

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

THIS JUST IN

## Daily Pill for Incontinence

FDA approves PROIN ER

The U.S. Food and Drug Administration approved PROIN ER (phenylpropanolamine hydrochloride extended-release) tablets for the control of canine urinary incontinence due to a weak urinary sphincter. PROIN Chewable Tablets were already approved for use in dogs for twice-a-day administration. This is the approval of the extended release version (once daily). PROIN ER should not be used in dogs who weigh less than 10 lbs.

The most common adverse reactions were vomiting, weight loss, hypertension, and diarrhea. Vomiting and/or diarrhea that occurred within the first week after starting PROIN ER typically resolved, while other dogs had intermittent vomiting or diarrhea during the course of the clinical field study involving 119 dogs. Dogs that experienced weight loss or hypertension generally experienced

these reactions throughout the study.

PROIN ER, made by Pegasus Laboratories, is available by prescription only. ■



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## Clinical Trial for Cavalier King Charles Spaniels

Dogs with Chiari-like malformation are eligible

Cornell's Department of Clinical Sciences has a new study that investigates the use of electroacupuncture for pain and/or scratching relief in Cavalier King Charles Spaniels with cervical spinal cord syringomyelia associated with Chiari-like malformation, which is a bony formation at the back of the skull. The result is that the skull then crowds the brain.

Acupuncture and electroacupuncture are commonly used for painful neurologic conditions but, while there is lots of evidence of effect in humans and rodents, there is little documented evidence of efficacy in dogs. The goal of this study is to see if there is an actual biologic response (via thermal imaging) and observed relief (such as pain and/or scratching relief) with this treatment.

The department is looking for Cavaliers to participate in this blinded, crossover study. The study requires weekly visits for 12 weeks. Owners will not know which treatment is administered at each of the three required treatments. A questionnaire will be given to owners about their perceived level of their dog's comfort. There is no cost to you to participate in this study. If you are interested in participating, please call 607-253-3060 or email [vet-research@cornell.edu](mailto:vet-research@cornell.edu). ■



The Cavalier King Charles Spaniel enjoys activity.

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## FDA Opens Up Adverse Event Reports Data

OpenFDA.gov allows you to search specific drugs

In a move that reminds us why the internet is so vital, the U.S. Food and Drug Administration's Center for Veterinary Medicine has made 30 years of adverse event reports (AERs) easily accessible. This move is important because it increases awareness of potentially harmful issues and further helps protect our animals. AERs include reports about approved animal drugs, unapproved/compounded drugs used in animals, and devices used in animals. Previously, getting this information required a Freedom of Information Act request.

The FDA uses the AERs to monitor the safety of animal drugs and devices, as well as the efficacy of these products. Manufacturers of drugs are required to report adverse events to the agency, but anyone can file a report—owners and veterinarians alike.

Remember that the information in the database is as reported to the FDA. The agency has not necessarily determined if the products in question were the actual cause of the events (go to <https://open.fda.gov/apis/>). ■



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## New Distemper Strain

*Found in dog imported from South Korea*

**A** new strain of canine distemper virus, called the Asia-1 strain, has been found in Western Canada and identified by Cornell's Animal Health Diagnostic Center. The source was a dog imported from South Korea to Canada in October 2018, reports Cornell. Dogs who have their distemper vaccines up to date are not likely at risk, but the concern is if the virus manages to contact wildlife.

"Well-meaning people are trying to save animals, but when you move animals, you move their infectious disease," says Dr. Edward Dubovi, director of the virology laboratory at the Diagnostic Center. "If this particular Asia-1 strain got out into the wildlife population, then it's here forever, because you can't get rid of it once it hits wildlife." Distemper symptoms include coughing, lethargy, pneumonia, gastrointestinal problems, and neurological signs. ■



## Human and Canine Fertility Problems

*Common manmade chemicals at fault*

**A** study from the University of Nottingham shows a decrease in sperm motility (and hence fertility) in both humans and dogs. Two manmade chemicals have been found to affect the quality of both human and dog sperm: di (2-ethylhexyl) phthalate (DEHP) and polychlorinated biphenyl 153 (PCB153).

DEHP is used to make plastics flexible. It can be found in many items in your home such as carpets and toys. PCB153 was previously used in surface coatings and paints. Although it is now a banned substance, it can still be found in the environment. Both chemicals have been detected at times in commercial pet foods.

