Cornell DogWatch

Expert information from the Cornell Richard P. Riney Canine Health Center July 2023 – Vol. 27, No. 7

THIS JUST IN

New Drug for Arthritis

Release expected by late 2023

Over 25% of dogs battle arthritis, a painful, degenerative condition that decreases joint movement and quality of life. As arthritis worsens, achieving adequate pain control becomes increasingly difficult.

Librela (bedinvetmab) is FDA-approved for the treatment of osteoarthritis in dogs and is expected to be available in late 2023. It is already in use in Europe, Australia, New Zealand, and several other countries.

The monthly injectable from Zoetis is the first monoclonal antibody (mAb) approved for use in dogs. The FDA approved an mAb for cats in 2022.

Bedinvetmab, the active ingredient in Librela, works by binding to and inhibiting the biological activity of a protein called the canine nerve growth factor (NGF), which has been found to be elevated in dogs with arthritis and is involved in the regulation of pain. When bedinvetmab binds to NGF, it prevents the pain signal from reaching the brain.

In 2019, a study looking at mAbs as pain control in dogs and cats was published in the *VetRecord*. "The efficacy of a single injection appears to last at least four to six weeks and the magnitude of effect appears the same as, or greater than, that expected with NSAIDs (non-steroidal anti-inflammatory drugs)," concluded the researchers.■

Enomoto, M., et al. "Anti-nerve growth factor monoclonal antibodies for the control of pain in dogs and cats," VetRecord, Jan. 5, 2019.

INSIDE THIS ISSUE

Could It Be Cancer?

Ignoring suspicious new growths is a mistake

Lumps and bumps seem to occur out of nowhere in aging dogs. Most are benign and require no treatment or concern, but that doesn't mean you can ignore the appearance of a new lump.

Worrisome Lumps

- In the mouth
- On the toes
- Firm, irregular, or immovable
- Rapid change in size or appearance

Initial Evaluation

The terms "tumor, mass, and growth" are used interchangeably to describe lumps and bumps. These terms do not differentiate between malignant (cancerous) and benign (non-cancerous) growths.

Some experienced veterinarians can determine if a growth is most likely benign by looking at it and feeling it. If that's not possible, a diagnostic procedure called fine needle aspirate (FNA) and cytology is performed, usually right in the exam room without sedation.

With an FNA, a needle is inserted into the growth and a tiny sample of cells is retrieved. The sample is placed on a microscope slide and sent to a laboratory for cytologic evaluation by a veterinary pathologist.

The upside of FNA/cytology is that it is quick, easy, and doesn't require sedation or anesthesia. Some growths easily shed their cells, which allows for a definitive diagnosis right away. These

(continues on page 3)

Which Lesion Is Cancerous?

Answers are on page 3. *Photos courtesy of Dr. William H. Miller.*

Bald Spot on Your Dog's Tail?

Consider tail gland hyperplasia, a common problem

Any dog can develop tail gland hyperplasia, which causes a bald spot on the dog's tail, usually toward the middle. It's most common in middle-aged, not-neutered males and is believed to be related to sex hormones but sometimes also occurs in neutered males and spayed female dogs. It's usually harmless, but if the problem escalates without treatment, amputation of the tail may be necessary.

How It Happens

The tail gland is located about a third of the way down from the base of your dog's tail, on the top (dorsal) surface. Sometimes the gland becomes enlarged, resulting in localized hair loss due to encroachment on the hair follicles, and the enlarged glands may secrete too much sebum. When sebum accumulates, it causes localized scaling, crusting, greasiness, blackheads (comedones), and secondary infection. Surrounding skin may darken and firm nodules may form from chronic inflammation.

Because of its classic look and location in the middle of the tail, tail gland hyperplasia is usually easy to diagnose. Depending on your dog's overall health and skin condition, however, your veterinarian may want to do tests to rule out possible underlying conditions like mange, ringworm, seborrhea, allergies, and hypothyroidism.

