



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

THIS JUST IN

## Anxiety Help

### Generic version of Clomicalm

Separation anxiety is a major problem for many dog owners. Dogs who are left alone who suffer from separation anxiety may indulge in destructive behaviors and even injure themselves. They can work to “escape” and break out of a house or yard thought to be secure.

“In a survey of factors associated with surrendering dogs to a humane society,” says a report from the Food and Drug Administration (FDA), “three out of 10 of the most common reported problems were consistent with separation anxiety.”

So, the FDA’s Center for Veterinary Medicine approval of the first generic form of clomipramine hydrochloride tablets (brand Clomicalm) is welcome news. It remains a prescription drug, however, for dogs 6 months of age or older. Remember that all behavioral medications should be used with a comprehensive behavioral management program. Just giving a drug won’t solve the underlying problem.

While a generic drug must be the bioequivalent to the referenced drug, some dogs do better with the original brand medication. If you try the generic

version of the drug and don’t see the same response, discuss switching back with your veterinarian. ■



## FDA Warning about CBD Safety

### Agency warns cannabidiol does not have a GRAS status

In November, the U.S. Food and Drug Administration (FDA) issued warning letters to 15 companies for illegally selling products containing cannabidiol (CBD) in ways that violate the Federal Food, Drug, and Cosmetic Act (FD&C Act), which is designed to protect consumers. Based on the lack of scientific information supporting the safety of CBD in food, the FDA says it cannot conclude that CBD is generally recognized as safe (GRAS). “We remain concerned that some people wrongly think that the myriad CBD products on the market, many of which are illegal, have been evaluated by the FDA and determined to be safe, or that trying CBD ‘can’t hurt.’ . . . there are real risks that need to be considered,” says FDA Principal Deputy Commissioner Amy Abernethy, MD, PhD.

Many unanswered questions and data gaps about CBD toxicity exist, and some of the available data raise serious concerns about potential harm from CBD. Safety concerns include potential liver injury, interactions with other drugs, drowsiness, diarrhea, and changes in mood.

In July 2019, the American Veterinary Medical Association submitted comments to the FDA urging the agency to provide regulatory clarity about expectations for labeling, safety, and use, but much more research needs to be done. For more information on the safety surrounding CBD for dogs, see “Much Ado About Marijuana” in our September 2018 issue. ■



## Dog Studies Can Show Placebo Effects, Too

### But it may be due to human intervention

The placebo effect is when a neutral substance seems to give the same results as a test treatment. In humans, the placebo effect is well documented. People want the medication to work, so they give better reports about the efficacy. For pets, it is “placebo effect by proxy,” since the owner does the reporting.

Different factors may come into play here. If a dog is in a clinical trial, the owner may be more diligent about care in general. A report in *The Atlantic* points this out. “So, it’s not pets that placebos are fooling, but humans. When you give a treatment, there’s an expectation that the treatment’s going to be beneficial, and there’s a desire that my patient or my pet gets better—you want that to happen,” says Michael Conzemius, a veterinary surgeon at the University of Minnesota.

The placebo effect can be highlighted when observations include both subjective and objective results. For example, an owner may say their dog is moving better but a force-plate gait analysis shows that the dog is the same or worse. We want our pets to respond positively, possibly missing reality. Evidence-based medicine tries to eliminate as much caregiver effect as possible, but many studies have to rely on owner input and observations.

Brennen McKenzie, a veterinarian and the author of *SkeptVet*, a blog dedicated to evidence-based veterinary medicine, sums it up nicely: “The more strongly motivated you are to see something, the more likely you are to see it.” People love their pets and want them to do well so they may miss the actual state of their pet’s health. ■

<https://www.theatlantic.com/science/archive/2019/11/danger-pet-placebo/601489/>



### INSIDE THIS ISSUE

	Page
Link Between Skin and Behavior.....	2
Mammary Masses .....	2
Grinding Your Dog’s Nails.....	3
Estrogen’s Role in Mammary Cancer.....	4
5 Things to Do When Facing Cancer.....	4
Optimize Orthopedic Health .....	5
Yes, The Dog Did It .....	6
Can Saliva Testing Help Allergies? .....	7
Improper Mounting Behavior .....	8
Happening Now .....	8



## Link Between Skin and Behavior

### *Itchy skin may be at the root of behavior problems*

**S**kin allergies may be linked to behavior problems, says a report in the December 1, 2019, issue of the *Journal of the American Veterinary Medical Association*. Specifically, this study from Nottingham University found that dogs with severe itching from atopic dermatitis also exhibited problem behaviors, including mounting, hyperactivity, and coprophagia (eating feces) as well as begging for and stealing food. This finding was in addition to behaviors that would be expected to show up in dogs with skin problem such as chewing and excessive grooming.

