

  THIS JUST IN

## Extended-Release Moxidectin Concern

#### *Breed may be a factor*

**E**

xtended release injectable heartworm preventives are fabulous for some dog owners. Heartworm can be

fatal. While most dog owners do monthly treatments, if your dog is difficult to medicate or you have trouble maintaining the monthly schedule, the six- or 12-month injections may help.

Reactions and complications are rare. Most adverse events, which covers everything from vomiting to a serious allergic reaction, happen within three days of the injection. A retrospective study looked at five years of data from Banfield Hospitals with 694,030 dogs involved and found about 14 events per 10,000 dogs occurred.

Seven breeds had the most reactions: Pit Bull, American Staffordshire Terrier, French Bulldog, Rhodesian Ridgeback,

# Handling Paw Pad Problems

### *Deep cuts and visible imbedded debris are emergencies*

**I**

f your dog is limping, remember to gently examine the bottom of his paws for signs of what is causing the

discomfort. Common causes of paw pad problems include lacerations, irritation, autoimmune diseases, and even cancer.

##### Cuts and Lacerations

“Paw lacerations can occur when dogs are out playing, hiking, or swimming,” says Leni K. Kaplan, MS, DVM, senior lecturer at Cornell University’s College of Veterinary Medicine. “Dogs have cut their pads in warm weather and cold weather, as sharp pieces of ice can also cause trauma.”

As well as natural hazards, human debris can pose a risk. Broken glass, pottery, pieces of metal, and more can harm your dog if he steps on it in just the right way.

*PavelRodimov | iStock*

##### When to Get Help

American Bulldog, Boxer, and Boston Terrier. Not all dogs of these breeds had reactions and dogs of other breeds sometimes had reactions. Younger dogs were more likely to have a problem than older dogs.

**Expert information from the Cornell Richard P. Riney Canine Health Center**

April 2024 – Vol. 28, No. 4

The takeaway here is to discuss with your veterinarian a different method of heartworm prevention if you own one of the mentioned breeds. If extended- release prevention is still the best method for your situation, then keep a close eye on any treated for dogs for the first few days after a treatment.■

Dr. Kaplan says that owners should seek veterinary care if:

* The dog is limping or licking at their foot
* The paw pads are not healing and not improving on their own
* Lesions appear on multiple paw pads or on other parts of the body
* The dog has a deep cut that may require sutures

Uncontrolled bleeding is an emergency, but other issues with the paw pad can wait until normal business

hours. While waiting for an appointment, limit your dog’s activity and prevent him from licking the injured paw to prevent further damage and irritation to the area.

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Paw pads are tough, but they can still be damaged or scraped. “You can see paw or paw pad irritation from trauma such as salt in cold snowy weather or from playing on hot asphalt in the warm weather,” says Dr. Kaplan. “Playing

on rough surfaces over time can also traumatize the foot pads.”

Salty water is uncomfortable on your dog’s paws. If he has any little cuts or

*Uncontrolled bleeding is a true medical*

*emergency that requires immediate help.*

scrapes, the salt can get in there and be painful. Hot asphalt, concrete, or

slate can cause burns, and running hard on rough surfaces can lead to blisters

or “run off” pads where the thick pad tissue becomes separated from the more sensitive flesh underneath. Walking through spilled chemicals can irritation or even burn on your dog’s paws.

##### Medical Conditions

“Medical conditions such as autoimmune skin diseases are more or less likely depending on the breed, age, and whether the patient has lesions on other parts of their body, for example, their nose,” says Dr. Kaplan. Some examples include pemphigus foliaceus and lupus.

Overall, these conditions are uncommon. But if your dog has chronic paw pad problems that don’t go away or has abnormal lesions on other parts of her body, a full veterinary exam and workup are a good idea.

*(continues on page 2)*

* SHORT TAKE

## Does Your Dog Really Need Antibiotics?

#### *With antimicrobial resistance becoming more widespread,* an infectious disease expert offers advice to pet owners

**I**

f you sometimes wonder if your dog needs to see the veterinarian for antibiotics or if you should wait it out, Scott Weese, DVM, an infectious disease expert from the University of Guelph, offers a great way to look at your pet’s illness: If you had the

same symptoms as your dog, would you be heading to an emergency room or your doctor’s office?

