

© THIS JUST IN

Hookworm Resistance

It could happen to your dog

Hookworms use their hooklike mouths to grab onto tissue in your dog's intestines and feast. Symptoms of a hookworm infection include weight loss, bloody stool, anemia, and lethargy. A 2019 study from the University of Georgia, using racing Greyhounds, found that hookworms were becoming multi-drug resistant to common deworming drugs. This is a major veterinary concern.

Four out of five of the Greyhounds in the study still had high levels of infection after being treated. Now, veterinarians are seeing evidence of resistance in pet dogs, too. And, hookworms can spread from dog to dog and to humans as well.

An article from the *Journal of the American Veterinary Association* states that veterinarians are turning to off-label use of drugs, such as emodepside, which is approved in Europe. It is not without risk if your dog also has a heartworm infection. An FDA-approved feline medication that contains emodepside and praziquantel is also being used off label, but it has the same heartworm risk.

Dogs pick up hookworms from the soil and infected feces. Proper hygiene at dog parks, kennels, and boarding facilities is extremely important. If your dog begins to show symptoms of hookworm infection, contact your veterinarian immediately. These parasites can spread rapidly. ■

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Effective Weight-Loss Tips

Strategies to help your dog take off those extra pounds

Obesity, a rampant problem in dogs, stresses your dog's joints and overall health. You can help him! Start by weighing your dog and then every month after that. Aim for a weight loss of 3% to 5% per month. These tips may help you achieve that

1 Use a commercial weight-control diet. With the epidemic of overweight pets in our nation, pet-food manufacturers have developed a number of high-quality, tasty "weight-loss" choices. Nearly every manufacturer has at least one choice, sometimes by breed size. Be sure you read the label to ensure that 1) It is formulated to the AAFCO standards for adult maintenance and 2) That it truly is lower in calories than what you're feeding now (some aren't!).

The biggest benefits of this choice are that you can usually feed the same volume of food and you are ensuring that you are feeding the proper amounts of nutrients your dog needs to stay healthy.

2 Measure food accurately. If you want to stick with your current food, that's fine. Cut it back 10% (you can do it by volume, if it's easier) and monitor him. "Use a measuring cup to accurately portion food for meals and make sure to fill the cup so it is level and not heaping," says Leni Kaplan, DVM, MS, Lecturer in Cornell's Community Practice Service.

3 Limit treats. "Monitor or significantly cut back on treats," says Dr. Kaplan. "Many pets tend to carry extra weight simply because they get way too many snacks and treats." Treats are often calorie-dense, meaning that even a few can throw off your dog's diet. Many trainers set aside part of one of the dog's meals to use as treats throughout the day.

4 Add veggies and water to your dog's meals. "To help pets feel more 'full,' add healthy veggies such as green beans to their kibble and/or add water to their meals. When pets are well hydrated,

they feel less hungry," says Dr. Kaplan. Plain canned pumpkin is a good option that many dogs enjoy. A small amount of pumpkin (a teaspoon to a tablespoon, depending on our dog's size) added to the food helps your dog feel more full and improves stool quality.

Adding water may take some experimentation. Some dogs enjoy slurping up "kibble soup," while others prefer when the kibble has soaked up the extra moisture, which can also help senior dogs or dogs who just had a dental procedure, too.

5 Exercise. Just like us, dogs need exercise. Lengthen the daily walk by 10% per week. If time is a factor, can you add a little speed? If your dog enjoys playing ball, toss it a time or two extra each day. Always watch your dog's reaction to the increased exercise and move it up gradually. If you note any difficulty with your dog panting hard or clearly trying to slow things down, stop. Discuss the possibilities of other health issues with your veterinarian. ■



Exercise can be an overlooked part of weight loss for your dog. Start at his speed, and slowly work up the intensity and length.

Cavalier King Charles Spaniel Genetic Variants

Findings include those linked to a common heart condition

Recent dog-breeding practices may have loaded Cavalier King Charles Spaniels with disease-causing mutations, including variants linked to myxomatous mitral valve disease (MMVD), according to a study published in *PLOS Genetics*.