Treatment

Sometimes tail gland hyperplasia remains quiet, causing nothing beyond a bald spot that is simply cosmetic. If the area becomes irritated, crusty, oozy, malodorous, or seems to be enlarging, treatment becomes necessary. Tail glands that do this usually require long-term maintenance.

If the area is infected, your veterinarian will prescribe oral antibiotics. Beyond that, treatment and maintenance are topical. If necessary, clip the hair around the area to make it easier to keep clean. Topical treatment options include anti-seborrheic shampoos and conditioners; benzoyl peroxide shampoos, sprays, or creams; antiseptic (chlorhexidine) shampoos, wipes, or sprays; or any combination of these. It may require trial and error to determine what works the best for your dog with the least amount of irritation.

If attempts to manage a dog's tail gland hyperplasia are unsuccessful and the lesion has become a source of chronic pain and infection, surgery can be curative. The problem is that it's usually impossible to remove the affected area without amputating the tail.

Prevention

Make sure your dog has no access to any human estrogen or testosterone topical products. If you see a bald spot on your dog's tail that occurs without explanation, make a veterinary appointment. If the diagnosis is tail gland hyperplasia, follow your veterinarian's advice and do everything you can to get, and keep, the area under control.

Most importantly, if your male dog is not neutered, get him neutered, as this usually resolves the condition. If it occurs in a neutered male or a female, an endocrine evaluation is necessary. ■

William H. Miller, VMD, photos

The telltale sign of tail gland hyperplasia is where it is on the dog's tail. It may appear crusty or it may be red and irritated. If it gets out of control, amputation may be suggested.

Cornell DogWatch

EDITOR IN CHIEF
William H. Miller, VMD, DACVD,
Emeritus, Professor, Clinical Sciences

EXECUTIVE EDITOR
Cynthia Foley

TECHNICAL EDITOR
Debra M. Eldredge, DVM

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Veterinary Medicine
Cornell
Richard P. Riney
Canine Health Center

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

Send questions and letters to the editor:
DogWatch
535 Connecticut Ave.
Norwalk, CT 06854-1713
dogwatcheditor@cornell.edu

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Old Dogs And Vaccinations

Risk assessment for geriatric or very ill dogs

Do really old dogs and chronically ill, debilitated dogs need vaccinations? That's a good question. To start, there are two facts to understand:

1. No research has found solid answers to this question, and the vaccine guidelines don't address dogs by age once they're adults.

2. If you're concerned about vaccine safety, side effects, or over-vaccination, listen up: The diseases are worse.

Do Vaccines Work on These Dogs?

Vaccines stimulate the immune system to produce antibodies that protect the individual from specific diseases. In order for this to be successful, a safe, effective vaccine and a normal, healthy response by the dog's immune system are necessary. And that's where we fall into a gray area with old or ill dogs.

Can we get a normal vaccine response from a chronically ill or debilitated dog? No one knows for sure. It is possible that we are not even protecting these dogs; we're just opening them up to the risks associated with vaccination.

On the other hand, the strength of the immune system wanes as dogs age, which gives power to the argument that we should vaccinate these dogs as their natural ability to fight disease weakens.

What about dogs who are fighting a disease? This is especially concerning for dogs who suffer from immune mediated disease like immune-mediated hemolytic anemia (IMHA) or immune-mediated thrombocytopenia (ITP).

Immune-mediated or autoimmune disease occurs when the body's immune system starts attacking its own cells, which means the immune system is not functioning properly. As such, there's an unpredictability associated with it. Should we vaccinate these dogs, stimulating an immune system that has already gone awry, or are we just poking a hornet's nest? Most veterinary professionals lean toward not vaccinating these dogs due to the chance it will make the autoimmune disease even worse.

What Do You Do?

If you have a geriatric, chronically ill, or debilitated dog, talk with your veterinarian. Your veterinarian may recommend checking vaccine titers,

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Vaccine decisions are about doing what's best for your individual dog.

such as for the distemper-parvo vaccine. Titers are blood tests that measure the dog's disease-fighting antibody levels. If levels fall within the protective range, your dog may not require a booster that year. Titers cost more than vaccines, but they can minimize vaccinations.