For the average human cold, you might fall back on family favorites such as chicken soup or hot tea with honey and see if you improve. If you experienced diarrhea for a day, chances are you would eat only bland foods or fast, drinking lots of liquids. The idea of taking an antibiotic probably wouldn’t even cross your mind

A recent VetGirl webinar given by Dr. Weese and Michelle Evason, DVM, from Antech Diagnostics discussed the responsible use of antimicrobials (antifungals, antivirals, and especially antibiotics) and shared important considerations for dogs experiencing respiratory illness and/or acute diarrhea.

For both situations, our pets can often get by with symptomatic care at home if they are eating and drinking, staying hydrated, and acting fine overall. Owners tend to want a quick fix, and many think antibiotics are the way to go, especially with diarrhea or if their pet’s coughing is keeping them up at night.

Certainly, any pet with labored respiration, not eating or drinking, acting lethargic or vomiting with or without diarrhea would benefit from a veterinary consultation, and most likely, some medications. The same is true for young pets, senior pets, and any pet with a chronic health condition.

But the average otherwise healthy pet will get by with some time, added fiber and a fast for diarrhea, and rest. For respiratory illness, some time in a humid bathroom for a mild cough can help (run a hot shower with your dog in the room). Often our pets get better even without medications.

Antimicrobial resistance is an increasingly serious problem for human and veterinary medicine, particularly with bacterial infections. It is also important to remember that there are many pathogens that people and pets share, so a resistant bacterial strain could affect people and pets.■

*(Paw pads, continued from page 1)*

“Paw pad tumors do occur but less commonly in my experience,” says Dr. Kaplan. A rapidly growing lump, skin abnormalities, and chronic lameness could indicate a tumor.

##### Home Care

Two paw pad problems that can often be managed successfully at home are dry, cracked pads and run off pads.

“If the pads are cracked and dry, owners can try applying Dermoscent BioBalm, Vaseline, or Bag Balm and see if the paw lesions improve. Make sure the dogs are wearing a cone collar so they cannot lick the product off,” says Dr. Kaplan.

Run-off pads, a phenomenon where the sturdy pad tissue is rubbed right off the bottom of the paw, may heal on their own or may require veterinary care. “It depends on the severity of the lesion, whether or not the pet is bothered and if they are limping or licking, or if the owner has attempted treatment without success,” says Dr. Kaplan. “If an owner notices a lesion on the paw pads, they can see if it

heals on its own by keeping the dog’s activity restricted and only walking them on soft surfaces such as grass, so the paw pads have a chance to heal.”

Covering your dog’s paw is often not wise unless you have been instructed to do so by a



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

For information on pet health, visit the Cornell University College of Veterinary Medicine, website at **vet.cornell.edu**

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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, Chief Content Officer; Philip L.

Penny, Chief Operating Officer; Greg King, Chief Marketing Officer; Ron Goldberg, Chief Financial Officer; Tom Canfield, Chief Circulation Officer.

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Postmaster: Send address corrections to DogWatch,

veterinarian. “Owners should not put socks on their dogs as they often trap moisture or get wet, which will first cause a skin infection or exacerbate the lesion being treated,” says Dr. Kaplan.■

*Leni K. Kaplan, MS, DVM, , is a senior lecturer at Cornell University’s College of Veterinary Medicine.*

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* CONSUMERS

# Pet Insurance Pitfalls

### *Insurance is a good choice, just read the policy first*

**D**

ecades ago, establishing a savings account dedicated to veterinary emergencies helped ensure you

could get your dog whatever care he needed. But that recommendation is outdated. A $5,000 savings can be gone in one swoop with a cancer diagnosis, with no money left over for chemo or radiation. Even a dental can run $3,000 or more. Unless you’re able to set aside considerable funds for your dog’s care, an insurance plan can be your best bet.

##### Choosing a Plan

Insurance companies sell policies that help you cover unexpected expenses, but

most part, accident-only coverage just leads to disappointment.

Note: Policies cost more money each year your dog ages. Some companies have limits on how old a dog can be insured.

While we can accept that health care is more expensive as our dogs age, we do not like policies that cut off once the dog reaches a certain age.

##### Saving Money

Contact your existing insurance providers (home, health, car, etc.) to see if they have any partnerships with pet insurance companies which may bring

a discount. Some employers also offer pet insurance for their employees, and sometimes organizations like AARP offer discounts on pet insurance. You also can save on premiums if you choose a higher deductible and lower reimbursement rate

*SeventyFour | iStock*

the goal of every insurance underwriter is profit. So, policies spell out coverage limits. Be sure you understand them. The most important thing you can do is get a copy of the insurance policy and read it before signing up. If something doesn’t make sense to you, call the company.