To evaluate the effect of these chemicals on sperm, scientists took 11 human samples and nine dog samples of semen and incubated them with the amounts of the chemicals that could be found in your home. DNA fragmentation and decreased motility were seen in all the samples.

These environmental pollutants are likely only to be part of the decrease in fertility seen in many areas, but they do show how dogs can be sentinel animals for this problem. It is also an alert for scientists to look at environmental pollutants as being behind various health problems. ■

<https://www.inverse.com/article/53798-sperm-decline-link-chemical-pollutants>

## Allergy Testing and Immunotherapy

*ASIT is expensive but usually effective*

**A**llergies are frustrating for both dog and owner. It may be necessary to go through multiple food trials for a suspected food allergy—requiring a careful food-elimination dietary plan—or medication trials to see what the dog responds to. These approaches are time consuming. Costs can add up very quickly.

The Companion Animal Hospital at Cornell recommends starting treatment for severe allergies with allergy testing and allergen-specific immunotherapy (ASIT). While it may cost a few hundred dollars, allergy testing can pinpoint which allergens are problematic, helping form a targeted treatment plan.

ASIT involves a cocktail of allergens custom-made for each dog to desensitize him to his specific triggers. Injections are given under the skin at regular intervals. This treatment is usually effective, but can be cost prohibitive, and some dogs do not respond well. If you're interested, your first step is to talk with your own veterinarian about the usefulness of this test. ■



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**Send reader questions  
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DogWatch  
535 Connecticut Ave.  
Norwalk, CT 06854-1713  
[dogwatcheditor@cornell.edu](mailto:dogwatcheditor@cornell.edu)

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# Clothing for Anxiety

*With proper behavioral support, they're worth a try*

Canine anxiety encompasses many different disorders including separation anxiety, thunderstorm and firework phobias, and fear at the veterinary office. Treatment of these conditions must be multi-modal and unique to each dog and the type of anxiety from which they suffer.

The original Thundershirt is a snug jacket wrap designed for both dogs and cats. Created by Phil Blizzard in response to his dog's intense thunderstorm phobia, the product has become a sensation and generated multiple spin-offs. According to the website, the Thundershirt can help with restaurant etiquette, leash pulling, separation anxiety, crate stress, veterinary visits, reactivity, and a host of other behavioral concerns.

Since the release of the Thundershirt, the marketplace has swollen with an astounding number of brands. However, as is often the case, a strong selling pace does not necessarily mean the product is an overwhelming success.

## Research

In 2014, researchers evaluated the Thundershirt's effect on the behavior of 90 dogs (King, C., et al. *Journal of Veterinary Behavior*). The study mainly

## Weighted Issue

The theory behind anti-anxiety dog clothing is loosely based on similar circumstances in humans. For instance, human babies often respond well to swaddling. Some autistic people report comfort when an inanimate object is used to apply pressure to the skin. Weighted blankets are becoming popular for this reason. Temple Grandin, a well-known animal advocate and outspoken member of the autistic community, developed a hugging machine to help her deal with anxiety.

While the human evidence does seem to support the use of an anti-anxiety wrap, it is not a panacea for all canine anxiety. While websites boast rave reviews, testimonials outside the seller's site often show the wraps make little-to-no difference in a dog's behavior.



*Research surrounding anti-anxiety wraps like these Thundershirts is mixed. Work with your veterinarian to find an individualized approach for your dog.*

evaluated anxiety behaviors, such as lip licking, panting, pacing, drooling, yawning, whining, howling, and calmness. Overall, there was not much difference between the dogs wearing the Thundershirts and the control-group dogs. The only statistically significant difference was in heart rates and in orientation toward the exit door (the control group was much more oriented toward the door while the dogs wearing Thundershirts were not).

Keep in mind, this study did not evaluate dogs in the situations that Thundershirt claims it can help. It looked at outward signs of anxiety in kenneled dogs. To truly know whether the Thundershirt worked, it would need to be tested in specific situations against a control group without the wraps.

Louise Anne Buckley PhD, RVN, looked at four different studies on pressure wraps in an article published on [veterinaryevidence.org](http://veterinaryevidence.org). "Most behavioral outcome measures associated with a positive effect were subjective assessments, with unblinded assessors," says Dr. Buckley.