The study's researchers wanted to know whether recent breeding practices had increased the number of disease-causing variants in dogs. They sequenced entire genomes from 20 dogs from eight common breeds, including Beagles, German Shepherd Dogs, and Golden Retrievers. They found that the Cavalier King Charles Spaniel, which experienced the most intense breeding, carried more harmful genetic variants than the other breeds they examined.

The researchers also looked for genetic variants in the Cavalier genomes linked to MMVD. They identified two genetic variants linked to the disease, which appear to regulate a gene that codes for a common protein in heart muscle. The findings offer a potential explanation for why the Cavalier is predisposed to develop the disease. ■

Axelsson, E, et al. The genetic consequences of dog breed formation—Accumulation of deleterious genetic variation and fixation of mutations associated with myxomatous mitral valve disease in cavalier King Charles spaniels. PLOS Genetics, 2021; 17 (9): e1009726 DOI: 10.1371/journal.pgen.1009726. Science Daily.



Cavalier King Charles Spaniels are athletic, fun family dogs, but one study found their intense breeding may have been harmful and caused genetic variants.

Prototype Shows Promise for Arthritis

An implant containing cartilage from stem cells reduces pain

A textile-based implant containing cartilage derived from stem cells reduced pain and restored hip joint function to baseline levels in a study of dogs with symptoms of moderate osteoarthritis. The study could be a significant first step toward preventative, less invasive joint resurfacing in dogs and humans.

“One of the holy grails of orthopedics is to replace cartilage, but there hasn’t been an effective way to do it,” says Duncan Lascelles, professor of surgery at NC State and co-corresponding author. The implant, which could replace damaged or missing cartilage, is part textile, part 3D-printed structure, and can be seeded with the patient’s own stem cells.

In the study, cartilage was allowed to grow on the implant for several weeks before surgery. Then the implant was placed into the damaged area of the hip’s ball joint. Over time, the implant dissolved, ultimately leaving only the patient’s own natural tissue in the repaired hip joint.

Four months post-surgery, the group that received the cartilage implant had returned to baseline levels for both function and pain, while the control group never improved. The researchers also saw evidence that the implant had successfully integrated into the hip joints, effectively resurfacing them.

“What we saw is that with the implant these dogs were doing as well as or better than they would be after a total joint replacement,” Lascelles says.

Lascelles hopes that the implant will address some of the issues involved with total joint replacements in young and active patients. ■

Estes, B, Kascelles, D, et al. Biological resurfacing in a canine model of hip osteoarthritis. Science Advances, 15 Sep 2021, Vol 7, Issue 38.

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Eating Well But Losing Weight

The problem may be digestion by the pancreas

Imagine this: Your happy dog starts wasting away, even with a healthy appetite. His coat becomes brittle and unhealthy, his stools change dramatically, he is not himself, and all the routine testing your veterinarian does on him comes back normal. This is the stuff nightmares are made of. This is when exocrine pancreatic insufficiency (EPI) will cross your veterinarian's mind.

EPI is not common, but if it happens, it's a big deal. Often, by the time you get the diagnosis, your dog has been sick for a while.

With EPI, your dog's pancreas no longer produces enough digestive enzymes. With no digestive enzymes, ingested food is not broken down, and therefore, it can't be absorbed.

The result is weight loss, dry coat, greasy voluminous stools/diarrhea, and vitamin deficiencies. It's malnutrition even though they are eating well.

While some breeds are more prone to EPI (a genetic component is suspected), it can occur in any dog, at any age. Repeated bouts of pancreatitis or chronic pancreatitis can cause it.

Testing

Your veterinarian will likely run a trypsin-like immunoreactivity test (TLI), which is a fasting blood test. If the TLI comes back low, your dog has EPI. Your veterinarian will likely run a full gastrointestinal (GI) panel, as dogs with EPI frequently have concomitant GI disorders like small intestinal bacterial overgrowth and cobalamin (vitamin B12) deficiency. If these coexisting disorders are not corrected, your dog's condition will be much harder to manage.