Atopic dermatitis is an allergic skin condition that often occurs due to inhaled allergens. People sneeze with pollen; dogs tend to scratch. Apparently, people with atopic dermatitis have been found to have psychological effects, such as depression, which can then lead to additional psychological problems like social withdrawal, anxiety, and insomnia.

The study, titled "The Itchy Dog Project," was done online using owner evaluations of their dogs' behaviors. The study included 340 dogs with atopy and 552 normal dogs.

"Our study clearly showed a relationship between the occurrences of problematic behavior in dogs and chronic itching. This can have a knock-on effect and impact the relationship between owner and dog, which means it's important for owners to know that their dog's behavioral problems could be due to the itching, rather than the dog themselves," says Dr. Naomi Harvey, a research fellow at Nottingham who led the study.

Of course, this effect goes both ways. Itching may lead to behavior problems and stress from the itching could cause exacerbation of the skin condition.

More work needs to be done, but this study suggests that skin conditions should be considered when evaluating dogs for behavior problems. In addition, environmental stresses that affect behavior should be evaluated when a dog has a flareup of his atopic dermatitis. ■

*Journal of the American Veterinary Medical Association Dec 2019, Vol. 255, No. 11,*



Pages 1199-1226

## Mammary Masses

### *Study brings good news for owners of female dogs*

**A** study from the Angell Animal Medical Center in Boston, published in the October 1, 2019, *Journal of the American Veterinary Medical Association*, looked at the risks for dogs with single versus multiple mammary masses at the time of surgery.

Mammary gland tumors are the most common tumor in intact female dogs. Reports say 70% of the tumors found in intact females are mammary tumors. They are generally found in middle-aged to senior dogs with certain breeds having a higher incidence than others. Those breeds include Toy and Miniature Poodles, Brittanys, English Springer Spaniels, English Setters, Cocker Spaniels, Maltese, Yorkshire Terriers, and Dachshunds. In addition, normally, the fourth and fifth glands have the higher number of masses.

This study brought wonderful news for dog owners as of the 161 masses identified in this study, 85% were benign. Five masses were not mammary tissue derived. And, interestingly, the fourth gland had a much lower risk of malignancy than the other glands combined. The researchers did not find any statistical difference in malignancy associated with age, whether the dog was intact or spayed, or whether a given dog had one mass or multiple masses. Previously it had been felt that multiple masses were a poor prognostic sign.

While this study brings good news, owners of female dogs still should do a check of their dog at least once a month for any mammary masses. Caught early, surgical removal can be curative. This study suggests that there is no need to panic even if you detect more than one mammary mass. Smaller breeds seemed to be over-represented in this study so more research should look into the risk associated with weight and size. ■

*Litterine-Kaufman J, et al. J Am Vet Med Assoc. 2019 Oct 1;255(7):817-820. doi: 10.2460/javma.255.7.817.*

*Prevalence of malignancy in masses from the mammary gland region of dogs with single or multiple masses.*



# DOGWatch

**EDITOR IN CHIEF**

William H. Miller, VMD, Dipl ACVD,  
Emeritus, Professor, Clinical Sciences

**EXECUTIVE EDITOR**

Cynthia Foley

**TECHNICAL EDITOR**

Debra M. Eldredge, DVM

**ADVISORY BOARD**

James A. Flanders, DVM, Dipl ACVS, Associate  
Professor, Clinical Sciences

Katherine A. Houpt, VMD, Ph.D., Dipl ACVB,  
Emeritus, Professor of Behavior Medicine

Joseph Wakshlag, MS, DVM, Ph.D., Dipl ACVN,  
Associate Professor, Clinical Nutrition

Margaret C. McEntee, DVM, Dipl ACVIM, DACVR  
Professor of Oncology

Meredith L. Miller, DVM, Dip ACVIM  
Lecturer, Small Animal Medicine

Leni K. Kaplan, MS, DVM  
Lecturer, Community Practice Service

DogWatch is an independent newsletter  
produced in collaboration with Cornell  
College of Veterinary Medicine



Cornell University  
College of  
Veterinary Medicine

For information on pet health, visit the Cornell  
University College of Veterinary Medicine,  
website at [vet.cornell.edu](http://vet.cornell.edu)

**Send reader questions  
and letters to the editor:**

DogWatch

535 Connecticut Ave.

Norwalk, CT 06854-1713

[dogwatcheditor@cornell.edu](mailto:dogwatcheditor@cornell.edu)

