

© THIS JUST IN

Vegan Diet for Dogs

More research is needed

A survey study explored links between dog diets and health outcomes and found that nutritionally sound vegan diets may be healthier than conventional or raw meat-based diets.

The researchers looked at health-survey data on 2,536 dogs fed either a conventional meat, raw meat, or a vegan diet. Statistical analysis showed dogs on conventional diets were less healthy than dogs on raw meat or vegan diets. Dogs on raw meat diets appeared to be healthier than those on vegan diets, however, the researchers noted several factors that prevent a conclusion that raw meat diets are healthier. For one, in this study, dogs on raw meat diets were significantly younger than dogs on vegan diets. Additionally, dogs on raw meat diets were less likely to be taken to a veterinarian. While this could be a sign of better health, prior research has indicated that guardians of dogs on raw diets are less likely to seek veterinary advice.

Further research is needed to confirm whether a raw meat or a vegan diet is associated with better dog health. Prior research has linked raw meat diets to increased risk of pathogens and nutritional deficiencies, however, these researchers suggest that a nutritionally sound vegan diet may be the healthiest choice for dogs. ■

Andrew Knight, Eason Huang, Nicholas Rai, Hazel Brown. *Vegan versus meat-based dog food: Guardian-reported indicators of health.* PLOS ONE, 2022; 17 (4): e0265662 DOI: 10.1371/journal.pone.0265662. Science Daily

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Guard Against Tracheal Collapse

A chronic cough may be an early sign of this disease

Tracheal collapse—a condition where the “windpipe” cartilage has been weakened or injured—can be life threatening. It is a common cause of chronic coughing, especially in little dogs, and it worsens over time.

If you own a toy or small-breed dog, it behooves you to learn about this disorder so you can be proactive if your tiny tike develops a persistent cough. Don't wait. Effectively managing early, mild symptoms will help stave off progression to more serious disease.

What Happens

The trachea is a semi-rigid but flexible tube that travels down the neck, into the chest, to the lungs. The tube is comprised of firm rings made of cartilage, which give the tube its rigidity. These rings are held together by ligaments, which give the tube its flexibility. The rings are not full circles, however. They are more C-shaped, with the opening facing upward, covered by a taut soft-tissue canopy. When everything is normal, the entire length of the trachea maintains its rigid tubular shape during respiration, with no change in diameter.

Tracheal collapse happens when the cartilage rings become weakened, no longer holding their rigid, original shape. Additionally, the normally taut soft-tissue canopy across the top becomes floppy. If the area of weakened tracheal rings is in the neck, the collapse occurs during inspiration (inhalation). If the weakened area is in the chest, the collapse occurs during expiration (exhalation). The collapse results in a tickling sensation that sets off the cough.

Nobody knows exactly why tracheal collapse occurs. It is most common in miniature and toy Poodles, Yorkshire Terriers, Chihuahuas, and Pomeranians. It usually occurs during middle age, although some may be affected earlier. A hereditary component is presumed but not proven.

While we don't know the exact cause, we do know obesity is the biggest thing that makes tracheal collapse worse. If your tiny dog is overweight, get that weight off.

Respiratory irritants like cigarette smoke, dust, aerosol sprays, and pollution also worsen it. Dogs who bark excessively usually have more trouble. Concurrent heart disease with heart enlargement exacerbates tracheal collapse, as the enlarged heart pushes up on the trachea in the chest. Anesthetic events where an endotracheal tube is placed will worsen symptoms, at least temporarily. Respiratory infections, which dogs with tracheal collapse are prone to, make matters worse.

The vicious cycles that occur with tracheal collapse contribute to the progressively worsening nature of this disorder, making breathing harder and inflammation.

Signs of Dangerous Tracheal Collapse in Dogs:

- ▶ Coughing: when agitated or excited, when picked up, when pulling against collar
- ▶ Cough is intermittent, harsh, dry, honking
- ▶ Cyanosis (blue mucous membranes from lack of oxygen)
- ▶ Exercise intolerance
- ▶ Fainting/collapse
- ▶ Retches after coughing
- ▶ Trouble breathing/wheezing

Coughing when leash pulling indicates a tracheal problem.