The newest test for EPI, called pancreatic elastase, is run on a single stool sample, and fasting is not necessary. While it's nice not to have to fast your dog or have blood drawn, this test is not sensitive enough to rely on for a definitive diagnosis. It has potential as a screening test, perhaps included with a stool sample submitted for routine parasite testing during a diagnostic workup for diarrhea.

A positive (normal) elastase test confirms your dog absolutely does not have EPI. Which means your veterinarian can cross EPI off your dog's list. The problem, however, is that a negative

What You Should Know

Symptoms of EPI include:

- ▶ Increased appetite
- ▶ Weight loss
- ▶ Loose stools (usually pale and large)

(abnormal) result does not confirm he has it, as some normal dogs can have negative elastase tests. So, if this preliminary screening test is negative, the diagnosis still must be confirmed with a TLI.

Treatment

Treatment entails adding digestive enzymes to your dog's food. This can be done by adding either commercially available powders—tablets are not recommended—like Pancreazyme (Virbac) or Viokase-V (Zoetis), or by adding raw, chopped animal pancreas (beef, pig, sheep, or game).

If you elect to use the powder, mix it thoroughly into the food, as direct contact with the powder can irritate your dog's mouth. There is no need to let the food/powder mix incubate for 30 minutes as previously thought. You can just mix and feed.

If you elect to use raw pancreas, get it from a reputable supplier and ensure that the product is freshly harvested and flash frozen at the slaughterhouse and that it arrives frozen. Greentripe.com is a supplier worth checking out, with many locations nationwide and online ordering.

Raw pancreas for enzyme replacement can be kept frozen for up to three months and still be viable. It must be fed raw, as cooking destroys the digestive enzymes. Recommendations for amounts to feed vary. Some say 1 to 3 ounces per meal, some say 2 ounces per 20 pounds of body weight per day. These suggestions are starting points.

Feeding raw animal products puts your dog at risk for disease from parasitic or bacterial contamination and puts you at risk for food borne illness caused by accidental contamination of your hands or home surfaces. We recommend you follow the FDA's guidelines for safe

handling of raw animal products, which can be found at www.fda.gov/animal-veterinary/animal-health-literacy/get-facts-raw-pet-food-diets-can-be-dangerous-you-and-your-pet

If your dog is not responding as well as you and your veterinarian expected, you can try:

- ▶ Switching to a prescription highly digestible, low-fat diet like Hill's I/D low-fat.
- ▶ Starting your dog on a stomach-acid reducer like famotidine (Pepcid AC), which blocks stomach acid, or omeprazole (Prilosec), which inhibits stomach-acid production—always under your veterinarian's guidance—as stomach acid destroys some of the digestive enzymes you're adding to the food.
- ▶ Increasing the amount of digestive enzymes you add to the food, with guidance from your veterinarian.
- ▶ A different brand or type of digestive enzyme supplement.
- ▶ Letting the enzyme/food mix incubate for 30 minutes before feeding.
- ▶ Having your dog tested for small intestinal bacterial overgrowth (SIBO) and cobalamin deficiency and treat if present.

Well-managed EPI dogs can live long, healthy lives. This disease requires a lifelong commitment, but your efforts and loving care will be well worth it in the end. ■



A study published in the Journal of Veterinary Internal Medicine showed an increased risk of EPI in Rough Coated Collies (pictured), German Shepherd Dogs, Chow Chows, and Cavalier King Charles Spaniels.

You Can Manage Diabetes

And your dog can have a long, happy life

Learning your dog has diabetes can feel like a punch to your gut. Up to 1% of all dogs may develop diabetes during their lifetime. While this is a serious diagnosis, treatment options and management strategies can give your dog a long, quality life.

Diabetes mellitus revolves around a lack of insulin or a lack of the body's response to insulin, which is similar to type 2 diabetes in people. Insulin therapy is a mainstay of treatment.

Starting Therapy

Once your dog has been definitively diagnosed with diabetes, treatment with insulin will be the starting point. Dogs who are ill may need to be hospitalized and started with rapid-acting insulin injections. Most dogs will be feeling relatively well and can start treatment at home under veterinary guidance.