Watch listed exclusions, which are services that are not covered. Be sure they’re acceptable and not vague. If you’re not sure, find out. For example, if the policy has a bilateral exclusion, does that mean if your dog has cataract surgery in one eye and the other eye becomes clouded, is it not covered?

Few policies cover a pre-existing condition, even after the waiting period. A pre-existing condition exclusion means if your dog is already diagnosed with cancer, it’s going to be difficult to get coverage. And, of course, you can’t get coverage for a broken limb that occurred yesterday. That’s fair.

Most policies also will not cover preventable disease, such as if your dog gets parvo because you didn’t vaccinate him. Congenital diseases are often not covered and may even be by breed.

Prescription medications and alternative therapies such as acupuncture and/or physical rehabilitation may be available as part of the base plans or as an extra rider that you can add on, or not at all. Think about whether you want or need these things to be covered.

While your veterinarian doesn’t have a crystal ball, he or she may be able to tell you, for example, not to worry about a hip dysplasia exclusion because your dog doesn’t have it. But you may be told that skipping prescription medication is a bad

*Advancements in veterinary medicine extend our dogs’ lives but also make care expensive.*

idea due to the high cost of meds and possible lifelong medication risk.

Be sure you consider available riders.

You may want to purchase riders for dental care, for example. A dental with tooth extractions can run into the thousands of dollars. A wellness rider, however, may not be worth your money because wellness care is something you planned on when you got your dog.

##### The Big Gotcha: Limitations

When you shop around, you’ll find that plans with an annual limit, like $20,000, may seem like plenty—until you need it. A policy cap or limit is the maximum that the insurance company will pay

overall. If your dog hits the limit, he will no longer be covered, usually until the policy renews but not always. Some plans also have a lifetime limit, which is the maximum amount that will be paid out for that dog.

Look for plans that offer continuous coverage. Be wary of plans that consider a prior illness no longer eligible for coverage when the policy renews. If your dog becomes diabetic, you don’t want the coverage to cease when the new plan year begins. You want continuity of coverage.

Consider an unlimited plan. It’s more expensive, but usually not terribly so, and it gives you far more peace of mind.

An “accident only” plan is far less expensive than a comprehensive policy, but don’t be fooled. Any veterinarian will tell you that, for most dogs, an illness

is more likely than an accident. For the

(see sidebar).

Remember, for most veterinary clinics, you must pay for services at the time they are rendered. In some clinics, such as emergency clinics, you may be charged a flat fee before they even begin. This is where a credit card dedicated to only pet care comes in handy. Frankly, it’s the modern version of a vet-fee savings account. Just make sure that your emergency card has a high enough limit to cover surprise veterinary bills.■

**Terms You Should Know**

**Preexisting Conditions:** Most policies will not cover a health problem your dog already had when he started the coverage.

**Wellness Plans:** Most base plans do not cover wellness care such as

vaccinations or exams, but most do sell a wellness rider.

**Deductible:** A deductible is how much you pay toward your dog’s covered veterinary bills before the insurance will kick in. In general, a higher deductible will lower your monthly premium, while lower deductibles will result in a higher premium. Deductibles can be annual or “per condition.”

**Reimbursement Percentage:** Most plans offer 70% to 90% reimbursement of approved veterinary fees, although some have 100% reimbursement. This means that after you have paid your deductible, the company will then pay that percentage of your remaining bill.

* HEALTH

# Cushing’s Is Complicated

### *It has four causes that result in the same symptoms*

**C**

ushing’s disease, also known as hyperadrenocorticism (HAC) or Cushing’s syndrome, occurs when

**Does Your Dog Have Cushing’s Syndrome?**

The most common signs of Cushing’s disease in dogs are:

* Excessive thirst (polydipsia)
* Excessive urination (polyuria)
* Excessive hunger and eating (polyphagia)
* Excessive panting
* Muscle weakness
* Abdominal distension (“pot-bellied” appearance)
* Thinning hair coat or balding
* Slow hair regrowth
* Thin skin
* Blackheads (comedones)
* Lethargy

You may also see:

* High blood pressure (hypertension)
* Urinary tract infections
* Chronic skin infections
* Diabetes
* Thick skin plaques (calcinosis cutis)
* Blood clots
* Cranial cruciate ligaments tears
* Stomach ulcers

the dog’s body is under the influence of too much steroid, whether it be

natural steroid produced in the body or administered steroid medications.