Subscriptions: \$39 per year (U.S.) • \$49  
per year (Canada). For subscription and  
customer service information, visit  
[www.dogwatchnewsletter.com/cs](http://www.dogwatchnewsletter.com/cs)  
or write to: DogWatch, P.O. Box 8535,  
Big Sandy, TX 75755-8535. 800-829-5574



DogWatch® (ISSN: 1098-2639) is  
published monthly for \$39 per  
year by Belvoir Media Group, LLC,  
535 Connecticut Ave., Norwalk,  
CT 06854-1713. Robert Englander,  
Chairman and CEO; Timothy H. Cole,  
Executive Vice President, Editorial  
Director; Philip L. Penny, Chief Operating Officer;  
Greg King, Executive Vice President, Marketing  
Director; Ron Goldberg, Chief Financial Officer;  
Tom Canfield, Vice President, Circulation.  
©2020 Belvoir Media Group, LLC.

Postmaster: Send address corrections to  
DogWatch, P.O. Box 8535, Big Sandy, TX 75755-8535.

Express written permission is required to  
reproduce, in any manner, the contents of this  
issue, either in full or in part. For more information:  
Permissions, DogWatch, 535 Connecticut Ave.,  
Norwalk, Connecticut 06854-1713.



# Grinding Your Dog's Nails

*This method can be less stressful for dogs and owners*

**N**ail grinders are a nice solution to nail trimming worries about bleeding nails because they cauterize as they go and leave the nail with a smooth rounded edge that won't scratch anyone.

Nail grinders are tools with a rough, round attachment that spins at high speeds so that it files anything it comes in contact with it—in this case, your dog's nails. Typical grinder heads are coated in a material that feels like really robust sandpaper, but you can also invest in a diamond head, if you wish, for extra durability.

You still need to be mindful of where the quick is. The grinder will cauterize it so it won't bleed, but hitting that nerve is still uncomfortable. In dogs with white nails, you can see the pink quick and avoid it by only grinding the hard white nail. Dogs with black nails require a little more detective work. If your dog has an obvious hook on the end of his nails, you are safe in the thinner parts of the hook but need to be careful about going into the thickest part.

For dogs with thick overgrown nails, you can gradually work the quick back by taking a little nail off every day or so until they are back to the desired length. As you gain more experience, you will start to recognize the changes in the nail as you get closer to the quick.

As a general rule, if you think you are close to the quick, file back the outside



A professional groomer grinds this Lab's nails.

edges of the nail rather than setting the grinder dead center. This will also remove any sharp edges that could scratch you if your dog jumps up on you later.

## Choosing a Grinder

Leni Kaplan, DVM, MS, Lecturer in Cornell's Community Practice Service, advises, "Pet owners should consider getting a grinder that has at least two speeds; most owners will want to use the slower speed to start depending on the size of the nail and how close they are to the quick. Consider getting a cordless nail grinder; this eliminates the hanging cord, which may scare the pet when it moves as the grinder moves. The pet will also not get inadvertently tangled in the cord during nail grinding with a cordless product."

Dremel is one of the best-known brands in the grinder game, and because of this, you may hear people refer to

## If You Hit the Quick

If you hit the quick when grinding your dog's nails, he will likely jerk his paw away from you suddenly. Don't panic! Immediately pick up his paw and praise and reward him for letting you hold it again. Then turn the grinder back on and touch it to the outer edge of the same nail briefly before praising and rewarding. Touching the grinder to the outer edge will avoid contacting the sensitive quick in the center again and gives you the opportunity to reinforce that nail grinding is not scary. After telling your dog how wonderful he is, move on to the next nail.

any brand of nail grinder as a "dremel." Choose the product that you think will work best for you—take the opportunity to hold one in your hand and get a feel for it before purchasing if possible.

## Introducing the Grinder

"The biggest tip: GO SLOW and be patient," advises Dr. Kaplan. "Pets tend to be skeptical about this new object that makes a humming noise, gets hot with use, and produces a strange odor." Start by just letting your dog check out the grinder with it turned off. Then hold his paw while near the grinder and give him treats. When he is comfortable with that, touch the grinder (still off) to his feet and nails and reward. If your dog doesn't like having his feet handled, work on that before introducing the grinder.

Dr. Kaplan says, "When the pet seems fairly comfortable with the grinder, start to turn it on for a few seconds at a time so they get used to the humming noise. Remember to give them treats throughout so they associate good and fun eats with the grinder."

Once your dog is comfortable with the sound, bring his paws back into the picture. Hold a paw while the grinder runs a little, then reward. Gradually increase the length of time the grinder is on, and hold each of his feet and manipulate his toes. Praise and reward frequently.