(continues on page 3)

Help for Fearful Dogs Going to the Veterinarian

An anti-anxiety medicine might help your canine

Many dogs are fearful and anxious when they go into a veterinary clinic, with or without their owners, depending on COVID clinic protocols. Stress can skew both physical and laboratory findings, possibly making an accurate diagnosis harder to make on your pet. A stressed dog may also injure vet staff or his owner out of fear. Many veterinary practices use Fear Free protocols, but some pets are still wary and unhappy.

A study reported in *JAVMA* from the University of California, Davis, looked at how dogs responded to a single dose of the medication trazodone given shortly before they left home for a vet clinic visit. Trazodone is an anti-anxiety medication and has been shown to help fearful cats with veterinary visits.

Dogs were given some trazodone 90 minutes before their scheduled appointments. Stress was then evaluated using many factors, including owner observations, veterinary staff observations, video behavioral assessments, objective physical exam factors such as heart rate and respiratory rate and serum concentrations of cortisol (a hormone associated with fear and stress).

All the dogs had two vet visits each a week apart. They were randomly assigned to get trazodone one visit and get a placebo on the other visit. All of the 20 chosen dogs had a low level of aggression towards vet visits.

Trazodone usage showed an improvement in dogs' stress according to owner survey and evaluation of videos of the visit analyzed later. Heart rates were higher in dogs who had received the medication which is a known side effect of trazodone. Serum cortisol levels were not statistically different.

Based on overall impressions, the researchers felt that a single dose of trazodone was worthwhile for fearful and stressed dogs pre veterinary visits. Additional research should be done to fine tune dosing and timing of dosing. You may want to discuss this treatment with your veterinarian if your dog gets highly stressed at his clinic visits. ■

JAVMA May 2022 Vol 860 #8 "Effects of trazodone on behavioral and physiological signs of stress in dogs during veterinary visits: a randomized double blind placebo controlled crossover clinical trial"

Cortisol Levels in Dog's Hair Measure Stress

This hormone gives a long-term determination of stress

Cortisol is well known as a "stress hormone," and measuring levels of cortisol can help to determine stress in dogs. Since cortisol accumulates in hair, measuring levels in hair can give a determination of stress response and recovery over weeks or months, depending on the length of the hair examined. This technique has been used extensively in humans, dogs, and other species.

This study looked at two aspects for the hair cortisol levels. They checked levels of cortisol on dogs when turned into a shelter, during their time at the shelter, and after adoption. These levels were compared to those of matched controls (breed, age, sex) who were pet dogs happily living at home.

The second aspect of the study compared those hair levels with urinary levels. Urinary samples give a more short-term look at cortisol levels, while hair is giving more long-term levels.

Levels were quite close upon admission and after adoption. Levels were higher in the samples taken while the dogs were at the shelter, suggesting that being in a shelter is stressful. Obviously, this is not surprising, but it is nice to have objective information to back this up. Small dogs and female dogs had higher levels of cortisol than large dogs and males. There was a reasonable correlation with the urinary samples.

The shelter in this study is in the Netherlands and has played a pioneering role in improving the welfare of dogs. They use glass walls instead of bars to reduce noise pollution for the dogs, for example.

The authors noted that more research needs to be done on the effect of hair color and the type of hair on cortisol levels. ■

Janneke, E., et al. Evaluation of hair cortisol as an indicator of long-term stress responses in dogs in an animal shelter and after subsequent adoption. Scientific Reports, 2022; 12 (1) DOI: 10.1038/s41598-022-09140-w, and Science Daily

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(Tracheal, continued from page 1)

Breathing harder: When the trachea collapses, it is more difficult for the dog to get air. When a dog can't get air, he breathes harder, which makes the trachea collapse even more, making it even harder to get air. Anxiety and distress associated with not getting enough air also makes the dog breathe harder, again worsening the collapse.