Natural steroids, also known as glucocorticoids or cortisol, are hormones produced by the adrenal glands that

are essential for life. They play a role in metabolism, immunity, the stress response, and other important bodily functions. Underactive adrenal glands

producing too little steroid creates a life- threatening condition called Addison’s disease in dogs. Overactive adrenal glands producing too much steroid results in Cushing’s disease in dogs.

Fortunately, Cushing’s tends to progress slowly, so it could be months or even years before a dog suffers many of these symptoms, causing many

veterinarians and pet owners to not treat the disease until the dog’s symptoms become problematic. But is this the best choice?

“I don’t think it is necessarily wrong not to treat if a diagnosis is made early,”

for maintaining balance in the body, a normal dog’s natural cortisol production will be suppressed when the brain recognizes all that extra circulating steroid. The overactive adrenal glands associated with Cushing’s disease don’t have the capacity to suppress their cortisol production.

There is a preliminary screening test, done in hopes of avoiding the cost and hospitalization stress associated with the LDDST, called a urine cortisol:creatinine ratio (UCCR). It is performed on a urine specimen you catch at home during a time of low or no stress for your dog (stress results in false positive results). If the UCCR test is normal you are home free! Your dog does not have Cushing’s. However, if the UCCR test is abnormal, it only means your dog MIGHT have Cushing’s, and you need to go forward with the LDDST after all.

Once your dog has been diagnosed with Cushing’s, most clinicians recommend an abdominal ultrasound to decide if the cause is PDH or AT. With PDH, both adrenal glands are typically symmetrically enlarged. With an adrenal tumor, one adrenal gland is usually enlarged by tumor, and the opposite gland is small. Ultrasonography can often identify neoplastic changes in the architecture of the affected gland as well. While there are additional blood tests

says Dr. John Loftus, section chief of small animal medicine at Cornell University’s College of Veterinary

Medicine. “However, one of the reasons to treat early is that dogs with Cushing’s disease are predisposed to forming blood clots. So, not treating could conceivably have some serious consequences. As such, I generally recommend treating all dogs with a definitive diagnosis, but I do think there are cases where we would consider waiting until the dog has more clinical signs.”

##### Four Types of Cushing’s

Cushing’s is complicated, with four different types of HAC causing the same set of symptoms:

**Pituitary-dependent hyperadrenocorticism (PDH):** This is

the most common form of Cushing’s in dogs, responsible for 85% of cases. It is caused by a tumor (usually benign) in the pituitary gland creating too much adrenal stimulating hormone, which then results in overproduction of cortisol by the adrenal glands. Since the pituitary gland is close to the brain, occasionally

neurologic derangements can occur, depending on the size and type of tumor.

**Adrenal tumor (AT):** This type of

HAC happens when a primary functional tumor forms in an adrenal gland, resulting in overproduction of cortisol.

**Iatrogenic HAC:** This is caused

by chronic administration of steroid medication, either oral or topical, and is clinically indistinguishable from naturally occurring Cushing’s disease.

**Atypical HAC:** This happens when

a missing enzyme results in a buildup of cortisol precursors (sex hormones)

resulting in the exact same symptoms as all the other forms of HAC.

**Diagnosis of PDH or AT Cushing’s** No test for Cushing’s in dogs is perfect, but the one most heavily relied upon

is called the low-dose dexamethasone suppression test (LDDST). This is a “challenge test” requiring an eight-hour stay in the hospital where the dog’s system is challenged with a dose of intravenous steroid, and its response to that challenge is measured. Due to the negative feedback systems responsible

that can be performed, the ultrasound is usually the better choice.

**Diagnosis of Iatrogenic Cushing’s** Making this diagnosis requires a good history, including:

* Is the dog taking oral steroids?
* Is topical cortisone being applied chronically for dermatologic disorders?
* Is the pet owner using topical cortisone products themselves that the dog may be licking?

To confirm iatrogenic Cushing’s disease, an adrenocorticotrophic hormone stimulation test (ACTH stim)

*John Loftus is section chief of small animal medicine at Cornell University’s College of Veterinary*

*Medicine.*

* HEALTH

must be performed. This is another challenge test. This time, a baseline blood sample is drawn, and ACTH is injected, with a post-injection sample drawn one to two hours later. Dogs with either normal adrenal glands or PDH or AT,

will show a spike in cortisol production after this adrenal stimulation. If the symptoms and history fit, and the ACTH stim shows no spike in cortisol levels, iatrogenic Cushing’s is the diagnosis and the external source of steroid needs to be slowly withdrawn.

