hair. Stains are usually over the affected joint, but if the dog is unable to reach the area with arthritis, the dog may lick the closest spot that she can access.

Diagnostic Options

For many skin infections, a swab or skin scrape can be examined under a microscope to identify the causative agent. Swabs may be sent out for a culture and sensitivity to identify bacteria and the best antibiotic to cure the infection.

Allergy testing may include feeding trials, skin tests, and/or bloodwork. Bloodwork will be done if an autoimmune disease is suspected.

Arthritis is diagnosed via palpation and x-rays as well as watching your dog walk and get up and down.

Some infections only develop because an underlying problem has weakened the dog's immune system. If your veterinarian suspects this, he or she may do additional testing to identify the underlying cause. In some cases, once the true problem is treated, secondary infections will clear up on their own.

Treatments

Once the cause for the licking is identified, treatment will be started. For parasites, that generally means a topical that will repel or kill the insects involved. Most topicals now treat a wide range of parasites, and parasitic skin disorders such as flea allergy are on the decline when these are used faithfully. Many parasites require environmental measures (your house, but sometimes the outside as well) and treating all your pets, not just the one who is itching.

Bacterial and fungal infections may require medicated baths and systemic medications.

Allergic itching may be treated by short-term corticosteroids or long-term with desensitization protocols.

Arthritis is often treated with a combination of pain medications, joint supplements, and weight management. Laser therapy, radiation, and acupuncture have been beneficial for some dogs who can't stop licking and chewing.

If your dog has just started licking or chewing and the skin is mainly intact, you might try some home care. Dr. Miller suggests that for mild licking, topical first-aid items found in the drug store (1% hydrocortisone, Caladryl) might work. If your dog has gone beyond licking to chewing, however, these things usually don't work. A physical barrier like a bandage or Elizabethan collar may be needed (see "Alternatives to the Dreaded Cone," June 2020). T-shirts and onesies for children can provide a barrier to stop your dog licking. Do not use any human prescription medications. Some of these can have bad side effects in pets.

Anal gland discomfort is often alleviated by manual expression of the impacted anal glands. You can do this at



A dog who constantly licks at one spot on his leg is indicating he has an issue that needs attention.

home or schedule an appointment. If the gland material includes blood or pus or has an otherwise abnormal appearance or odor, your vet may prescribe antibiotics.

Perianal fistulas are treated with immunosuppressive medications and/or antibiotics and can benefit from shaving the hair around the affected areas to provide better ventilation. In severe cases, surgery may be necessary.

Laser therapy, radiation, and acupuncture have been beneficial for some dogs who can't stop licking and chewing. We say it all the time but catching a skin condition early makes for easier diagnosis and treatment. Your dog licking his paws after a walk in the rain is normal. Chewing on his foreleg or rubbing his ear while whining are not. ■

Lick Granulomas

Lick granulomas, also called "acral lick dermatitis," occurs when your dog simply obsessively licks at one area almost continuously. These lesions usually occur on the front part of a dog's lower limbs where it is easy for the dog to reach. With enough time, hair wears off and the skin becomes ulcerated. Some dogs will develop thick plaques in the skin.

Breeds with a tendency for acral lick granulomas include Doberman Pinschers, German Shepherd Dogs, German Short-Haired Pointers, Golden Retrievers, Great Danes, Irish Setters, Labrador Retrievers, Weimaraners, and Boxers.

Allergies and underlying neurologic conditions are often suggested as underlying cause, but dogs will also lick and chew at painful areas. Once the chewing and licking has been long standing, it can be difficult to break the cycle and allow the skin to heal. Behavioral problems may underlie the condition, such as an obsessive-compulsive disorder. The itch/lick cycle also may cause the release of endorphins, which are brain chemicals that relieve pain and may give a sensation of pleasure. This makes breaking the habit all the more difficult.

Treatment options include antibiotics and anti-inflammatory treatments to reduce the swelling and promote healing. However, you may need to consider medications to help with anxiety and obsessive-compulsive disorders.

A New Twist for Cancer

Electrochemotherapy combines drugs and electric pulses

Chemotherapy is a longtime mainstay for oncology treatment in dogs. Specifically, this refers to the use of cytotoxic drugs to attack, kill, and prevent replication of cancer cells.