Inflammation: A collapsed portion of trachea that becomes inflamed or infected will cause increased secretions in the airway. The inflammation and secretions promote more coughing, and coughing mechanically induces more inflammation, which worsens tracheal ring weakness and collapse.

The Diagnosis

Diagnosis is challenging. Tracheal collapse is a dynamic situation, meaning it changes all the time, based on pressures and air flow in the moment. This means that even if your dog has a collapsing trachea, it may not be apparent on initial x-rays. Your veterinarian likely will take x-rays during both inspiration and expiration to try to see the collapse.

Chest x-rays have value for dogs with chronic coughs to rule other things out, like pneumonia and cancer. Dogs with collapsing tracheas are at increased risk of respiratory infections like pneumonia and often have concurrent heart murmurs, so chest x-rays are an important part of the diagnostic process. Just remember, if a collapsing trachea is not identified on survey x-rays, it's not a guarantee the dog doesn't have one.

The next step, whether a collapsing trachea is identified radiographically or not, is initiating medical treatment for the cough. If the cough can be successfully managed medically, there is usually no immediate need for further diagnostics. Remember, we need to stop the cough in order to avoid the vicious cycle of increasing inflammation and tracheal collapse. If your dog's cough is well-managed, and he is comfortable and happy, you're doing OK.

If treatment for the cough is unsuccessful, chest x-rays may be repeated to see if anything has changed. After that, if your veterinarian still suspects collapsing trachea, referral to a specialty center for fluoroscopy or bronchoscopy is indicated.

Fluoroscopy is like a continuous x-ray shown on a monitor in real-time, so it's

much more likely to catch a dynamically collapsing trachea. Bronchoscopy is performed by passing an endoscope (tube with a camera on the end) into the trachea that allows the veterinarian to see the inside of the trachea and bronchi. It is considered the gold standard for diagnosing collapsing trachea.

With bronchoscopy, the doctor can procure samples of secretions for laboratory testing. Bronchoscopy also allows the doctor to grade the degree of the tracheal collapse, which is important for choosing best treatment options and predicting prognosis. There are four grades of tracheal collapse, with grade I being the least severe and grade IV being the most severe.

Treatment

Medical management is usually tried first, and it may be successful for grades I and II tracheal collapse. In addition to medications discussed below, treatment always includes weight loss for obese patients, using a harness instead of a collar, and making sure respiratory irritants are eliminated from the home environment. Don't underestimate how important these things are for long-term success.

Commonly prescribed medications used in varying combinations include:

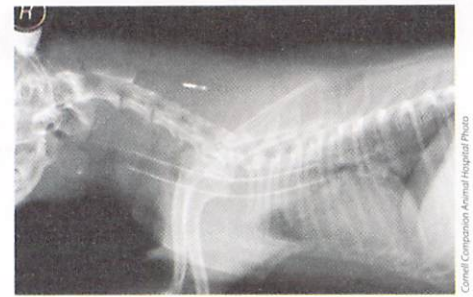
Corticosteroids, like prednisone. These are powerful anti-inflammatory medications that help decrease airway inflammation tremendously. They are, however, best used intermittently as needed, as they can cause immune suppression, and dogs battling tracheal collapse are already prone to secondary respiratory infections. Administering steroids with an inhaler, like humans use, helps minimize side effects.

Cough suppressants. Butorphanol and hydrocodone are most typically prescribed. Using these at the maximum acceptable dosage and frequency is often necessary to manage cough due to tracheal collapse.

Antibiotics. As needed, for secondary respiratory infections.

Bronchodilators. These medications can open the airways to the lungs. Theophylline or terbutaline may help, depending on where the collapse is occurring. Albuterol is a bronchodilator that can be administered by inhaler.