Slow withdrawal is important, as the adrenal glands will have shut down a bit since there’s been plenty of steroid

tissue, thereby decreasing the amount of cortisol that can be produced. Side effects may be mild or severe,

and include weakness, vomiting, diarrhea, and loss of appetite. Treatment with Lysodren also requires close monitoring with repeat ACTH stim tests.

Inadvertently destroying too much adrenal tissue creates a potentially life-threatening situation, and the damage may be irreversible. For atypical Cushing’s disease,

*A dog with Cushing’s will need frequent monitoring that often includes bloodwork.*

*dragonimages | iStock*

floating around, and they need time to ramp back up to full function.

**Diagnosis of Atypical Cushing’s** While dogs with atypical Cushing’s disease have all the symptoms of Cushing’s disease, their preliminary tests all come back normal. Diagnosis requires an ACTH stim test that includes measurement of sex hormones before and after stimulation. A spike in sex hormones after ACTH stimulation is indicative of atypical Cushing’s.

##### Treatment

Trilostane, a synthetic steroid equivalent that inhibits an enzyme and results

in suppression of natural cortisol production, has become the treatment of choice for PDH. Side effects are generally mild and include lethargy, vomiting,

and diarrhea. Careful monitoring is important, as too much trilostane can cause excessive adrenal suppression, which can be deadly. Monitoring requires repeat ACTH stim tests or baseline cortisol levels at the intervals recommended by your veterinarian.

The FDA-approved label dosage for trilostane is once daily administration at the suggested dose. When a drug

is administered in a different way it is called off-label dosing, a common,

accepted practice in veterinary medicine. “We like to treat with trilostane twice

daily in most cases,” says Dr. Loftus. “Once daily dosing can work but, in most cases, twice daily is more effective.” If Trilostane is prescribed for your dog at once daily dosing, Dr. Loftus suggests discussing twice daily dosing with your veterinarian, who can consult with an internal medicine specialist if they have questions regarding dosing.

Mitotane (Lysodren) is another treatment for PDH that destroys adrenal

Lysodren is the treatment of choice as it suppresses the sex hormones as well as cortisol. Trilostane does not.

Radiation therapy can be considered for dogs with large pituitary tumors causing neurologic impairment.

Surgery may be recommended. The treatment of choice for an adrenal tumor is surgical removal of the abnormal adrenal gland (unilateral adrenalectomy). This is a difficult surgery with the possibility of severe complications (hemorrhage, thromboembolism) both during the procedure and after. The best candidates for surgery are dogs with small tumors with no evidence of tumor invasion into surrounding blood vessels and no evidence of cancer spread to liver or lungs (metastasis). For dogs who are not candidates for surgery for whatever reason, palliative therapy with trilostane or Lysodren can help. Radiation therapy is another option for these dogs.

If the cost, risks, and side effects of these treatment protocols make you uncomfortable, there are alternative treatments you can discuss with your veterinarian, although they are all

considered less effective. These include melatonin and lignans, ketoconazole, and selegiline.

##### Prognosis

With appropriate treatment, the prognosis isn’t too bad. “Looking at different studies, a median survival time of around two years is a fair number,” says Dr. Loftus. “That also means that half of the dogs live longer than that.

Average age at diagnosis is around 10 years, so many dogs are likely living a fairly normal lifespan for them.”

“Most dogs with PDH die from other causes,” says Dr. Loftus. “In one study, only about 25% of dogs with hyperadrenocorticism were reported to

have deaths attributed to the condition, but it wasn’t always clear if they had PDH or adrenal tumors. When it was known if dogs had adrenal tumors or PDH, deaths attributable to HAC was higher in dogs with adrenal tumors.”

##### Bottom Line

Yes, Cushing’s disease in dogs is complicated, but because Cushing’s disease is typically so slowly progressive, some dogs may live with it for a long time before it causes problems.

If your dog is diagnosed with Cushing’s, talk to your veterinarian about what may be the best option for you and your dog. Should you start treatment right away? Which treatment do they recommend? If you elect not to treat right away, you and your veterinarian should monitor your dog’s health carefully. Recommended monitoring usually includes frequent physical examinations, bloodwork, urinalysis, and blood pressure measurement.■

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CT 06856-5656. Please include your mailing label.

* DISEASE

# Parvovirus Is Deadly

### *Antibiotics won’t work, but vaccinations can prevent it*

vaccine for dogs. Core vaccines are those vaccines recommended for all dogs, no matter what their lifestyle is.