Electrochemotherapy (ECT) adds a new twist that can make standard chemotherapy even more effective. ECT combines the administration of chemotherapeutic drugs with electropermeabilization of cell membranes by the application of electric pulses. This helps the chemotherapy drugs to enter and interact with the cancer cells. It can increase the effectiveness of the medications and potentially lower the dosages needed, which could translate into lower side effects.

Joseph A. Impellizeri DVM, DACVIM, MRCVS (Cornell 1994) of Veterinary Oncology Services at Guardian Veterinary Specialists, Brewster, N.Y., and Wood River Animal Hospital, Wyoming, R.I., has used ECT on a variety of cancers in dogs, including mast cell masses, incompletely resected sarcomas, oral tumors (sarcoma, squamous cell, melanoma), brain, bladder, and many types of gastrointestinal cancers.

"With ECT, the tumor is exposed to an electric field for a few milliseconds, which causes the tumor cells to become porous for up to an hour after the procedure and allows for an increase of up to a thousand fold in the local absorption of the chemotherapy," he says. The pulses are carefully controlled so that only the cells right near the electrode are affected. That means nearby normal cells escape virtually all the effect of the chemotherapy drug. Lower dosages of the medications can be used with a lowering of side effects. Treatments can be repeated as necessary.

ECT can be used as an adjuvant treatment if occult metastases are suspected, to help prevent recurrence if surgery did not result in clean margins, prior to surgery to try to reduce a mass, secondary to radiation treatments, and as palliative therapy for a senior pet to help retain some quality of life. In some cases, it is used as the initial and primary treatment for the cancer concerned and for masses in areas that don't lend themselves to easy surgical removal, such



This dog is waking up from anesthesia.

as on the limbs. Mast cell tumors (see "Mast Cell Tumors Can Be Tricksters," June 2020) are notorious for recurring and may show up in locations that are not amenable to full surgical resection, making ECT helpful.

Bleomycin and cisplatin are the two most commonly used chemotherapy drugs for this technique. The chemotherapy medications may be given IV, into the tumor directly, or

a combination of those methods, depending on the location and type of cancer being treated.

"This technique is relatively inexpensive and minimally invasive. The treatment is targeted right to the cancer. Side effects of the chemotherapy drug used are minimized since the dose of the drug can be greatly reduced with the addition of the electrical pulses. ECT can also be combined with other therapies for maximal benefit," explains Dr. Impellizeri.

There are some drawbacks. The dog must be under general anesthesia or heavy sedation for the treatment (generally under 30 minutes). Post treatment, dogs may have some edema and possibly necrosis at the treatment site, which will require wound care. And, of course, no treatment is guaranteed.

Research is continuing in this area. Scientists are looking at placing electrodes via endoscopy, which would allow veterinarians to place electrodes closer to internal cancers, making this therapy more effective for those neoplasias. Right now, it is most effective for superficial cancers.

Most vet clinics do not have the equipment, so a referral to a veterinary oncologist will be needed if this therapy seems to be the "right fit" for your dog. ■

5 THINGS

Beware of These Canine Summer Hazards

A little precaution goes a long way to keeping your dog healthy

- 1 **Barbeque burns.** Barbeques smell great, especially to your dog! But remember that a grill-sniffing dog could get burned or end up eating something he shouldn't, like cooked bones.
- 2 **Sunburn.** Dogs can get sunburn, especially dogs with short, light coats or any of the hairless breeds. There are an FDA-approved sunscreen for dogs made by Epi Pet. If needed, you can find sunglasses goggles for dogs, too.
- 3 **Hot ground.** Hot pavement and hot sand can give your dog blistered, sore paws. If it is too hot for you to walk barefoot or the surface is hot to the touch, it is too warm for your dog to walk there, too.
- 4 **Water toxicity.** Yes! While your dog needs plenty of clean drinking water available, you can run into water toxicity if your dog is swimming, retrieving, and playing in the water. Dogs can inadvertently gulp a lot of water while playing and overhydrate. Playing with a hose should be monitored, too.
- 5 **The heat index.** Dogs can easily overheat, especially if the humidity and temperature are both high. Enforce rest periods in the shade, offer water frequently, and consider a "cool mat" and fans to help your dog stay comfortable. ■

The Ear Mites Made Me Do It

These determined tiny pests are rare but annoying

While ear mites won't actually whisper murderous thoughts to your dog, they can make your dog's ears itchy and uncomfortable. Thankfully, William Miller, VMD, DACVD, Professor Emeritus of Medicine, Section of Dermatology at Cornell, says that this tiny parasite is uncommon to rare in dogs and easy to eliminate.