Customizing treatment for diabetics is essential. Individual dogs may respond to one type of insulin but not another (see sidebar). Some dogs become resistant to a certain type after time and need to change. Dosages can vary greatly among dogs, as can the timing of dosages. Typically, dogs will start off on insulin injections twice a day, around their feeding times. But, be prepared for the experimentation necessary to find the ideal protocol for an individual dog.

Veterinary staff will explain how to handle and store insulin, and how to correctly use the syringes. Different

strengths and types of insulin come in different units, and you need to carefully match the syringes you use with the insulin type. Insulin is sensitive and must be stored carefully, not too cold or too hot. Even shaking it too vigorously can harm this medication. Some insulins need to be rolled rather than shaken. Never use insulin past its expiration date.

Finally, you will learn how to give the injections. Some clinics have you practice on something like fruit until you are comfortable with doing the injections properly. Injections are given subcutaneously. The needles are a small diameter and very sharp, so most dogs handle the injections well. Needles and syringes need to be disposed of properly. You will need a sharps container and to learn how to dispose of the needles in your town.

Insulin-Glucose Response Curve

Once you have the basics down, you will help fine-tune your dog's treatment. Trial and error is used to determine the best insulin, the ideal dose, timing, and how to coordinate feedings with the dosing schedule. For the first week or two, while your dog's body adjusts to the insulin and you get your routine down, your veterinarian may have you monitor your dog via urine glucose strips. These give you a rough idea as to whether your dog is handling the insulin without getting his glucose levels too low.

What You Should Know

Symptoms of diabetes

- ▶ Excessive thirst (drinking water)
- ▶ Increased urination
- ▶ Weight loss (even if eating well)
- ▶ Decreased appetite
- ▶ Cloudy eyes
- ▶ Chronic or frequent infections, including skin and urinary infections

The ideal method for determining all these factors is to create a glucose response curve. Glucose is one of the main factors influenced by insulin. Tracking results of glucose in the blood is an easy way to know if your insulin dose is correct. Urine glucose monitoring can also help but is not as precise.

To create a glucose curve, blood glucose levels are checked about every two hours over a 12-hour period, if possible. Yes, that many blood tests can be expensive, but it is worth it to get your dog on the right track. Using the glucose curve, your veterinarian will see when the insulin starts to act, how long a single dose provides treatment, when the insulin is at its highest level of activity, and when it fades out. While running the glucose curve, your dog's feeding timing and amounts are carefully controlled. Based on the highs and lows of the curve, adjustments may be made in dose, timing of meals and amount fed.

Normal blood glucose levels in healthy dogs are 80 to 120 milligrams per decilitre (mg/dl). Most dogs can handle levels going as high as 250 with minimal side effects. Post mealtimes, some dogs may normally go up to 400 but that is a temporary effect. Once blood glucose levels go over 200, glucose will be detectable in the urine.

Factors Influencing Insulin Dosing

Because glucose is a basic nutrient, many factors can affect a dog's requirements. Obese dogs need to lose weight, so that should be factored in. If your dog has a successful weight-loss program, insulin amounts will decrease. Activity levels also require different amounts of insulin. A dog who is running agility trials will end up with a different dose than a dog who strolls sedately around the block

Side Effect Cataracts

Cataracts are a common side effect of diabetes in dogs. These cataracts tend to mature quickly and may be associated with inflammation. A veterinary ophthalmologist can evaluate your dog's eyes to determine if cataract removal would improve vision.

If the ophthalmologist recommends removal, a well-regulated diabetic dog can have general anesthesia and surgery to remove the damaged lens. An artificial lens may be put in place at that time. If your dog is not a surgical candidate, don't despair. Blind dogs usually adjust well to their loss of vision.



The bluish filmy circular spot on the dog's eye is a cataract, which can lead to blindness.

once or twice a day. Female dogs who go into heat will often have different insulin needs than a spayed dog (it is generally recommended to spay an intact diabetic female to even out insulin requirements).