When you are ready to start grinding, start by just touching the grinder (on) to a nail and then praise and reward. The vibration from the grinder is going to feel weird to your dog, so you will need to build up contact time gradually and pay well in treats and praise. "When first using the grinder, owners may want to trim only one or two nails at a time until the pet gets used to the grinder," says Dr. Kaplan. Over time you can increase the number of nails you do in a sitting, and the number of nails you do between rewards. Slow and steady wins the race. ■

## You Should Know

- ▶ The humming noise from the grinder may be scary to pets who are not used to this sound.
- ▶ Grinders get hot with use so make sure to take breaks and not spend too much time on any one nail.
- ▶ Grinding has a strange odor that may make pets uncomfortable. If you can do the nails outdoors, all the better.
- ▶ The vibration of the grinder on the nail feels odd to many pets. When first using a grinder, only do one or two nails each day.

## Hairy Feet

Long hair will get tangled in the grinder, which can hurt as it pulls. You can prevent this from happening by either trimming long hairs or holding them back from the nail with your hand.



# Estrogen's Role in Mammary Cancer

*New findings show estrogen may fight metastasis*

It's widely believed that dogs that are spayed at a young age have a reduced risk of developing mammary tumors as it reduces the effects of estrogen production. But a new study from the University of Pennsylvania's School of Veterinary Medicine says that, while it's clear that spaying dogs greatly minimizes their risk of developing mammary cancer, the practice may increase the risk of more aggressive cancers. The team found higher serum estrogen levels were protective, associated with longer times to metastasis, and improved survival.

"Dogs that remain intact and have their ovaries develop many more mammary tumors than dogs that were spayed, so removing that source of estrogen does have a protective effect," says Karin U. Sorenmo, a veterinary oncologist at Penn Vet and senior author on the study, published in *PLOS ONE*. "Estrogen does seem to drive mammary cancer development. But what it does for progression to metastasis . . . that I think is more complicated."

The research used data from two prospective studies, including one involving dogs in the Penn Vet Shelter Canine Mammary Tumor Program, through which shelter dogs with mammary tumors receive treatment and then find foster or permanent homes.

The team evaluated 159 dogs with mammary cancer; 130 were spayed as part of the study and 29 were intact. In addition to surgically removing the dogs' measurable tumors, the team collected information on serum estrogen levels, tumor type, disease grade/stage, time to metastasis, and survival time.

Despite estrogen's link with an increased risk of developing mammary tumors, the researchers found that higher serum estrogen levels seemed to help dogs avoid some of the riskiest aspects of their disease. Unexpectedly, when dogs were spayed at the same time their tumors were removed, those with estrogen receptor-positive tumors that had higher serum estrogen took longer to develop metastatic disease and survived longer than dogs with lower estrogen levels, confirming that these tumors depended on estrogen for progression.

Sorenmo speculates that, in these cases, estrogen's action may be nuanced,



*More work needs to be done to understand estrogen's role in battling cancer.*

"It drives the cancer, but it also seems to control or modulate it, reining it in," she says, because most dogs with high serum estrogen levels had lower-grade and estrogen receptor-positive tumors, rendering them susceptible to hormonal deprivation by spaying.

The protective role of estrogen was

surprisingly pronounced in dogs with estrogen-receptor negative mammary tumors. In these higher-risk cancers, high serum estrogen was associated with delayed or absent metastasis. Complementing these findings and supporting a potential broader, tumor receptor-independent anti-cancer effect driven by estrogen, dogs with low serum estrogen had a significantly increased risk for developing other non-mammary aggressive fatal tumors, such as hemangiosarcoma, during their follow-up after mammary tumor surgery.

Some of the findings contradict what has been found in women with breast cancer. For example, higher serum estrogen levels in women following breast cancer therapy have been associated with higher rates of recurrence. But many cases of breast cancer in women arise just after menopause, when estrogen levels tumble, so there may be a more complex role for estrogen here too. More work needs to be done, but the findings raise good questions. ■

*Sorenmo, K.U., et al. The estrogen effect; clinical and histopathological evidence of dichotomous influences in dogs with spontaneous mammary carcinomas. PLOS ONE, 2019; 14 (10): e0224504 DOI: 10.1371/journal.pone.0224504. Science Daily.*