She concluded that "pressure vests may have small but beneficial effects on canine anxiety and that habituating the dog to the vest, assessing for comfort, and using repeatedly may improve the likelihood of any benefit."

## Purchase or Skip It?

The answer to whether anti-anxiety clothing will work or not is not a simple yes or no. Anxiety is a complicated

disorder and encompasses multiple behaviors and triggers. We find saying that one product can fix all anxiety problems is overreaching. When a dog suffers from anxiety, different approaches are usually needed to manage it.

Anxiety management usually begins with behavioral modification under the supervision of a behavior expert. This takes patience, hard work, and frequent consultation with an expert. It can be difficult and frustrating, although behavioral modification is often rewarding. It is not a quick fix!

Behavior training is commonly done in conjunction with medications. While some owners shrink from the thought that their dog might benefit from anxiolytic drugs, these can be highly effective during the behavioral modification stage. As the dog and owner learn more coping strategies and behavior improves, the medications sometimes can be weaned. In addition, there are supplemental treatments available such as pheromone diffusers and calming probiotics that may be helpful.

## Bottom Line

An anti-anxiety wrap may offer a legitimate adjunct to conventional behavioral-modification therapies. The approach, however, should never be used as a quick solution to anxiety. Some dogs, when wrapped in something tight like these wraps, will freeze. Rather than helping the anxiety, the dog has become rigid with fear.

While the annoying behavior may have stopped (panting, pacing, whining), the underlying anxiety is not being treated. It is critical to approach anxiety disorders with scientifically backed methods. We would consider aids like wraps when more conventional methods have failed or if recommended by a veterinarian with experience in behavior, who may also be able to narrow down the brands of wraps best suited to your dog. ■

## What You Should Do

- ▶ Look for triggers for his anxiety
- ▶ Make changes to avoid stress
- ▶ Discuss anti-anxiety medications with your veterinarians
- ▶ Consult a board-certified veterinary behaviorist



# Understanding Addison's Disease

*This adrenal-gland illness requires an alert owner*

The symptoms of Addison's can be vague and often missed. Left untreated, this disease can be fatal. But, with treatment, your dog can live his normal lifespan. The trick is to know the symptoms and get to the vet immediately.

Naturally occurring Addison's disease is found in 0.06 percent to 0.28 percent of dogs, according to a 2017 research paper published in the *Canadian Veterinary Journal*. That paper focused on Great Pyrenees dogs who may have a higher incidence, possibly a genetic component.

Our sister publication *The Whole Dog Journal* puts the incidence higher: "Veterinarians who routinely test for Addison's often find it, suggesting that the illness is not really rare but rather under diagnosed and under reported. You don't find Addison's unless you look for it. Some veterinarians speculate that Addison's disease occurs in dogs at a rate as much as 100 times the rate in humans." (The Cleveland Clinic says Addison's affects one in 100,000 people in the U.S.)

## What Is Addison's

Addison's disease is named for Dr. Thomas Addison, a highly respected physician and scientist and a brilliant diagnostician, whose early work led to the identification of the disease in 1849. According to Wikipedia, the first case in dogs was diagnosed in 1953.



The handsome Nova Scotia Duck Tolling Retriever is one of the breeds with a predisposition for Addison's disease.

In its simplest description, Addison's is a decreased production of the hormones normally produced by the adrenal glands. It is not as common as Cushing's (see "Canine Cushing's Disease," November 2018), but it can be more acutely serious. Female dogs are at highest risk with young to middle-age dogs (4 to 7 years of age) being the most common victims.

Certain breeds and mixes of those breeds have a predisposition to this problem, including Portuguese Water Dogs, Bearded Collies, Standard Poodles, Nova Scotia Duck Tolling Retrievers, Leonbergers, Airedale Terriers, Great Danes, West Highland White Terriers, and Labrador Retrievers. However, any dog and either sex may be affected.

The adrenal glands are guided by a hormone produced by the pituitary gland called ACTH or adrenocorticotrophic hormone. They produce two important types of hormones, glucocorticoids and mineralocorticoids. Within those groups, the two most important ones are cortisol

and aldosterone. Cortisol is the "stress hormone," while aldosterone regulates the important electrolytes sodium and potassium. Approximately 80 to 90 percent of the adrenal cortex must be damaged before clinical diagnosis is accurate, which means by the time you realize your dog is sick, he is in trouble.