About the Mite

Formally known as *Otodectes cynotis*, the ear mite likes to make its home in the ear canal or the skin of the ear in dogs, cats, rabbits, and ferrets. Cats, especially kittens, are the most popular host, but puppies can be susceptible too. The mite spends its entire life on the host and lives approximately two to three months after hatching. Ear mites can reproduce rapidly as adults.

Ear mites can survive in the environment for short periods of time, and crawl to their host. They are extremely contagious and can crawl from one pet to another if they are close together. This makes them more of a problem in areas that have a high-density of animals, such as shelters, but ear mites can be spread between dogs and cats who get along well and like to cuddle.

The mites are extremely tiny—about the size of a pin head—but can be observed with the naked eye if you look closely. More often though what owners see is the damage that the mites do to their pets' ears as they burrow and feed.

Detection and Diagnosis

Signs that your dog may have an ear mite infestation include:

- ▶ Shaking head
- ▶ Ears held in an abnormal position
- ▶ Scratching and pawing at the ears
- ▶ Rubbing head on you or other surfaces
- ▶ Dark debris and discharge from the ear, often looking similar to coffee grounds
- ▶ Hair loss or rash around the ear from scratching
- ▶ Aural hematoma
- ▶ One or both ears may be affected.

Ear mites need to be diagnosed by your veterinarian. This can be scheduled as an appointment during regular hours, with no need for an urgent or emergency appointment unless your dog has severely



Remember to include the cat for treatment, if you suspect ear mites in your dog.

damaged her ears from scratching. A staff member at the clinic will swab your dog's ear(s) and then examine the sample under a microscope. This allows the technician or veterinarian to observe the presence of mites, or show that the infection is due to a different organism, such as bacteria or yeast. It is possible that your dog can have multiple concurrent ear infections, in which case treatment will need to address all of the infectious agents present.

Your veterinarian will also check the condition of your dog's tympanic membrane, or ear drum. Some medications can be toxic if they enter the middle and inner ear, so your vet will want to be sure that the ear drum is intact before prescribing medication.

Treatment

The first step for treating an ear mite infection is thorough cleaning of the affected ear(s). Your dog's veterinary team can do this while you are in the office, or you can do it at home. Cleaning the ears removes the debris that the mites live and hide in, and can also remove some of the mites themselves. This makes it much easier for topical ear medications to do their job.

Several medications can be used to resolve an ear mite infection, including the topical product Milbemite (active ingredient milbemycin oxime) that is placed directly into the ear. Many flea-control products also kill mites, so those can be a great option to kill two birds with one stone.

Seek an official diagnosis from your veterinarian before starting treatment for ear mites. "Unless it is known that the household cats have ear mites, treating a dog with ear disease for ear mites is almost guaranteed to fail," says Dr. Miller. "If the cats do have ear mites and the dog and cat are buddies, one treatment with a good oral or topical flea and tick products should do it."

Prevention

The best way to prevent your dog from getting an ear mite infection is to keep him on a regular flea and tick preventive, advises Dr. Miller. For once you don't need an extra product to keep your pet protected. Year-round flea, tick, and mite control is especially important if your dog likes to cuddle with your cat, particularly if your cat goes outdoors and may encounter infected cats. ■

How to Clean Your Dog's Ears

Get a product intended for ear cleaning in pets from your veterinarian or a pet supply store. Look for a product that contains a drying agent, as this will help to discourage further infections.

Squirt the cleaner onto a cotton ball, then gently squish the cotton ball inside your dog's ear. This is generally better tolerated than squirting the cleaner directly into the ear.

Use additional cotton balls, gauze pads, or cotton-tipped sticks to remove debris from the ear. Continue until the ear is clean.



Tip: When using cotton-tipped sticks, only clean the opening of the ear canal. Reaching where you can't see could cause you to pack wax and debris deep in the ear canal.