## © 5 THINGS

### 5 Things to Do When Facing Cancer

*The dogcancerblog.com offers food for thought with our dogs in mind first*

- 1 Write down what your dog's status is right now. Include the type of cancer, possible treatments, financial cost, and likely quality of life.
- 2 Determine the benefits of treatment against the risks. Maybe your dog could cut back on pain medications and take longer walks.
- 3 Examine the best-case scenario. Of course, complete remission with a multiyear survival with good quality of life is your "best case," but look deeper to see how realistic that is for your individual dog.
- 4 List all risks of treatment. Be honest and look at the reality of your dog's situation. How likely is the worst-case scenario? Again, be brutally honest here. What if the odds are 90 percent that your dog will not respond favorably to chemotherapy?
- 5 Weigh the pluses and minuses to treatments, supportive care, and hospice care. Evaluate all of these things in light of your dog. He may be a social butterfly who doesn't mind weekly trips to the vet clinic for an IV injection. Or he may be a "happiest at home" dog who would be upset every time he had to go in for treatment or bloodwork. A cancer diagnosis requires an honest look at your dog, your home, your financial situation, and what's best for both your dog and you. ■





# Optimize Orthopedic Health

*Excess weight or exercise is hard on your dog*

**W**e all want our dogs to be sound and healthy for as long as possible. Dogs who aren't destined for agility championships still need orthopedic soundness to be comfortable, even if his main job is as snuggler supreme or couch puppy extraordinaire.

## Puppy Start

Clearly, a sound puppy is a good start. Purchasing a puppy from a reputable breeder or buying one from a knowledgeable rescue or shelter can increase your chances of getting a physically sound dog.

When getting a purebred pup, ask about orthopedic clearances on the parents. For medium to giant breeds, hip and elbow clearances are standard. Even toy dogs can have orthopedic problems, such as luxating patellas. You may be able to verify proof of clearances by checking out the Orthopedic Foundation for Animals website at <https://www.ofa.org/>. You can find a whole "pedigree of health" for many inherited traits.

Rory Todhunter BVSc, PhD, DACVS, Professor of Surgery, Section of Small Animal Surgery at Cornell, considers genetics important in orthopedic issues. "Select a pup with optimum orthopedic genetic quality. Use pedigrees and radiographic information. Use breeding values for hip and elbow dysplasia. You won't get orthopedic diseases without genetic propensity," he says.

If your pup is a mixed breed, looking at breed statistics for the combos that make up his heritage can give you an idea of overall risk as well. Mixed breeds are susceptible to all the orthopedic conditions seen in purebred dogs.

Of course, genetic traits like hip dysplasia aren't simple inherited traits. There are many modifier genes and variations in penetrance. In addition, environmental factors can influence

many orthopedic traits as well. Clear parents won't guarantee no problems, but they reduce the risks.

If your pup has no orthopedic clearances, have your veterinarian do an orthopedic exam on his routine puppy visits. This is especially important if you hope to compete in performance sports with your dog.

## Control His Environment

Once you have minimized risks for orthopedic problems via selection, turn your attention to the areas that you can control, like diet. Dr. Todhunter stresses the need to feed your dog as an individual. "Feed your dog or puppy appropriate amounts based on age, body weight, and activity level. Keep him fit and slim. All dogs should have a 'waist' when viewed from both on top looking down and from the side. Obesity promotes orthopedic disease and subsequent osteoarthritis and chronic inflammation just like in people in affected joints." Puppies will go through growth spurts and may seem "too thin" at various points, but they catch up shortly.

Activity level and exercise are important from an orthopedic point of view, especially with puppies. It can be tempting to run your exuberant large breed puppy five miles to "wear him out" but it is not good for his joints. This is especially true if you are running him on hard surfaces such as asphalt.

Equally bad can be throwing a ball or flying disc multiple times. "Limit prolonged games of retrieving on hard ground," says Dr. Todhunter. If your pup or dog is running hard, leaping or doing quick turns, he is stressing his joints. Swimming is better but should be limited for puppies. Try to make puppies avoid stairs, especially large and giant breed dogs, as stairs can stress those developing joints.

## Discuss with Your Vet Age to Spay/Neuter

Very early spay/neuter, such as at 8 to 12 weeks, may be associated with the development of some orthopedic problems like torn cruciate ligaments or increased risk of injury due to later closure of growth plates.

A generally accepted standard is to increase exercise for puppies by five minutes per month of age up to twice a day. For example, 3-month-old puppies should have 15 minutes of exercise each day, 20 minutes at 4 months, and so on. That means walking on leash or free running, not five minutes of hard fetching or jogging on leash. Along with this "planned exercise," your pup will get activity in your house and yard interacting with you.

Why so much concern for puppy joints? Bone growth comes from areas called "growth plates" at the end of the long bones. Known as the epiphyses, these sensitive areas contribute much of the length to a dog's bone such as the femur and humerus. If these areas get injured before normal growth has finished, the dog will have shortened bones. Injuries might be fractures through the growth plate area or even bruising from jumping off furniture.