## Types of Addison's

There are three forms of Addison's:

**Primary:** The dog has immune-mediated damage directly to the adrenal glands and especially to the outer layer or adrenal cortex.

**Secondary:** The pituitary gland is not producing enough ACTH to stimulate the adrenal glands.

**Atypical:** In these cases, a dog will often have normal levels of either sodium or potassium so the clinical picture is not readily apparent. In some cases, there will be normal levels of both electrolytes but a low level of glucose (hypoglycemia).

An iatrogenic form of Addison's may also develop as a problem related to overuse or prolonged use of prescription corticosteroids that can switch the adrenals off. An abrupt withdrawal of oral corticosteroids could leave your dog with abnormally low levels of cortisol until the adrenal glands get back to work. This iatrogenic condition tends to be temporary, but this is one of the reasons gradually reducing doses of steroids is important. Dogs with iatrogenic Addison's have normal levels of sodium and potassium because the aldosterone production has not been interfered with.

## Diagnosis

Addison's disease is sometimes called the "great pretender" because its clinical signs can fit a variety of other health problems, including kidney disease, gastrointestinal problems, diabetes, and seizures. Addison patients often present with lethargy, diarrhea, and vomiting. Some dogs start

## Know the Symptoms

- ▶ Blood in vomit or stool
- ▶ Depression
- ▶ Diarrhea
- ▶ Hair loss
- ▶ Increased thirst and urination
- ▶ Lethargy
- ▶ Shaking and tremors
- ▶ Sporadic weakness
- ▶ Vomiting
- ▶ Weak pulse
- ▶ Weight loss

## Want to Help? Genetic Testing

Dr. Steven Friedenberg and the Canine Genetics Laboratory at the University of Minnesota College of Veterinary Medicine are working to identify gene mutations responsible for the development of Addison's disease in dogs. They are particularly interested in blood samples from normal and affected English Cocker Spaniels, Standard Poodles, Goldendoodles, and Labradoodles. Normal dogs should be at least 10 years old so the researchers can feel confident they will not get the disease. However, they will take blood samples from any dog with a documented diagnosis with an ACTH stimulation test and an abnormal serum sodium:potassium ratio. Contact Dr. Friedenberg at [fried255@umn.edu](mailto:fried255@umn.edu).





with increased drinking and related increased urination. Some dogs lose weight and others may show shaking and tremors at times. Off and on weakness is possible. Some dogs will vomit blood or pass blood in their stools.

Making diagnosis even trickier, clinical signs can vary dramatically, and some dogs will have clinical problems that wax and wane. So your dog may show vomiting and diarrhea for a day or two and get better with symptomatic care. He might be fine for a couple of weeks or months, but the cycle then repeats. Unless you are tracking his health, you might not even notice the problem as recurring.

Alternatively, a dog may be going along fine, maybe with occasional bouts of a sensitive stomach, and then have an Addisonian crash or crisis. A dog in an Addisonian crisis is very ill, and it can come on swiftly. He will be weak, dehydrated, and possibly in heart failure. Collapse is common.

Bloodwork often shows a dramatically low sodium level combined with a high potassium level. This contributes to a slow heart rate and a weak pulse. An EKG will show abnormal patterns typical of hyperkalemia (high potassium levels).

Along with electrolyte abnormalities, dogs with Addison's generally present without a "stress leukogram" as part of their blood workup. A stress leukogram is a pattern of white blood cells often seen in sick dogs due to cortisol levels; in Addison's, the stress leukogram is missing because of the cortisol deficiency. The stress leukogram is part of a complete blood count (CBC). Note: A dog presented in an Addisonian crisis should have a stress leukogram due to his critical state. The absence of that is considered a tip that Addison's may be behind the dog's chronic condition.

The gold standard diagnostic test for Addison's is an ACTH stimulation test to evaluate adrenal function. However, this cannot be done until the dog is stabilized. In this test, blood is drawn before actually starting the test to evaluate a "resting" cortisol level before starting the actual test. The dog is then given a dose of ACTH to stimulate adrenal production of cortisol. Two hours later, blood is drawn to evaluate the response.