Generally, the parvo vaccine is part of the combo vaccine given to puppies and

he canine parvovirus is highly contagious and spreads among dogs through contact with feces from

**T**

infected dogs, coyotes, wolves, and foxes. Unvaccinated dogs have a mortality rate of about 90% if untreated, according to

a 2000 study published in *Animals.* Even with treatment, approximately 30% of affected dogs die.

This is a tough virus that is resistant to detergents, heat, alcohol, and most disinfectants. A strong bleach solution is the most effective way to clean up and

kill the virus. Otherwise, it can survive in the environment for weeks or months.

##### Signs and Diagnosis

Initial signs of parvo can be nonspecific but include vomiting, a lack of appetite, and diarrhea. The diarrhea quickly develops a characteristic foul odor. The odor comes from blood and the dying cells of the intestinal tract that are sloughed out after viral invasion. Fever and septic shock often follow quickly for young puppies. Dehydration is severe.

Diagnosis is done via clinical signs and a quick screening fecal test looking for antibodies. A low white blood cell count is commonly noticed.

##### Treatment

Treatment is intensive and can be frustrating. An infected dog requires serious supportive care with fluids to battle dehydration and replace lost

electrolytes, medications to help with nausea and diarrhea, and often blood or plasma transfusions to help short term with immunity. While mild cases can be treated at home, many cases will require at least a couple of days in the hospital.

Since parvo is a virus, no antibiotic can stop it. Antiviral treatments such as Tamiflu may be offered off label.

Tamiflu, a human flu medication, acts by inhibiting an attachment

enzyme on the surface of the flu virus called neuraminidase. It seems this same enzyme is used by pathogenic bacteria that then invade through the gastrointestinal wall when it is injured, as in cases of parvo. Bacterial attacks

contribute to parvo illness and deaths, so the medication may help in some cases.

A new treatment has received conditional FDA approval. Canine Parvovirus Monoclonal Antibody (CPMA) is a one-dose parvovirus treatment. Made by Elanco, this product has antibodies that quickly bind to the parvo virus, hopefully catching much of the virus before it has a chance to attack cells. The treatment has been shown to drastically reduce mortality from parvo and shortens treatment time for cases. Obviously, the sooner it is given, the better.

##### Bottom Line

The American Animal Hospital Association considers parvo a core

then boostered as adults. To compensate for the interference of maternal antibodies, it is recommended that puppies under 16 weeks of age receive three vaccinations. These are spread apart, so your pup may get a vaccine

at eight, 12, and 16 weeks for example. Unvaccinated adult dogs get two doses initially, given two to four weeks apart.

About a year after the last initial dose, all dogs should get a booster and after that, boosters spread out to every three years. Some owners may opt to do titers yearly in place of vaccinations. In those cases, if parvo is the only “low” titer, your veterinarian can booster your dog with a simple parvo vaccine instead of the usual combo vaccine that includes distemper, parainfluenza, and adenovirus.■

*Protection from parvo is as simple as saying yes to the vaccination during your puppy’s vet visit.*

*SerhiiBobyk | iStock*

|  |
| --- |
| **Breeds**Some breeds seem to have a genetic predisposition to severe parvo. These include Rottweilers, Doberman Pinschers, German Shepherd Dogs, Labrador Retrievers, and English Springer Spaniels. Some of the bull-type terrier breeds and sled dog breeds also seem more susceptible. |
| **Damage to the Heart**While best known for causing gastrointestinal signs, parvo can also cause a fatal myocarditis, damaging the muscles of the heart. This is mainly seen in puppies. Arrhythmias and inefficient functioning due to the inflammation of the heart muscle can lead to death. |
| **Cornell Isolated the Virus in 1978**In 1978, a devastating gastrointestinal virus hit dogs. With no prior immunity, dogs died in great numbers after horrible vomiting and diarrhea.Fortunately, Cornell’s Baker Institute scientists, including Dr. Leland Carmichael and Dr. Max Appel, isolated the parvo virus. Initially, dogs got the feline vaccine, but there was a canine vaccine by 1979. An improved and attenuated vaccine came out in 1981. |

* ILLNESS

# Canine Mycoplasma Infections

### *One of the factors in the fall 2023 respiratory outbreak*

Mycoplasma organisms can attach to urogenital tissues and cause bladder problems as well as reproductive issues. The prostate may also be infected with mycoplasma. One study looking at male

n fall 2023, canine mycoplasma infections were in the news for causing a potentially fatal respiratory illness.

**I**

Many cases had a long duration with some dogs progressing to pneumonia and sometimes death. The University of New Hampshire isolated an organism similar to known Mycoplasma species that is now undergoing further study.