Remember, though, that even dogs with some radiographic changes may never show any clinical symptoms, especially if you keep them fit with a sensible diet and moderate exercise. Using common-sense exercise programs and conditioning exercises from a certified rehabilitation veterinarian or veterinary technician with appropriate joint supplements can keep your dog active for years. ■

## Non-Concussion Exercise

Concerned about your high energy pup wearing you out? Consider some mental games that are just as tiring to a pup as physical games. That might include food puzzles or scent games. Even brief obedience or rally training sessions can tire a pup out just by concentrating on learning. A helpful set of guidelines for exercising puppies is this chart from Puppy Culture. <https://www.puppyculture.com/new-exercise-chart.html>



*A puppy needs limited amounts of "planned exercise" to protect his joints.*



# Yes, The Dog Did It

*Abnormal flatulence may indicate an illness*

There are many jokes about flatulence and dogs. Usually an innocent dog takes the blame for a human indiscretion. Still, for some families, canine flatulence can make for uncomfortable relationships and hurt the human-animal bond.

Flatulence is the passing of intestinal gas, sometimes accompanied by a sharp sound and unpleasant odor. Rarely, small amounts of fecal material will be passed as well. While it's normal for some gas to be produced during digestion, some dogs leave an atrocious smell.

## It's in the Food

As with people, the most common causes of flatulence are certain foods or "dietary indiscretion." Poorly digested foods lead to excessive fermentation in the large intestine and colon, which means gas will need to be passed. "Any foods that are not well digested may be a cause. Soy, some fiber sources, cruciferous vegetables, etc., can all be a problem," says John P. Loftus PhD, DVM, DACVIM, Assistant Professor, Small Animal Internal Medicine, the New York State College of Veterinary Medicine at Cornell.

Foods associated with gas production in dogs include:

- ▶ Beans
- ▶ Fatty foods
- ▶ Grains
- ▶ Lactulose
- ▶ Legumes such as peas
- ▶ Psyllium
- ▶ Soybeans
- ▶ Spicy foods

Food allergies and sensitivities can lead to gas production when the offending items are consumed, such as when dogs who are lactose intolerant ingest milk or dairy products.

High levels of meat protein may cause gas for some dogs because it is an ideal source of nutrients for clostridial bacteria. In turn, those bacteria are associated with increased amounts of malodorous gas production. This is worse if the individual dog suffers from any protein maldigestion. A rapid change in diet, without time for intestinal bacteria to adjust, can lead to excessive gas.

Dogs who eat rapidly, swallowing air along with their food, are prone to passing gas according to some veterinarians. The same can be true of dogs who pant excessively or are normally heavy breathers, such as many of the brachycephalic dogs. It should be noted that many of these dogs will belch or burp as well as pass gas. Other experts feel that the added intake of air orally will not influence intestinal gas at all. Still, it can't hurt to limit as much air gulping as you can, which sometimes can be helped with a slow-feeder bowl. Avoid feeding your dog directly after extensive exercise as it can lead to more gas being passed. It can also lead to bloat.

## Health Concerns

For most dogs, flatulence is not a health problem. Tracking diet and treats to see what foods lead to excess gas production can help you eliminate the culprits from your dog's diet (see also story on p. 7). Cutting back on table food also may help to reduce gas production. Activated charcoal may be recommended by your veterinarian in extreme cases but only short-term.

Anecdotally, many dog owners feel avoiding certain foods will reduce flatulence. Common offending foods include rice and potato.

Both Boxers and French Bulldogs

## Did You Know?

*Borborygmus is the word for unusual rumbling noises from the abdomen. These noises are often followed by either gas or diarrhea or both.*

have a relatively high incidence of histiocytic ulcerative colitis (ulcers in the lining of the colon and inflammation). This condition may be caused by an overgrowth or invasion of *E. coli* (a bacterial species) in the intestinal tract. A change in the normal microflora of the intestines can lead to gas production.

Inflammatory bowel disease (IBD) has been linked to some cases of canine flatulence, although it's a minor symptom compared to the weight loss and protein loss. Soft Coated Wheaten Terriers and Yorkshire Terriers have an increased incidence of this immune problem. In addition, Yorkies have a higher than normal incidence of liver shunts, which causes some maldigestion.

Any gastrointestinal upset, including infectious diseases like parvo virus, may lead to excess gas. Even antibiotic usage can contribute to flatulence as it disturbs the normal intestinal bacterial flora.

## Diagnosis

"Often gas can be a sign of digestive disease, so getting that checked is a good idea," says Dr. Loftus. How your veterinarian helps you pinpoint the cause of excessive flatulence will vary with the intensity of the problem and other clinical signs. For mild cases, starting with food trials and a fecal exam is simple and inexpensive. Specialized bloodwork may be required to rule out IBD, pancreatitis, or exocrine pancreatic insufficiency (EPI). Ultrasound and radiographs are sometimes used but often a biopsy is required for a definitive diagnosis of serious problems.