Most normal dogs have a resting value of 1.0 to 5.0 micrograms/dl. The response to the ACTH is generally obvious, rising to levels of 6 to 20 micrograms/dl. Dogs with Addison's

start with a low level (less than 1.0 micrograms/dl) although they may come in at a "low" normal of 1.0/dl. The ACTH is considered positive for Addison's if the level either does not rise or barely rises.

### Addison's Treatment

Treatment requires replacing corticosteroids and mineralocorticoids to cover for the hormones the adrenal gland is not producing. While injectable medications are used during a crisis, when your dog returns home, he may be put on the oral medication Florinef (fludrocortisone). This medication has both mineralocorticoid actions and glucocorticoid actions, and your dog will need to take it daily for the rest of his life. This is used off label by veterinarians.

Alternatively, your dog may be prescribed Percorten-V, an injectable containing pure mineralocorticoid desoxycorticosterone pivalate (DOCP) and a long-acting insoluble ester of desoxycorticosterone acetate (DOCA) to cover glucocorticoid replacement. This slow-release medication is given by an intramuscular injection. Dogs need injections on a regular basis, which is adjusted individually and can range from every 21 to every 30 days. This is the only FDA-approved medication for Addison's in dogs.

## Cushing's vs. Addison's

Both these adrenal gland diseases can be tricky to diagnose with a wide range of symptoms. Both involve blood cortisol levels. Cushing's is high cortisol, or hyperadrenocorticism. Addison's is low cortisol, or hypoadrenocorticism. Here's an easy way to remember which is which: With Addison's, you "add" cortisol.

At times, your dog may require extra glucocorticoids. Remember that a normal dog produces extra cortisol for stressful situations such as boarding, travel, etc. Since the Addison's dog can't, it will be important to predict what situations may increase his stress level and add medication as needed. Of course, the best plan is to try and minimize stress in his life to begin with. Some dogs will require some extra prednisone daily despite one of the other two medications. Expect some fine tuning will be required to find the best protocol for your individual dog.

While this may seem overwhelming, and a dog with Addison's does require consistent medical therapy, he can live a normal, long life with appropriate care with medications and periodic bloodwork. ■

## 5 THINGS

### Five Safe Water Tips

*Water sources are not always safe for your dog to drink*

- 1 When hiking, carry water for your dog and yourself. Pristine-looking streams and lakes can carry microorganisms like diarrhea-causing giardia that you don't want your dog to ingest.
- 2 If you find yourself without bottled water, treat natural water sources with filters and chemical treatments before you or your dog drink the water.
- 3 Pack drinking water when going to pools, dog parks, or even if participating in a sport like dock diving. You may not be able to intercept all water he ingests but having fresh water available will minimize your dog's need to drink the "used" water.
- 4 If your municipality has a "boil water" order that means boiling your dog's drinking water, too.
- 5 If your dog has diarrhea, prevent him from eliminating near water sources and get a fecal check as soon as possible to check for any internal parasites that he might pass on. ■



Clean water is just as important for him as it is for you.



# A Nose for Trouble

*Color and texture changes may indicate problems*

Just like touching a person's forehead to see if he has a fever, checking to see if a dog's nose is warm and dry does not indicate an illness. "It does not mean anything if a dog's nose is wet or dry," says Dr. Leni Kaplan of Cornell's Community Practice Service, although usually a dog's snout is damp.

"Wet noses result from normal nasal secretions (including sweating) and dogs licking their noses," says Dr. Kaplan. "That being said, some dogs' noses are dry and normal. Often, dogs' noses will be dry after they have been sleeping and breathing through their noses." Low humidity or exposure to extreme weather conditions, such as heat or high winds, also can dry out your dog's nose temporarily.

## Super Sniffers

Dogs naturally secrete small amounts of mucus and sweat through their noses, and they do regularly lick them. But why? Their amazing sense of smell. By keeping his nose moist, your dog provides an ideal environment for scent molecules to stick and dissolve, allowing your dog to process each smell. The wet nose is part of why your dog has a much better sense of smell than you do.

## Signs Something is Wrong

Whether your dog's nose is wet or dry does not necessarily indicate that something is amiss, but these symptoms do:

- ▶ Copious or thick discharge
- ▶ Change in color
- ▶ Change in texture
- ▶ Bleeding
- ▶ Cracks
- ▶ Hard, thick layers
- ▶ Growths
- ▶ Crusting
- ▶ Peeling



Labrador Retrievers have a recessive gene for nasal parakeratosis.