Reassess your dog's lifestyle every year. As dogs age, mobility issues or other infirmities can keep them a bit closer to home than when they were younger. A dog who used to hike with you in wooded areas who now just steps outside for a nap in the sun on the porch likely has little need for leptospirosis or Lyme vaccinations. It's similar for the kennel cough (Bordetella) vaccine.

Rabies Is Different

Because rabies is a life-threatening human health concern, vaccinations are heavily dictated by state and/or local municipalities. Rabies titer tests are available, but the titer test is not accepted by law enforcement. If your dog bites a person, the dog will be considered unvaccinated.

If your dog really shouldn't receive a rabies vaccine for his own health reasons (e.g., severe anaphylactic reaction to rabies vaccine in the past, immune-mediated disease, severely debilitated condition), some municipalities will accept a letter from your veterinarian stating why it is dangerous for your dog to be vaccinated and allow an exemption.

Bottom Line

Vaccines have been saving lives for centuries, but without research to prove what's best for old or ill dogs, it's difficult to know exactly what that is. Partnering with a veterinarian you trust and who knows your dog will get you there.■

(lumps, continued from page 1)

include the mast cell tumor (malignant) and the histiocytoma (benign).

A negative cytology means no cancer cells were noted and allows you to simply monitor the lump. If anything changes, alert your veterinarian.

The downside of FNA/cytology is that the tiny sample that is obtained may not be fully representative of the growth. Additionally, some tumors do not shed their cells easily, which also can lead to inconclusive or false negative results.

When You Need a Biopsy

If your veterinarian is suspicious of a lump despite negative cytology, the next diagnostic step is a biopsy (histopathology). With a biopsy, a piece of the growth is removed and sent to a pathology lab. This procedure requires either sedation and local or general anesthesia, depending on where the lump is. Your dog will have sutures and post-op recovery restrictions.

The upside of a biopsy/histopathology is that it gets a more fully representative sample of the growth, which allows the pathologist to examine not only the cells involved, but the architecture of the lump as well. It's rare to get inconclusive results with a biopsy.

Regularly inspect your dog for lumps, such as at every grooming. If you see something suspicious, call your veterinarian. It's far better to be safe than sorry here, as some bad growths can masquerade as harmless.■

The Cancerous Lump

1. Lipoma. Benign. A common finding in the fat of older dogs.

2. Mast cell tumor. Cancer. Low-grade tumors may be cured with surgery.

3. Sebaceous adenoma. Benign. Small growths in the oily glands in the skin.

4. Skin tags. Benign. The cause of these small stalky growths is unknown, but may be due to irritation to the skin.

Understanding Anesthesia

Veterinary strategies that keep your dog safe

Knowing your dog needs to go under anesthesia is stressful, but your dog's veterinary team's anesthesia procedures are designed to keep your dog safe and correct any problems quickly.

"Anesthesia is not a one-size fits all process. Each animal is assessed individually, and their medical history is taken into account when formulating a specially tailored plan. At Cornell, we are fortunate enough to have a specialist anesthesia service that does this," says Nadine Fiani, DVM, board-certified veterinary dentist and section chief of dentistry and oral surgery at Cornell.

While general practice veterinary clinics may not have the bells and whistles of a teaching hospital like Cornell, they still employ many of the same strategies to minimize risk and meet the needs of your individual dog.

Before Drop-Off

If your dog is going under anesthesia for a scheduled procedure, preparation starts at home well before you get to the veterinary hospital.

Most veterinary facilities call to confirm your appointment a day or two ahead and will give you some instructions at that time. One key piece of information is fasting time or how long to withhold food.

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Your dog will likely receive an induction drug that takes your dog into deeper unconsciousness.

Fasting is important because when your dog is under anesthesia, her swallowing reflex no longer works normally. If she happens to vomit in response to some of the medications used, she could accidentally aspirate the vomitus into her lungs and cause aspiration pneumonia. Neither you nor your veterinarian wants that to happen. An empty stomach means there is nothing for the dog to throw up and get into the lungs.