If your dog is sick or becomes hypothyroid (low thyroid hormone production), his insulin needs will change. If your dog skips his morning meal and doesn't eat, you need to contact your veterinarian to discuss adjustments in the insulin dose. Insulin needs the "raw material" of the food to be effective.

Monitoring Your Diabetic Dog

If your dog is not showing any clinical signs of hyperglycemia (too high a blood sugar/glucose) such as drinking more than usual, being extra hungry or urinating excessively, your dosing should be in the ballpark. Even so, periodic blood testing is recommended.

Having hypoglycemia (low blood sugar/glucose) is more serious. If your dog is very lethargic, sleeping more than usual, and resisting activity he may have hypoglycemia. Some of these dogs will have tremors, difficulty walking, and can collapse into a coma.

The brain is very dependent on glucose for its nutrition, so any changes in mental state could mean hypoglycemia. If you suspect this, you can put corn syrup or honey on his gums. If he is alert, a meal of cooked pasta with

some syrup or honey can help to quickly raise his blood sugar. The response should be fairly rapid. Contact your veterinarian if you suspect high or low glucose with your dog.

Fairly new on the scene are continuous or flash glucose-monitoring systems. These high-tech systems use an electrode inserted in the subcutaneous tissues of your dog. They give off a small current determined by the amount of glucose in the interstitial tissues. That charge is then converted to a glucose amount and seen on a monitor.

Two systems have been used successfully in veterinary medicine: the MiniMed iProz, a continuous monitoring system, and the Abbott Freestyle Libre which is a flash system. These systems can provide a picture of your dog's daily blood glucose levels while he is at home and doing his normal activities.

Best Management Practices

The goal with your diabetic dog is to mimic a healthy dog's glucose status. You want a normal rhythm with no clinical signs of too high or too low. That means a steady routine, ideally feeding your dog the same diet and at the same time(s) every day. Plan your dog's activity for each day. If you have an unusually active day planned, ask your veterinarian ahead of time about any recommended adjustments in insulin or food.



Caught early and with proper management, the prognosis for most diabetic dogs is good.

A steady state minimizes long-term damage from diabetes to organ systems like the heart, liver, and kidneys. Even dogs who are well-managed may eventually develop cataracts, but it takes longer in dogs who have relatively well-controlled glucose levels.

Once your dog is on a set schedule, costs and complications are minimal.

Prognosis

With careful monitoring, many dogs with diabetes live full, active lives. It is important for owners of diabetic dogs to keep a notebook charting daily dosage, diet, and activity. Doing so can alert you to any developing problems. ■

Understanding Your Dog's Prognosis

As with so many canine health problems, early diagnosis is key to your dog living a full life. Caught early, with treatment started right away and careful monitoring, many dogs with diabetes live full, active lives. The battle will be more difficult with dogs who have these issues:

Phosphate levels. Dogs who have high levels of phosphate in their blood at the time of diagnosis tend to have a slightly less positive prognosis. The exact reason for this is unknown, but it emphasizes the need for a complete blood chemistry panel at the time of diagnosis.

Medical history. Dogs who are over 10 years old, overweight, have a history of pancreatitis, or are battling hyperadrenocorticism (Cushing's disease) are more likely to have problems. Dogs with hypothyroidism have a slightly higher risk of becoming diabetic and any dog who has required treatment with glucocorticoids for long periods of time is also at risk.

Breeding. A study from the United Kingdom suggested that Border Terriers, West Highland White Terriers, and Cocker Spaniels had lower survival times than Border Collies. Tibetan Terriers, Cairn Terriers, and Samoyeds are also considered high-risk breeds for diabetes.

Females. While female dogs have a higher risk of developing diabetes, if they are spayed, they can be managed quite well.

Types of Insulin

There are many versions of insulin available for treating diabetic dogs, and your veterinarian will guide you to the best choice for your individual dog.