## Changes to Watch

"Dog noses have a normal cobblestone appearance, texture, and color," says Dr. Kaplan. What is normal for one dog may vary for others, especially when it comes to color—dog noses can range from black to brown to pinkish, sometimes matching the color of the dog's skin or coat. The nose should overall be smooth, but if you look closely you will be able to see that it has tiny grooves that give it that cobblestoned look (these grooves also aid in scenting, as they channel moisture with dissolved scents into the nose to the scent receptors).

Knowing what your dog's nose looks like normally will help you to identify any problematic changes. "If an owner notices any changes to the nose including loss of cobblestone appearance, change in color,



How well do you know your dog's nose?

crusting, bleeding, or peeling, then they should contact their veterinarian for an appointment. Increased or thick nasal discharge is also a cause for concern," says Dr. Kaplan.

## Diagnosis and Treatment

"There are a variety of causes that will affect the normal appearance and texture of the nose including: infection, trauma, immune mediated diseases, or conditions where there is a loss of innervation to part of or the entire nose," explains Dr. Kaplan.

Treatment depends on the cause of damage to the nose. An infection will need to be treated with appropriate antibiotics or antifungals, and therapy could include systemic medications given orally as well as topical solutions applied directly to the nose. Traumatic injuries will generally heal with time, but may require stitches depending on the extent of the wound. Nerve damage can cause the dog to be more likely to damage his nose, so it will be necessary to protect him, possibly with something like a basket muzzle to act as a barrier between the delicate nose tissue and all of the hazardous places that our dogs like to sniff.

Immune-mediated diseases can be more difficult to diagnose, and treatment for these conditions is often lifelong, but some can achieve remission.

## Breed Tendencies

"Breeds with shortened snouts often have thickened keratin layers, a loss of cobblestone appearance, and a dry nose as they are unable to keep their entire nose moisturized and/or exfoliate the keratin normally," says Dr. Kaplan. This thickening of the nose leather is called hyperkeratosis and can affect dogs' paw pads as well. While it can affect dogs of any breed or mix, brachycephalic breeds, like the Pug, and Cocker Spaniels seem to be predisposed.

Labrador Retrievers can suffer from hereditary nasal parakeratosis. Dr. Kaplan says that affected dogs "will have thickened keratin layers, loss of cobblestone appearance, and a dry nose." This is a recessive disorder requiring both parents to pass on the gene for a pup to be affected, and signs typically show up before the dog reaches a year of age. Genetic testing is available. Because of these three factors, this condition can be easily avoided through conscientious breeding practices. ■



# When Fido Stops Urinating

*A rupture is an emergency due to the release of toxins*

**A** urethral obstruction that slows urine release is usually due to bladder stones, which can be treated medically or surgically. However, if urination stops, it's an emergency. Untreated, the urethra may rupture, although most urethral ruptures are due to serious trauma, such as being hit by a car or experiencing a pelvic fracture. While stabilizing the dog will be the priority, the urethral rupture will be addressed as soon as possible as urine leaking into the surrounding tissues can be damaging.

## When It Ruptures

If the urethra ruptures, urine gets outside of the urethral mucosa and into other tissues, causing a serious reaction.

Symptoms of a urethral rupture include abdominal pain, bloody urine, straining without the production of urine, and abdominal swelling. Laboratory bloodwork may demonstrate increased levels of potassium and

nitrogenous waste compounds like urea. These dogs often have acid base abnormalities that need to be corrected with fluids as well.

## Diagnosis

The most useful diagnostic aid is a positive contrast cystogram, coupled with evaluation of any free fluid in the abdomen. The positive contrast cystogram uses a radio-opaque contrast material to show leakage from the bladder out through the urethra. A urethrogram with contrast specifically aimed at the urethra also can be used.

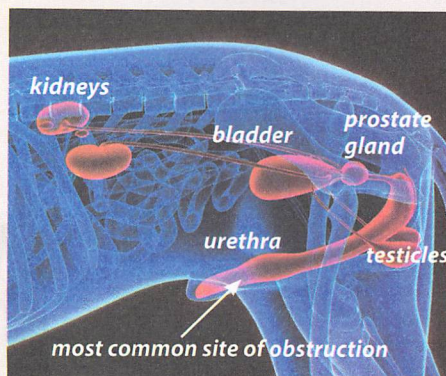
Your veterinarian will begin by finding a safe way to get urine out of the bladder, such as with a delicately placed catheter to bypass the ruptured area. Partial tears often heal well on their own if given the template of a catheter to heal around. Sometimes an incision must be made into the bladder itself and a catheter set up directly from the bladder to outside the body wall.