But fasting can bring its own problems. Because of this, your dog will likely be given a fasting time based on her age and overall health.

The 2020 American Animal Hospital Association fasting guidelines recommend fasting healthy dogs 4 to 6 hours before anesthesia. Puppies under 8 weeks old should only be fasted 1 to 2 hours because they are at high risk of developing low blood sugar. Dogs who are at high risk of regurgitation or who have had problems with it before when under anesthesia will be fasted for longer times, up to 12 hours.

Your veterinarian will advise you on whether you should give any medications the morning of the procedure. In most cases, it is best to give your dog any chronic medications that she may be taking. For diabetic dogs, you may be instructed to decrease her insulin dose that one time.

If your dog is anxious or difficult when at the veterinary hospital, your veterinarian may send home a sedative ahead of your appointment. Giving the sedative before you leave home will calm your dog before she can get stressed by the drive or walking into the office. This allows the team to use less anesthesia overall throughout the course of the day and helps make the experience less stressful for everyone involved.

Bloodwork and Pre-Meds

Your veterinarian will likely recommend preanesthetic bloodwork. Most anesthetic drugs are processed by the liver and kidneys, so this bloodwork allows your veterinarian to see how those organs are doing before tossing drugs at them. This is an important step.

Young, healthy pets tend to get a small chemistry panel just looking at core liver and kidney values, while older dogs or ones with health problems may get a more extensive panel.

If your dog's bloodwork is normal, the show goes on. If there are abnormalities, your veterinarian will either adjust their drug protocol, give intravenous (IV) fluids ahead of anesthesia to provide extra hydration, or postpone the procedure until the underlying organ function issues can be addressed.

Once your dog gets the green light, she will often be given some sort of pre-medication. These pre-meds are usually a cocktail of several drugs that helps to calm your dog and starts providing pain relief. Your veterinarian will choose complementary medications that work well together so that your dog can get maximum benefit from small amounts of each drug. By using a little bit of several different drugs, your dog is much less likely to experience side effects from any given medication.

Most veterinarians have a preferred protocol of drugs, but these are not set in stone. Different dogs have different needs, and protocols are adjusted as needed. For example, if your dog's record

Dr. Nadine Fiani is an associate clinical professor and section chief of dentistry and oral surgery at Cornell University's College of Veterinary Medicine.

What You Can Do

- Follow instructions for fasting and which medications to give the morning of the procedure.
- Give oral sedatives if prescribed, and report any difficulties you had giving the medications.
- Remind your veterinary care team of any issues your dog has had with particular medications in the past.
- Say yes to bloodwork to make sure your dog's liver and kidneys are working normally before anesthesia.
- Have your phone handy to answer any calls from the veterinarian. Most dogs have no trouble with anesthesia, but if something does go wrong, your veterinarian may need to reach you for permission to provide additional emergency care.

shows a bad reaction to a particular drug in the past, your veterinarian will use different drugs instead to give your dog a better experience.

Induction of Anesthesia

After the pre-meds are given and your dog relaxes, a veterinary technician will place a catheter in a vein. This gives the team easy access to give any medications that are needed throughout the procedure and during recovery. Then they will induce anesthesia.

Induction drugs are usually injectable medications given into the vein. These drugs take your dog from light sedation to deeper unconsciousness. At this point, your dog's muscles will totally relax and her eyes will roll up as she goes into a deep sleep.

Next the technician places an endotracheal tube down your dog's throat so that they can deliver oxygen and anesthetic gas directly to her lungs.

Maintaining Anesthesia

Gas anesthesia is the most common choice for maintaining anesthesia, or keeping your dog asleep. Inhalant anesthetics are metabolized quickly and can be adjusted up or down as needed to keep your dog stable—asleep and pain-free, but not too deep.

During maintenance of anesthesia, your dog's vital signs will be monitored continuously. If any change in blood pressure, heart rate, oxygenation, EKG, or temperature is noted, the team will adjust the anesthesia levels or give medications to counter what is going on.