FDA-approved for use in dogs:

- ▶ porcine lente (Vetsulin)
- ▶ zinc insulin (ProZinc)

Used off-label with good results:

- ▶ Detemir (Levemir)
- ▶ Glargine (Lantus)
- ▶ Isothane insulin, known as NPH (Novolin-N, Humulin-N)

All insulin drugs should only be used under the guidance of your veterinarian, with regular check-ups. Insulin costs will vary among products.

Rehab at Home: the TENS Unit

This therapy device may be worth the investment

If your dog needed rehabilitation therapy at one point or another, you've seen your share of veterinary bills. And balancing frequent rehab appointments with your work schedule can be a challenge, too. You may wonder if you can do any of this yourself. With a little training, transcutaneous electrical nerve stimulation (TENS) is one thing that you might be able to do at home. And better still, it's inexpensive.

What It Is

TENS is a form of electrical therapy that uses a mild electrical current to relieve pain and muscle spasms. At first it might sound a little like something out of a horror movie set in a psychiatric hospital, but it is well-tolerated by dogs.

There are two primary theories for how TENS therapy relieves pain. The first is that the electrical impulses stimulate nerves so that they don't transmit pain signals to the brain. The second theory is that the electrical current stimulates the release of endorphins, which block perception of pain.

TENS therapy feels like a gentle buzz or vibration. In veterinary medicine, practitioners typically aim for an intensity setting that is extremely comfortable for the dog to make sessions a positive experience. Higher settings can be uncomfortable or even painful during the treatment (just like a shock from static). While human patients may tolerate higher intensities, dogs don't subscribe to the "no pain no gain" idea!

When It's Useful

"TENS can be a really good option to help with pain control, target rebuilding muscle groups, and improving neurologic input," says Christine Horne, DVM, CCRP, CVA, CIVCA, of Georgia Veterinary Rehabilitation. "It can help to reduce the need for medications." Some examples of conditions that can benefit from TENS therapy include torn cranial cruciate ligament, muscle atrophy after a bad fracture, and back injuries.

Dr. Horne particularly enjoys working with "down dogs," or dogs who are unable to walk due to an injury or nerve damage. "We can really improve their quality of life!" she says. Even when an owner can't afford a recommended



Many dogs do whatever they have to do to get that disk or a ball—and that can result in injury.

surgery, these dogs can often benefit from rehab. And TENS therapy is one piece of the treatment puzzle.

TENS Therapy at Home

Most TENS treatments are done by trained staff at the vet clinic. Frequency depends on your dog's needs. Many dogs may just receive treatments once a week, while those that are extremely painful may come in several times a week.

You may be able to do TENS therapy at home after hands-on training with your rehab practitioner. "When used right, it doesn't have any side effects, but if used incorrectly, it can be painful," says Dr. Horne. Turning up the intensity

too high or too quickly can hurt, as well as improper placement of the electrodes.

If you're considering doing TENS treatments, get training. Take notes and/or pictures so you know exactly where the electrodes should be placed to give your dog the most benefit and to avoid hurting her.

TENS units are available online, and you can get a decent unit for as little as \$30. Dr. Horne recommends getting the same brand as your rehab practitioner uses. Each brand and model can be a little bit different, so getting the same one that you were trained on will help to eliminate mistakes and make it easier for your veterinarian to help you if you have a question. Dr. Horne's practice also has a couple units that they rent out to clients who want to try doing treatments at home before buying their own.

"Don't experiment!" says Dr. Horne. "If you're trained to use it correctly it can be a really good option." ■

Electroacupuncture

One specialized form of electrical therapy is electroacupuncture. It's exactly what it sounds like: acupuncture with electricity. A mild electrical current is passed through the acupuncture needles after they are placed in acupuncture points throughout the body. Dr. Horne likes to use electroacupuncture on dogs who have undergone back surgery.

A Typical Treatment

During a treatment, gel electrodes will be placed on the skin near the area being treated. To get good contact, it is usually necessary to shave the area. Once the electrodes are

in place, the practitioner will turn on the TENS unit to start passing an electrical current through the gel electrodes and your dog. The practitioner will always turn up the intensity slowly, making sure that your dog is relaxed and comfortable. Once your dog shows a sign of response, such as skin twitch, contraction of a muscle, or turning her head, he or she will dial the intensity back down a little bit so that the reaction stops. The goal is for your dog to be comfortable and happy.