For most dogs, passing gas is not a sign of a serious health problem. "Exercise can help," says Dr. Loftus. If your dog is healthy otherwise, consider increasing his activity level and slowly changing ingredients in his diet. Ideally, change one ingredient at a time so you can isolate the culprit. Look for the presence of the known gas-producing foods. Feeding charcoal biscuits can't hurt, although it may not help. If your dog shows other signs of gastrointestinal illness, a veterinary visit is in order. ■



## Breed Tendency

Some dog breeds are especially prone to flatulence, including:

- ▶ Boxers
- ▶ English Bulldogs (pictured)
- ▶ French Bulldogs
- ▶ Pugs
- ▶ Soft Coated Wheaten Terriers
- ▶ Yorkshire Terriers



# Can Saliva Testing Help Allergies?

*It offers hope, but false positives cloud its promise*

Some of the most difficult veterinary problems to treat involve food allergies and food sensitivities. Usually, treatment begins with a food elimination trial where you swap in and out specific ingredients to see which cause a reaction. Now, however, saliva and blood-testing services claim they can identify food allergens, which could make the process faster and easier.

According to Dr. William H. Miller VMD DACVD Professor Emeritus of Medicine, Section of Behavior and Section of Dermatology, "The classic food allergy pattern for dogs in the skin was claimed to be ears and rears—not true. The clinical signs of food allergy can mimic virtually any skin disease. In addition, food issues are almost always either GI (gastrointestinal) or skin but not both." It is virtually impossible to diagnose a food allergy or sensitivity with a simple physical exam.

## Testing

In a true food allergy, your dog's immune system reacts to a food protein as if it was a foreign invader. Dogs with food allergies may show skin symptoms such as itching or may show gastrointestinal signs like vomiting or diarrhea. True food allergies can show up under a year of age. The most common foods associated with allergies are beef, chicken, eggs, cow's milk, wheat, soy, and corn. For a true

food allergy, the only way to definitively diagnose the problem is feeding trials.

The dog must be willing to eat the new diet and owners must be compliant. No treats and no other foods, including flavored medications and toothpastes. Six to 12 weeks is the recommended time period to eliminate a food as the culprit for allergy symptoms.

After your dog has "chilled out" from the offending protein(s), you then do a "challenge" by feeding one of the possible culprits. Reactions to an offending protein can show up in a day or a week; rarely, it takes a couple of weeks.

Food sensitivities or intolerances are less serious. Often the clinical signs are soft or frequent stools or increased flatulence. With these problems, your dog isn't digesting the foods properly, causing gastrointestinal signs.

## Immunoglobulins

On the hunt for more convenient ways to diagnose causes of "adverse food reactions" such as allergies and sensitivities, companies have developed with blood and saliva tests. A recent study reported in the October 1, 2019, issue of *JAVMA (Journal of the American Veterinary Medical Association)* conducted at the Cummings School of Veterinary Medicine at Tufts University looked at two serum tests and one saliva test to see just how accurate results might

be. The serum tests looked for allergen specific IgE. The saliva test looked for allergen specific IgM and IgA.

Ig's are immunoglobulins, antibodies produced by white blood cells. They generally have a specific pathogen or foreign element that stimulates them and causes a reaction. Different types of immunoglobulins (IgA, IgM, IgE, IgG) will react in different situations and against different types of antigens. In addition, different breeds may have different levels of the immunoglobulins. One study looked at Beagles and German Shepherd Dogs and concluded that there is a genetic component to the amounts and types of immunoglobulins produced.

While blood tests are generally used to look for the immunoglobulins associated with food sensitivities and food allergies, IgA, IgM, and IgG can also be detected from fecal samples. The testing looked at in this study used blood or saliva. IgM and IgE are typically found within blood cells. IgA is often located along the mucosal surfaces of the gastrointestinal tract as well as in saliva.

IgA and IgM are more commonly associated with food sensitivities or intolerances. IgE and IgG are generally associated with true food allergies. IgE is noted for its interactions in skin allergies. These immunoglobulins are associated with many antigens that may not be food related, making it important to test for specific proteins that might trigger a response. Dr. Miller says the immunology of food allergy or intolerance isn't completely understood and may vary in individual dogs.

All three tests done in the study evaluated about 24 food proteins, varying somewhat with each test. The 30 test dogs were all normal dogs owned by Tufts faculty, staff, and students.

Unfortunately, there were many false positive results with all three versions of the screening test. One dog even tested positive for all the foods. The conclusion was that the gold standard for diagnosing food-related health problems in dogs remains the elimination diet followed by a food challenge.