## Urinary Obstructions More Common Than Ruptures

Urethral obstructions are usually due to bladder stones. "The most common site of obstruction is just proximal to the penis. Those stones are treated by hydropulsion through a urethral catheter to push the stone back into the bladder. That relieves the obstruction and allows urine to pass freely again. If the stone won't budge, a urethrotomy may be necessary for serious damage to the urethra from trauma. Alternatively, an endoscope might be able to grasp a stone, or your veterinarian might use a laser to blast the stone into small pieces," explains Dr. Flanders.

Depending on the type of stone (a urinalysis identifies the stone), your dog may be put on a prescription diet with the goal of dissolving the stone(s) in the bladder. This works best with struvite stones (magnesium ammonium phosphate hexahydrate). However, surgery is sometimes necessary to remove the stone.

Less commonly, a urethral obstruction can occur due to neoplasia (abnormal tissue growth), such as transitional cell carcinoma in the bladder neck/urethra junction. This cancer may respond temporarily to nonsteroidal anti-inflammatory drugs, and chemotherapy may help. Radiation therapy may prolong quality of life. For any cancer that obstructs urine outflow, "a fairly new therapy is to use an expandable intraluminal stent to open up the urethra. This is also temporary because the tumor will eventually grow through the stent but can provide the individual dog with some quality time," says Dr. Flanders.



Canine male urinary system

decade3d | Deposit Photos

Mucosal tissues tend to heal within five to 10 days, especially with partial tears. At that point, the catheter can be removed. A full thickness defect will require some added time to regain full, normal strength but two to three weeks is generally adequate. "The urethra is fairly efficient at healing, especially if it is a longitudinal tear. We will check to see if a tear has healed spontaneously by doing a urethrogram. It is rare to go in and surgically repair a urethral tear," explains James Flanders DVM DACVS, Associate Professor, Section of Small Animal Surgery, at the New York State College of Veterinary Medicine at Cornell.

## Complications

If the urethra is completely transected, surgery may be necessary, although the risk of future strictures is high. Strictures sometimes can be treated with balloon dilation, but all this will require a board-certified veterinary surgeon.

A perineal urethrostomy in the scrotal area of male dogs may be done if there is serious damage to the penile area and the penile urethra. This causes the dog to urinate through the new opening rather than the end of the penis. This is often a permanent surgical correction, which usually works well.

If the urethra is severely damaged, a vesicostomy can be done to make an opening directly from the bladder to outside the body wall. This is rarely permanent. Dogs with a vesicostomy will not be continent and will need to wear a diaper. Special care must also be taken to prevent any urine scald of the skin. Clearly this is not a solution for everyone, but some dogs have done well for years after this surgery. ■

## What You Can Do

Watch for symptoms:

- ▶ Abdominal pain
- ▶ Bloody urine
- ▶ Frequent attempts to urinate
- ▶ Lack of appetite
- ▶ Lethargy
- ▶ Reduced/stopped urine output
- ▶ Straining to urinate
- ▶ Vomiting



# On-Leash Excitement

*He's called "Squeaky" at class due to his whining*

**Q** I have a mixed-breed rescue dog. His DNA test came back American Staffordshire, Australian Shepherd, Rottweiler, and mixed breed. He looks like a Catahoula, about 70 pounds and 4 years old. We have owned him for three years.

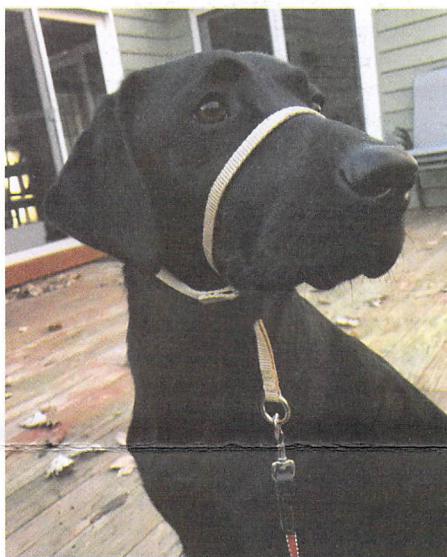
When he sees other dogs, he gets wound up, particularly on a leash. He pulls and whines, barks, and tries to rear up on his back legs. He is excited, but I am not sure if he wants to play or fight the dog, so I do not let him interact with other dogs. Off the leash, he plays with some other dogs and loves their company.