There are a variety of TENS units on the market, but they all consist of electrodes (in back) and a monitor.

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Aggressive to Marshmallow

How to change your dog's aggressive behavior

Q I have suffered some \$1,000 veterinary events with dogs I've rescued from the street, so I found your message in September's issue of *DogWatch* of great interest. I believe too many rescue dogs are not well understood and not very many trainers want to take on aggressive dogs. Dogs with behavior issues don't have many folks in their corner, sadly.

I'm not a behaviorist or trainer by any means, but I've learned at least one thing, serendipitously: Some dogs that exhibit aggression, given the right conditions, turn into marshmallows and become very sweet.

My hopefully helpful suggestion is in order to work on an aggressive dog's behavior one must have a walking partner who will regularly walk dogs with you. Under the guidance of a trainer, if one can be afforded, gradually walk your uppity dog with your neighbor walking his/her dog along using the gradual introduction technique where you start off with the dogs widely separated and gradually over perhaps several days if there is a lot of tension, gauging both dog's reactions to each other, until it can be seen the dogs can safely close distance until they can walk peacefully side by side. That may or may not work but give the dogs a fair chance, is what I'm saying.

A I am glad you have had success turning formerly aggressive dogs into marshmallows. The technique you described is a good one and one I often suggest to owners of dog-aggressive dogs. One problem can be that the dog learns to be non-reactive with that dog, but does not generalize to other dogs—possibly because dogs come in so many sizes, shapes and colors, not to mention four sexes (neutered males, neutered females, unneutered males, and unneutered females). Unfortunately, although



Positive activities and treats for good behavior can transform your aggressive dog.

aggression toward dogs is one problem that rescue dogs (or any dog) may have there are several others.

Some dogs are aggressive to people approaching without dogs. I use the same technique for both kinds of reactivity. The minute you see the approaching person and/or dog you say, "Stranger" and pop a treat in the dog's mouth. That means that in addition to the leash and clean-up bag (I know you are a good citizen) in your hands, you need treats (or a treat pouch around your waist). The idea is that the dog becomes classically conditioned like Pavlov's dog to expect a treat (maybe even salivate) when he hears the word "Stranger."

Another misbehavior a rescue dog may exhibit is aggression toward visitors to the house, which usually starts after the dog has been in his new home for a few weeks. He now has a territory that he must defend. The treatment for that can be teaching the dog to go to and lie on a mat instead of lunging at the door. Meanwhile the guests should text

(rather than knock) that they are arriving so you can put the dog in a safe place where neither he nor the guest will be disturbed. Be sure he has a Kong or other long-lasting treat to placate him.

The saddest cases are the situations in which the rescue dog is fine with the primary adopter, usually the wife, but is aggressive toward or terribly afraid of the partner, usually the husband. Men are more likely to stimulate aggression than women in most situations. I hypothesize that men are scarier because they are big, have deep voices, and may have strange hair on their faces.

In addition, most rescue groups and foster owners are women so the dog may have limited, and possibly only bad, experiences with men before entering his new home. Try to have the wife ignore the dog for at least a few days while the husband feeds and cares for the dog, doing obedience so the dog realizes that the husband is predictable and that good things happen when he is around. I have had a lot of resistance from the wives who want to continue to be the dog's best friend.

Here's to you and all the kind people who adopt dogs; may all their rescues be marshmallows. ■

© HAPPENING NOW ...

Generous Donation—When Norman Nolan passed away at age 95 in April, he left all his assets to the Cornell University Hospital for Animals, particularly to help those who can't afford the services their animals need. A longtime beloved visitor, he often brought treats to the vet school and hospital staff. A retired Navy gunner, he worked at the Naval ROTC at Cornell and fell in love with the university. Nolan owned many dogs and cats over the years. "His pets were his children, he adored them and got the best veterinary care he could get!" says Dr. Carol Hardy, a longtime friend and former senior lecturer in Biomedical Sciences. ■



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.



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