For example, if your dog starts to breathe rapidly, she is either in pain or waking up. The technician or anesthesiologist will turn up the anesthesia and/or administer pain medications to calm her. If your dog's heart rate drops, she may be given atropine to stimulate a better heart rate.

Most facilities also keep dogs on IV fluids throughout anesthetic procedures to help with hydration and blood pressure. While the technician keeps an eye on your dog, the veterinarian performs the procedure.

Recovery

Once the dog is done, the gas anesthesia is turned off, but she will be kept on oxygen for at least 5 minutes. Brachycephalic dogs and ones in critical condition are often kept on oxygen longer. This helps her body to flush out the anesthesia and ensures that she is getting plenty of oxygen.

Once the dog is taken off oxygen, she will be moved to a recovery area. Here the technician will watch her closely until she starts to blink and swallow. Once she can swallow normally, the technician will remove the endotracheal tube.

The staff will continue to monitor the dog as she wakes up. If she shows any signs of pain or distress, appropriate medications may be given. Staff will check her gum color and make sure that she is breathing normally on her own.

Back at Home

Depending on the facility and the procedure that was performed, your dog may be able to go home the same day or may stay overnight.

If going home the same day as anesthesia, expect your dog to be a little bit groggy. She should be up and moving within an hour or two of anesthesia, but it takes longer to totally work all the medications out of her system.

Young, healthy dogs are usually back to themselves the next day, while older dogs may take several days to get back to 100%. Call your veterinarian if you have any concerns about your dog's recovery.

Don't be concerned if your dog doesn't defecate for a day or two after anesthesia. Some dogs poop normally the same day, but others get a little constipated from some of the medications.

Follow appropriate medication and care instructions based on the procedure that your dog had done.■

OcskayMark/iStock

Most canine teeth cleanings involve surgery and anesthesia.

What Are All These Drug Charges?

Depending on how your veterinarian does their invoices and estimates, you may see individual line items for each medication used. Remember that combining small amounts of multiple medications decreases the risk of side effects for your dog while providing the best sedation and pain relief. If your veterinarian only used one drug for each step of anesthesia, she would need a lot of it to achieve the same effect. Your veterinarian or a technician can go through the different medications with you if you want, so you understand when each one is used and why.

Emergency Anesthesia

In an emergency, your dog likely will not be fasted. Tell the veterinarian when your dog last ate and how much, as well as any medications that she is on. The team will take care to minimize the risk of aspiration while still ensuring that your dog gets the emergency care she needs.

Anesthesia in an emergency setting often has more risks than a routine procedure. For example, "There is a huge difference in the anesthetic risk between a healthy dog spay and spaying a dog with pyometra," says James Flanders, DVM, board-certified veterinary surgeon and associate professor emeritus of small animal surgery at Cornell. "Dogs with pyometra can be severely ill due to sepsis. Septic dogs can be dehydrated from vomiting and very toxic due to the high numbers of bacteria in the uterus and in the bloodstream. The risk of anesthesia in a septic dog is very high."

Your veterinarian will discuss the risks associated with your dog's situation, and the team will work to stabilize your dog's condition before putting her under anesthesia. Stabilization often includes IV fluids, oxygen therapy, and medications to help encourage a normal heart rate and calm your dog. After all that, the process of anesthesia will be largely the same as for a routine procedure.

Normal Fungus Gone "Wild"

It's usually the same fungus that causes ear infections

Is your dog licking his feet more than normal? Does he seem to fuss more than normal when his feet are handled? Maybe he walks gingerly over rough surfaces. These are all potential signs of a foot fungal infection.

The most common fungal organism in feet are the same ones seen in many ear infections: a yeast from the *Malassezia* genus of fungi. *Malassezia* is a common yeast, part of your dog's normal skin flora. Unfortunately, in some conditions, the yeast goes wild and causes problems.

"As the yeast proliferate, the skin's surface often becomes greasy, and the dog will lick the feet but not too passionately," says William H. Miller, Jr., VMD, professor emeritus of clinical sciences at Cornell University's College of Veterinary Medicine. "The kicker is that many dogs become allergic to the metabolic byproducts of the yeast and then really start to lick and chew. Many of these bigtime foot chewers are allergic dogs to begin with. Most are atopic, but it can be seen in food allergy, too." Contact dermatitis allergic reactions also may open the way for yeast infections.