Mycoplasma are tiny bacteria without a solid cell wall, which makes them difficult to recognize and foils antibiotics like penicillin that attack bacteria by damaging their cell walls. Further complicating things, dogs can be infected with different mycoplasma species.

##### CIRDC Pathogens

**Breeding Dogs**

A third area of concern for dog owners when it comes to mycoplasmal infections is reproductive health. A study\* published in January 2023 looked at mycoplasma-affected fertility in humans and dogs and found that almost 90%

of male dogs had mycoplasma present in semen, usually multiple species. If this prevalence is widespread, it would

suggest that mycoplasma do not influence the fertility of male dogs. Still, some of the dogs studied had reduced fertility or were sterile.

* ASK DR MILLER

dogs with benign prostate hyperplasia found mycoplasma in slightly over 80% of the dogs. Further research is needed to determine if the presence of mycoplasma was incidental or associated with the prostate condition.

Mycoplasma may be routinely found in the reproductive tract of female dogs, but only causes problems if there is an overgrowth. Stressful situations and unnecessary use of antibiotics may open the reproductive tract to disease

*(continues on p. 8)*

The acronymn CIRDC (canine infectious respiratory disease complex) covers several pathogens that can cause respiratory illness in dogs.

Mycoplasma species often sneak in

# Help for My Itchy Dog

### *Topical flea control adds to his constant itching*

with *Bordetella bronchiseptica* (causes kennel cough) and can survive in the environment for months without a host species. Incubation can be up to four weeks, which further complicates diagnosis. The bacteria can be shed for up to three weeks (usually airborne).

**Signs of Respiratory Illness** Classic signs of mycoplasma respiratory illness in dogs include:

* Cough of varying severity
* Nasal discharge (often purulent)
* Lethargy
* Fever

Diagnosing mycoplasma is challenging. The organisms are difficult to culture and generally require a polymerase chain reaction (PCR, a lab technique used to amplify DNA) for diagnosis.

##### Treatment

Doxycycline is the antibiotic of choice. Severe cases might require hospitalization, intravenous fluids and

medications, and use of an oxygen cage. Dogs may require blood transfusions.

Standard supportive care includes:

* Encouraging eating and drinking
* Keeping the nose clean
* Providing humid air
* Veterinarian-recommended cough medications if needed.

I want to give my small mixed-breed dog a bath more often because he

scratches so much, but he seems to itch even more when I do. Should I consider hypoallergenic products?

**Q**

Plus, he goes crazy when I apply a topical flea medication, rolling and

rubbing on everything in the house. But he has to have that because I am afraid of the oral tablets. I heard they cause neurologic problems in little dogs.

My vet is frustrated with me because I won’t use the oral flea tablets, and I am just as frustrated with the shampoos she suggests due to the price. Should I accept his itching as normal for him and not worry about the reaction to the flea stuff?

**A**

Before we chat about the bathing, let’s discuss topical flea medications.

There is quite a variety of products out there, and all contain some chemicals that can irritate the skin. In my experience, however, this is uncommon in normal dogs. Some

**Do You Have a Health Concern?**

*Send your health questions to DogWatch editor-in-chief William H. Milller, Jr., VMD, professor emeritus of medicine,*

*section section of dermatology, at Cornell University’s College of Veterinary Medicine. Email* *dogwatcheditor@cornell.edu.*

products spread topically from the point of application over

the skin. Others are absorbed through the skin and distributed via the bloodstream. Those that stay on the skin will have

their efficacy reduced or eliminated by frequent bathing, especially if the dog is bathed more often than once a week with a strong shampoo. Dogs that need to be bathed often should receive their flea control by mouth or with the products absorbed through the skin.

From what you’ve told me, I doubt that any grooming shampoo will help your dog. Unless a product is medicated with ingredients aimed at itching, shampoos usually won’t stop itching and sometimes make things worse.

The real issue is why is your dog itchy? As you can imagine, there are dozens upon dozens of reasons for a dog to itch. You don’t say whether you started an itch workup with your veterinarian. If you haven’t, you should ask for a referral to a veterinary dermatologist in your area. Once the underlying cause for the itching is resolved, your dog should only need an occasional bath for grooming purposes.■

* ASK DR. HOUPT

# Dangerous Behavior

### *Dog attacks despite every effort to find a solution*

My 8-year-old neutered male Cairn Terrier, Toby, lives with three family

**Q**

members (ages 82, 82, and 55). Over the past several years, Toby has had a number of aggressive incidents.