We have been doing obedience training for three years and, when we enter the class and he sees other dogs, he starts whining and is anxious. They call him "Squeaky" at class. When we compete in obedience, he squeaks and is anxious, but when we walk in the ring to compete, he performs beautifully. Any insight would be appreciated.

**A** You are a super owner first by taking a dog that was bound to be challenging because he was not in your home during his socialization period and then taking him to obedience classes to improve his behavior. His behavior toward other dogs is common. He wants to join the other dogs—whether to play or to fight we don't know.

Here are some management strategies you can use to help the situation:

Try to walk him when other dogs aren't around—avoid the six o'clock-just-home-from-work dog walkers. Don't use



*A head collar, like the Gentle Leader shown here, gives you control without pulling on the dog's throat. The dog's nose is directed toward you when he pulls on the leash.*

a retractable leash because the dog could be 25 feet in front of you in seconds.

You could use a calming Thundercap (thundershirt.com) to reduce his vision. He can still see, but not as clearly, so he should not get aroused as quickly. You may use a head halter, such as a Halti (companyofanimals.us/brands/halti) or Gentle Leader (petsafe.net), so you can control his head and prevent lunging.

The main goal is to teach your dog that the approach of another dog is

something good. You'll need a treat pouch with plenty of small but delicious treats, perhaps chicken, and patience.

The most important thing is avoiding direct eye contact between the dogs because that is a challenge and often leads to aggression. As soon as you see another dog—and remember your vision is better than his so you should see the dog first—give him a series of treats.

Try not to pull on his leash. Say, "Here comes a nice dog; isn't that fun?" Don't yell or otherwise arouse him. Next, ask him to "Look" so he is looking at you, not the other dog. If he doesn't, pull him around with the head halter so that he is facing you. Lead him away from the other dog either by turning around or away at an angle, again avoiding eye contact between the dogs.

Enlisting the help of a friend with a non-reactive dog would facilitate the process. That person can walk one way around the block or a room as you walk the other so that you pass one another repeatedly. Remember to reward your dog as the other dog approaches.

If he won't take the treat, he is too aroused, and you should move him away. He should learn quickly that if he wants to get closer to the other dog, he has to be quiet and calm. As soon as he whines, barks, or lunges, he loses the opportunity to approach the other dog.

Finally, if needed, your veterinarian may recommend either an over-the-counter calming product or prescribe anti-anxiety medication. Discuss this with your veterinarian, explaining what you've tried and what happened. Good luck and enjoy your pooch. ■

## © HAPPENING NOW...

**Award Winner** - "What Not to Wear - Dog Leashes" by Kate Eldredge (*DogWatch*, May 2018) earned the 2018 Dog Writers Association Pet Fashion Guild Pet Fashion Award. Sponsored by Pet Fashion Guild, the award is for an article that demonstrates the enhanced bonds and connections between humans and their dog(s) through pet fashion.

### **Bachelor's Degree in Dog Training** -

The State University of New York at Cobleskill has announced a new Bachelor's Degree in Technology (BT) program in dog training and management. The four-year program will teach students to design canine training programs



and prepare for careers in the canine industry and canine security.

**New State Pet** - The state of Ohio has made the shelter dog its official state pet.

**Vegan Interest** - A University of Guelph online survey of 3,673 pet owners found that 35 percent of the responders whose pets ate conventional diets were interested in switching to a vegan diet. Published in the journal *PLoS One*, the study says that 55 percent said they needed further evidence that a plant-based diet would meet their pets' nutritional needs, approval from their veterinarians, and plant-based pet foods to be easily available. ■

Cornell's renowned behavior expert Katherine Houpt, VMD, Ph.D., shown here with Yuki, her West Highland White Terrier, provided the advice in this column.



### Coming Up ...

- ▶ Oral vs. Topical Spot Pesticides
- ▶ Uses for Colloidal Silver
- ▶ Managing Mange
- ▶ What's Behind Dental Sprays