You might notice brown discoloration of the hair on the feet and a brownish discharge around the nail beds. Some of the discoloration is due to saliva stain. The skin on the feet themselves may be red, moist, and inflamed. You might have to spread the toes or look underneath to spot the inflammation if your dog has hairy feet. Often the dog's feet will be sensitive and painful, possibly with some swelling or even an unusual odor.

If nails are involved, they become brittle. They may break easily, including when you go to trim them. Brown discharge appears around nailbeds and may be seen in white nails.

Very often yeast infections occur in conjunction with other problems such as allergies and immune problems. If your dog's feet often tend to be wet and warm, such as in humid summer conditions or if he is frequently in wet areas, the conditions are perfect for yeast growth.

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Constant licking and chewing at feet and nails is a sign of a fungal infection.

Diagnosis

Diagnosis is based on the clinical signs, including appearance, and often a slide cytology to look for yeast. Remember that having some yeast present is normal. Your veterinarian is looking for an overwhelming amount of yeast.

Dr. Miller cautions that people must remember that *Malassezia* is part of the normal microbiome of the dog. "If you swab the feet of many normal dogs, you will find some yeast. If there is no evidence of disease, like licking, the dog doesn't need treatment. If there are tons of yeast, then that's not normal. Aside from the rare case caused by the dog being stuck in flood waters, mud, etc., most dogs with Malassezia disease have some initial skin condition like seborrhea or allergy," says Dr. Miller.

Treatment

Dogs with an obvious underlying cause such as seborrhea or allergies will need a workup and treatment of the primary problem. Dogs with a mild yeast infection alone can often be treated at home while severe cases may require oral antifungal medications and/or antibiotics for any secondary bacterial infections.

Topical treatment is the ideal for most cases of yeast infections of the feet. While lime sulfur, bleach, or chlorhexidine solutions are used by many veterinarians with success, Dr. Miller prefers a vinegar solution. Wipes containing the anti-fungal miconazole and chlorhexidine are sometimes used, but wipes may not get the treatment down into the cracks of the paw and pad.

Some veterinarians recommend soaking the paw, but Dr. Miller prefers to dip the paws into your vinegar solution and then forgo a rinse. "When I start treatment, I suggest cleaning the feet first if they are greasy, dirty, or crusty," he explains. "Once the surface goo is gone, the owner just dips each foot into a small bowl of the vinegar solution making sure to press the foot down so the toes spread out which allows the vinegar to get into the nooks-and-crannies on the bottom surface. The foot is pulled out after brief contact and wiped with a towel or paper towels. I don't like long soaks because oversoaking can macerate the skin and predispose to bacterial disease."

White or apple cider vinegar can be used, although some veterinarians feel that white vinegar works best. The vinegar choice is mixed 1:1 with water for the dipping solution.

If your dog has seborrhea or skin allergies, treat those conditions as prescribed. Many dogs do well with topical treatments but may need systemic medications during times of flare ups for those conditions.■

What You Can Do

Preventing yeast infection involves keeping your dog's paws reasonably dry. That said, skin that is too dry can lead to paw cracks, which open the door for yeast and more.

If your yard is wet and muddy, wipe and dry your dog's paws when he comes in. Fence off marshy areas in your yard. Check your dog's feet carefully when you trim his nails, catching any budding yeast infections early on. Look between toes and the paw pads on the bottom.

Watch for signs of contact dermatitis if you use a new carpet or floor cleaner. The irritation and inflammation from that may provide conditions for extra yeast organisms to thrive.

It's a Good Year for Ticks

That means it's a bad year for dogs and their owners

While ticks can infest our dogs any year, 2023 looks to be a good year for tick populations. That means it's not a good year for dogs or us. A tick bite can spread Lyme disease, anaplasmosis, ehrlichiosis, babesiosis, Rocky Mountain spotted fever and more.

Why The Increase?