The first was three years ago, at which time I took him to his vet where he was diagnosed with luxating patella and treated. At his last physical, Toby’s bloodwork showed he had been exposed to anaplasmosis, but since he had no

range. Do lots of obedience: down, stay, sit, come in several short (five-minute sessions) a day.

Altering his brain chemistry with medications plus behavior modification and safety measures may improve Toby’s behavior. If all these measures fail, you may want to consider euthanasia.

I don’t recommend that lightly, but my recommendation is based on a study we did when a resident vet felt strongly that all dogs should be allowed to live. She never recommended euthanasia.

We followed her cases and found that owners ultimately euthanized their dogs when the dog bit multiple times

symptoms, no treatment was given. He was recently treated for a cyst on his back and a loose molar.

My vet said that animal behavior is beyond her training and suggested I seek

*Toby’s aggressive behavior has become a danger to his family.*

either moves too quickly or comes near to his stomach. Toby is happy and friendly

in one attack, when the dog was large, when there are infirm or elderly people in the home, and when the dog was unpredictable. I am afraid Toby’s case meets all the criteria except for size.■

a veterinary behavioral specialist. around people, but I am nervous to have

Toby’s aggression is explosive. One time, without warning, he attacked my face. He broke my nose and tore my lip in two. I had puncture wounds all over

one side of my face, and you could see my teeth and my jawbone from the bruising on my cheek. We feel that these incidents are linked to pain, but since he hides his pain well, we don’t see them coming.

In addition, there have been a few occasions when Toby hasn’t gotten what he wants (going for a walk at that exact time, for instance), and he throws angry aggressive tantrums. These are rare, but they do happen.

Toby gets plenty of exercise and social interaction. He gets two walks a day and enjoys visiting his friends. At home, the family plays games with him, and he likes catching tennis balls. There is also a garden where Toby can dig holes and run around in an enclosed area.

Toby eats twice a day and treats. Unfortunately, he also gets treats as bribes when he decides to block where the family can walk.

In general, Toby is a timid, sweet dog. If a strange dog comes up to him, he is likely to freeze or flee. He does get nervous if a dog approaches him and

anyone close to him. Toby doesn’t like to be touched very much. The vet said he

is overstimulated by touch. I can pat the top of his head, his back, and his tail, but he seems uncomfortable with more.

Toby has sleep startle reflex. Once I realized what was going on, I insisted that Toby sleep in a kennel at night.

Most of the time, Toby is a sweet little pup, but my family and I have grown afraid of him. I don’t want to have to put him down, but unless I can find someone to help me with his behavior, I don’t know how I am safely going to be able to keep him. If you think you could help us we would be so grateful.

**A**

You are to be commended for trying to find medical causes, especially

pain, for his misbehavior. Toby is a very cute dog, but pretty is as pretty does and he has not behaved in an acceptable

manner. Yes, you should seek a veterinary behaviorist. To find a board certified veterinary behaviorist near you (see https://[www.dacvb.org).](http://www.dacvb.org/)

Meanwhile, I would use baby gates to confine him away from the older members of your family. They can toss him treats but not get within tooth

*(Infection, continued from page 7)*

conditions. Most dogs with urogenital mycoplasma do not show signs of illness so the bacteria can be overlooked as a fertility problem.

##### Bottom Line

The term “mycoplasma” covers a wide range of different species that can thrive in our dogs. While these are often benign bacteria, if the normal floral balance

is upset by improper antibiotic use or the presence of additional potentially pathogenic organisms, mycoplasma can become significant health problems.

Cultures are difficult to do so many clinics now go for PCR testing if indicated.

Unfortunately, there are no vaccines for mycoplasma infections in dogs.

However, having your dog current on the other known components of canine respiratory disease complex helps to reduce severity of any illness.■

*\* Domrazek K, et al. The influence*

*of Mycoplasma species on human and canine semen quality: a review. Asian J Androl. 2023 Jan- Feb;25(1):29-37. doi: 10.4103/aja2021124. PMID: 35259783; PMCID: PMC9933968.*

**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 dogwatcheditor@ cornell.edu or mail to DogWatch, 535 Connecticut Ave., Norwalk, CT 06854-1713.*

***Coming Up …***

* ***Choosing a Fear Free Practice***
* ***Ways to Mask Loud Noises and Settle Dogs***
* ***Palliative Care and Euthanasia Decisions***
* ***Concerns About Lawn Chemicals***
* ***Itching Due to Food Allergies***