Leash Biting at Night

Remember that dogs don't do things for no reason

Q We have a 15-month-old American Eskimo puppy. A pet behaviorist and a private dog trainer have told us she is not aggressive. However, we continue to have a problem with her snarling and biting when we attempt to take her leash off at night. Her biting at times is getting worse and has drawn blood. She never had littermates and never learned bite inhibition. I worked with her on this and thought we had a handle on it. Any insight you can give me would be greatly appreciated. Thank you for your advice

A If a dog bites you, it is aggressive. You are correct that being a single puppy means that she did not learn many social skills including bite inhibition. I would have expected that she would be a biter during play not when she was handled. Whenever a dog does something, especially something that we don't like, we should try to find a reason. Dogs don't do things for no reason.

She is unusual in that she bites when you remove the leash rather than when you put it on. Does removing the leash signal something will follow? Perhaps she does not want to go to bed, especially if the bed is a crate? Perhaps she is tired and, possibly, in pain after a walk. If you are using a prong collar, it may hurt when you pull on the leash to unclip it. If that is



With ears back and whites of eyes showing, this little dog is showing fear aggression, not offensive aggression.

the case, you might use a harness to walk her. There are lots of harnesses, including the No Pull and Freedom harnesses that give you control you need in case she thinks she is in the Iditarod when you walk her.

One solution is to leave the leash on. She might tangle the leash and get caught, but usually that is not a problem. If it is, you might have to use a short leash and just clip on another leash when you take her for a walk.

To determine why she might be biting you should observe her body posture, especially her ears and tail. Is she stiff with her ears up and tail curled tightly? That indicates that she is offensively aggressive. If she is pinning her ears back and showing the whites of her eyes, she is probably afraid. The latter emotion is much more likely.

To solve the problem, you want to counter condition her. That means teaching her that touching her collar is always followed by good things. It would be best to do this at a different time of day, like morning rather than night.

Have the leash in your hand but not attached to the dog. Reach toward her and give her a treat. Repeat 10 times a day for a week. The next week, touch her collar with the leash and give her a treat every day for a week. The third week have the leash attached and reach for it and give her a treat. Repeat 10 times a day for a week. Finally, remove the leash at the end of the day and give her a treat.

Be consistent in your training, and let us know how this goes for you. ■

Ravenous Border Collie

Most are not food-motivated

Q I adopted a Border Collie from the local shelter. She is mature and was not underweight when I got her a year ago. She was a stray. My question is regarding her eating: She acts as if she were continuously famished. When I took her to the veterinarian she had only gained a few ounces. She gets table scraps and scraps when I am cooking and her regular meals twice a day, but she acts as if she were starving. Is this normal behavior for a Border Collie?

A You are kind to adopt an animal from a shelter. Lots of dogs are food-motivated, but Border Collies are not known for that trait. My guess is that she was severely food deprived at some time in her life. Perhaps she will be more content if we can spread out her meals by making her hunt for her food. There are many food-dispensing toys on the market, and she could get half of each meal in a ball that dribbles kibble when she turns it. My dog, Yuki, would rather eat from the ball than from her dish. There are also wooden puzzles that require her to move a panel to access the food. A Kong can be filled with canned dog food with a dash of cheese on top and then frozen so it will take her a long time to obtain the food. ■

© HAPPENING NOW...

Only 60% Pass—Researchers analyzing 29 hemp-based pet supplements sold online in the United States found levels of CBD and other cannabinoids varied widely. Only 18 supplements met appropriate labeling guidelines for non-medication, non-dietary supplements, according to PetIndustryNews.com.

More "No Sales"—The Star Tribune says bills are underway in Minnesota to restrict the sale of dogs and cats at pet stores. California, Maryland, and New York have worked on similar laws.

Shelters Overwhelmed—The ASPCA established a \$5 million COVID-19 Relief & Recovery Initiative. The funds will be distributed to animal welfare organizations overwhelmed by the unprecedented number of animals being turned in due to the coronavirus, according to JAVMA News. ■

Do You Have a Behavior Concern?

Send your behavior questions to Cornell's renowned behavior expert Katherine Houpt, VMD, Ph.D., shown here with Yuki, her West Highland White Terrier. Email to dogwatcheditor@cornell.edu or send by regular mail to DogWatch, 535 Connecticut Ave., Norwalk, CT 06854-1713.



Coming Up ...

- ▶ Why Lyme Disease Is a Worrisome Diagnosis
- ▶ Avoiding Surgical Complications
- ▶ From Scent Work to Sniffing Out Disease
- ▶ So Many Treats! Which Ones Are Best?