Changes in climate also influence tick populations. Warmer winters mean tick nymphs can mature faster. And the shorter life cycle means an overall increase in tick numbers and/or a longer time for ticks to be actively out and about, seeking hosts.

These changes may also open the doors to non-native ticks who can now thrive in the changed environment. Meanwhile, if a hot environment becomes hotter, ticks will tend to die from drying out, unless the humidity also increases, as that can be somewhat protective to the ticks.

Even plant dynamics can influence tick numbers. The summer and fall of 2016 yielded bumper crops of acorns across the Northeast. More acorns meant more food for mice, which meant more mice. With more mice, there were more hosts for tick nymphs to feed on. As a result, 2017 saw larger than normal numbers of ticks in the Northeast.

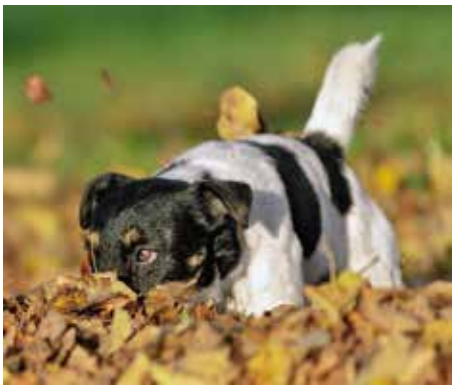
Sadly, the move to expand green spaces in cities and to establish more parks means more tick habitats and more tick hosts. Wildlife moves in and provides hosts such as rodents and deer. Add in more people and dogs out enjoying those spaces and you get more tick infestations.

Be Alert But Careful

If you see a tick on your dog, remove it immediately, being extra careful to remove the tick's head. If you leave the head, bacteria can still be transmitted into the dog. Disease transmission is estimated at 36 to 48 hours after attachment, but some experts are saying 24 hours or less.

Signs of tickborne disease may not appear for seven to 21 days or longer after a tick bite, according to the Centers for Disease Control and Prevention. Watch your dog closely for changes in behavior if you suspect that your pet has been bitten by a tick. Symptoms vary with the disease transmitted, but in general you may see:

- diarrhea
- fatigue
- joint swelling
- lack of appetite
- lameness
- muscle pain
- swollen lymph nodes



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It's fun to play in piles of leaves, but the risk of tick-borne disease is too high this year.

Tick populations have been increasing and moving northward in North America for years. The warmer temperatures help them shift. Add in the rainy, snowy winter seen in most locations this year, and you have happy ticks. Ticks can't handle really low humidity, but they can adapt to most other weather conditions, including freezing temperatures.

While ticks can be found in almost any habitat, including coastal areas as shown by a recent study in California, the ideal home is a wooded area with deciduous trees. Ticks also flourish in tall grasses, shrubbery, and along the edges of woods.

Protect Your Dog

Protect your dog by using a proven anti-tick product on your dog—read labels; some products repel fleas but not ticks. *You can choose a collar, a topical, or an oral product, but you must use the product exactly as directed.* Discuss the brand choice with your veterinarian.

Only use dog products on dogs, as cats can be killed by chemicals in dog products. The Companion Animal Parasite Council recommends using a tick product all year round since we now know ticks can be active even in the winter at times. Do a thorough body check on you and your dogs after hikes; for short-haired dogs, rubbing a lint roller over the coat can grab ticks that haven't latched on yet.

The bottom line is that ticks are currently thriving. Modify your environment as best you can and provide your dog with adequate tick protection.■

Go Tick Unfriendly

Move tick habitat out of your dog's area in your yard as much as possible and discourage wildlife:

- Put brush piles, compost, and leaf litter outside of your dog's area.
- Rake or mulch grass after you mow.
- Keep grass to 6 inches high or less. Trim hedgerows and along fence lines.
- Limit the ornamental shrubbery in your yard.
- Avoid any plants that might attract deer, and consider a high fence if deer tend to pass through your yard.
- Avoid groundcovers that might provide moist, shady areas for ticks.
- If your dog loves to rest under a certain tree, add a raised cot so he is off the dirt.
- A three-foot-wide barrier around the yard of gravel or crushed stone can discourage ticks from traveling into your yard. Diatomaceous earth also can act as a barrier.
- Consider some of the plants reputed to be tick repellants such as rosemary, various mints, sage, lavender, and marigolds. Cedar oil sprays may also help.
- Consider using "tick tubes" to help wipe out tick populations on mice. These are tubes that are filled with cotton balls with permethrin on them. Mice take the cotton balls to help build nests, and the insecticide kills any ticks on the mice.
- Chickens and guinea hens are known for tick consumption and can patrol your yard.