Still, anecdotally, numerous owners report some improvements following diet changes dictated or recommended by one of these tests. It might be firmer or less frequent stools or a decrease in the passing of malodorous gas. Obviously, more studies need to be conducted to compare serum or saliva results alongside elimination diets. ■



Although individual dogs can have gluten sensitivities, the Irish Setter has an autosomal recessive gene that is linked to gluten-sensitive enteropathy.



# Improper Mounting Behavior

## Counter conditioning can help end this problem

**Q** I have a 7 1/2-year-old Golden Retriever, who is a therapy/Reading Education Assistance Dog (R.E.A.D.) dog. We have been going to elementary schools for six years. Rocky is a perfect gentleman at school, lying still while a child reads to him, one hand on the dog and one on a book. My 6-year-old granddaughter loves him, and he, in turn, lets her hug, lean on, and play with him. Lately, he has begun to try to hump her—he gets excited when she comes home from school or is running around. I stop him and tell him “no,” but he continues to do it. He is as big as she is and strong. I’m afraid he could hurt her, plus this is unacceptable behavior. Please tell me how I can stop this behavior.



Rocky’s behavior may be resolved by teaching him to sit when he sees the little girl.

playing. Mounting can be observed in four very different situations (and three different emotions). The first is sex, of course, but it is highly unlikely that sex is of great interest to a middle-aged castrated dog. You could, of course have his blood tested for sex hormones. The second situation is play. Male puppies and adult dogs often mount in play. The third situation is anxiety and perhaps a complete history would reveal some component of his environment is making him anxious. Finally, mounting can be a sign of dominance.

Dominance is a controversial subject in behavior these days, probably because it has been over-used as a diagnosis. There is no question that dogs living in a group form a dominance hierarchy with one dog, usually a male having first access to food, mates, a comfortable spot, etc. The controversy is whether dogs include us in their hierarchy. If a dog bites you when you try to take a burr from his fur, he probably is doing it to avoid pain, not to establish his social superiority.

### ◎ HAPPENING NOW...

**Dog Rescues Kittens**—A stray dog in Ontario, Canada, was found on a road sheltering five kittens from the cold, according to CTV News. The Pet and Wildlife Rescue (P.A.W.) took them in and said it was unlikely the five-week-old kittens would have survived otherwise. Offers to adopt the dog, named Serenity, are pouring in.

**Very Old Puppy**—The remains of a “remarkably intact” puppy were found in Russia last year, but information

Your dog may or may not think he is superior in rank to your granddaughter. What he does do is to invade her personal space without invitation.

Your granddaughter should not just walk into the house. If she carries a cell phone, she should call you or knock on the door to let her in rather than just walking into the house. You can grab the short leash and ask Rocky to sit while she walks in. This is called counter conditioning because he should learn that the stimulus of the little girl means he should sit and lie down rather than jump on her. The easiest way to make him more respectful is to have her give him commands. I am sure he knows sit and down and probably stay.

You and she should spend five minutes a day together working on his obedience. She can say “sit,” and if he doesn’t obey her, you can give the command. He should get a treat every time he obeys. Maybe a small biscuit if he obeys only when you give the command, but a delicious piece of meat if he obeys her on her first request. Remember not to repeat the command or he will learn to sit only after you say it 14 times.

You can give him one command wait five seconds and give it once more. If he still doesn’t sit, stop the session and wait at least five minutes before trying again. It won’t take long for him to consider her a leader. She should not hug him; most dogs don’t like to be hugged and this dislike can escalate to aggression.

You may wonder why sexual behavior persists in a neutered male. The explanation is that his brain was masculinized while he was a fetus so his brain (as well as his genitalia) are masculinized and, although the hormones that would stimulate his sexual behavior if he were intact (not castrated) are missing, his brain is still male. ■

about the find is just surfacing. Named Dogor, the male two-month-old puppy’s remains are estimated to be 18,000 years old. Researchers are unable to determine if the puppy is wolf or dog or a mix.

**Music for the Dogs**—The *New York Post* says that Broadway violinist Martin Agee regularly goes to a local shelter and plays his violin for dogs recovering from abuse and serious injuries. The dogs curl up, relax, and sometimes join in the music. ■



### 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](mailto:dogwatcheditor@cornell.edu) or send by regular mail to DogWatch, 535 Connecticut Ave., Norwalk, CT 06854-1713.



### Coming Up ...

- ▶ What Makes a Dental Diet “Dental”?
- ▶ Becoming Involved in Foster Care
- ▶ Life Without Teeth
- ▶ How Tails and Ears Communicate