Puppy Nips Too Much at Play

You should end the game and redirect the puppy

Q I just received my first issue of *Cornell DogWatch*. So far, I love it and noticed you have a "mail in your questions" email and had to take advantage of it.

I have a 7-month-old yellow Labrador Retriever that I received from a breeder, who held onto all the puppies for the first 6-8 weeks before sending them off to their new homes. My puppy has a weird habit I've never seen in a dog that I don't understand nor know how to go about correcting it.

When she starts to play with her toys, she always has to touch my hand with it while she chews/bites it. But, as I hold the toy and tug on it gently and play with her, she goes for the part of the toy I am holding and always nips me. She also does this if I just have my hand hanging over the couch arm or on my lap.

She also growls at me with the toy in her mouth. Even if I'm not engaging with her, she will stand there with toy in mouth, growling and barking until I offer a hand and play with her, which results in me being nipped. My response is to either walk away or take the toy away, which makes her whine for it until she grabs another toy and repeats the process.

It is annoying. I do take her for frequent long walks and to a local field to throw a ball and work on retrieves (training her to be a bird hunting dog). Any advice is greatly appreciated.

A I would have expected your Labrador to have learned better playing manners from her siblings and mother during those six to eight long weeks before you brought her home.

Your response is correct, however: If her teeth are on your flesh, play ends.

Leave the room if you must. Playing ball is fine, and she should drop the ball before you throw it again.

I would avoid any sort of tug of war. You noted the biting happens when you pull at the toy, so avoid doing that. You might try a "flirt pole," which she can jump after and pull on without breaking your skin.

You also might increase the variety of toys so she won't miss gnawing on your hand. Puzzle toys are great, and she should receive half her food ration from puzzle toys to enrich her experience and reduce her need to prey on you.

Finally, a safe professional doggie daycare or informal play group with other young dogs should also help. Her playmates will let her know if her play is inappropriate or too rough. ■

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Pups learn appropriate play from one another.

Do Skin Sores Indicate Lupus?

Non-healing sores may require a change in treatment

Q My dog has skin sores that won't heal. The vet prescribed antibiotics, but they didn't work. I am not sure she knows what's wrong, so I looked on the internet myself and found that dogs can get lupus and that lupus can cause skin problems like sores. How would I ask her to consider lupus, or should I? The dog is a 4-year-old Sheltie, who normally has a beautiful coat.

A Yes, dogs with lupus can have skin disease, but lupus is rare in dogs. If your dog had lupus, the skin disease would be accompanied by other conditions like arthritis, kidney disease, or blood problems. If your dog is otherwise healthy, lupus is unlikely. On the other hand, skin infections are very common in dogs and are becoming more problematic to treat and resolve.

Over the past decade, the bacteria *Staphylococcus spp.* responsible for the infections have become resistant to many antibiotics. What used to work may not today. Ideally, a bacterial culture should be taken so the most effective antibiotic can be selected. However, cultures are expensive and take multiple days to complete.

Primary care veterinarians usually dispense an antibiotic without a culture if the case warrants it. If there is little response to the drug, then the question remains, "Is it a resistant infection or some other condition?" It is good medicine for your veterinarian to re-examine the dog and decide the best course of action. If things aren't clearer after this vist, you can request a referral to a veterinary dermatologist in your area. ■

William H. Miller, VMD, is the Editor-in-Chief of Cornell DogWatch *and professor emeritus of medicine, section of behavior and section of dermatology.*

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.

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