Sedatives. For dogs who suffer escalating anxiety or distress associated with airway hunger, sedatives like trazodone or acepromazine may be



Radiograph of the neck and chest of a dog after placement of a stent within the trachea (windpipe) for treatment of tracheal collapse.

prescribed so owners are equipped to interrupt that vicious cycle at home.

Surgical Options

Dogs who fail to respond to medical management, have grades III or IV tracheal collapse, have suffered cyanosis (skin/membranes turn blue) or collapse, or have received emergency treatment for trouble breathing may need surgery.

Of the two different surgical options for collapsing tracheas, the most popular is placement of an intraluminal tracheal stent. This is a mesh-like, rigid tube placed inside the trachea at the location of the collapse, using bronchoscopy or fluoroscopy. When performed by an experienced, skilled specialist, success rates are very high.

The procedure is not without risk. Immediate post-operative complications, while not common, include bleeding, tracheal rupture, and infection. Other complications can include kinking of the stent, stent migration, collapse of trachea adjacent to the stent, and obstructive scar tissue formation.

Even if surgery is a scary proposition for you, remember that severe tracheal collapse is life-threatening. Surgery can become your last and only option. A recent study published in the *Journal of the American Veterinary Medical Association* concluded that medical management alleviated signs for months to years in dogs with mild to moderate disease, although clinical signs did still worsen over time. Survival time for dogs with severe disease was significantly shorter for those who did not undergo intraluminal stent placement, versus those who did. We're talking 12 days for the dogs who did not have surgery, compared to 1,338 days for those that did. These are pretty compelling numbers that will hopefully make you feel better about electing surgical intervention, should your dog become a candidate. ■

Barely Noticeable Rear Pain

Active dogs who are slowing down for no apparent reason may be nursing their iliopsoas muscle

Your dog's enthusiasm for chasing balls seems to have dimmed. He's slower. Not quite so quick at the start. His stride seems shorter, and he may move unevenly, with one side not stretching out as far as the other. He's not quite lame, but he's not quite right. Is it a problem? Possibly. He may have stretched his iliopsoas muscle.

The iliopsoas (pronounced "ilio-so-as") is a muscle and tendon combination that connects the pelvis to the femur, which is the large bone in the hind leg between the hip and knee. It aids in hip flexion and bringing the leg forward. Somewhat like a "groin pull" in people, the iliopsoas can become injured by overuse and hyperextension of the leg.

In some cases, you may not even realize your dog is handling a low-grade chronic iliopsoas injury. He shows no clinical gait abnormality, at least until he slips while turning or on ice, which exacerbates the problem, so he becomes very sore and/or lame.

Dogs with an iliopsoas strain generally show pain and a slight lameness, but they usually don't suddenly go lame and refuse to bear weight on the affected leg. An iliopsoas strain is usually chronic, building up due to repeated low-grade wear-and-tear on the muscle. Many dogs only show a shorter stride in the rear when trotting. This soreness can be unilateral or bilateral, depending on which sides are injured.

A Common Injury

An iliopsoas injury likely occurs more often than it's diagnosed because it's so difficult to diagnose a soft-tissue injury.

"Strains of this muscle verified on imaging are very rare. In the sporting dog world, for a few reasons, these strains have been a common diagnosis to explain performance lameness based on palpation alone," says Christopher Frye, DVM, assistant professor, section of sports medicine and rehabilitation at the Cornell University Hospital for Animals.

"I do find this complex of muscle sensitive on palpation when concurrently found with other hind-end disease (cruciate injuries, hip dysplasia, lumbar and lumbosacral disease), but a true



Note the extension forward of the hind limbs on this Spaniel puppy, and it's easy to see how the iliopsoas muscle becomes strained.

Nigel Williams/istock

primary sport-related strain is extremely unlikely to be a cause of lameness. Because of this sensitivity finding when palpating that area, we then hypothesize that there is potentially a compensatory or overuse injury in that muscle group," says Dr. Frye.

Maryna Ozuna, a trainer who specializes in movement and behavior in dogs, says she is seeing an increase in dogs with iliopsoas problems due to life issues. She feels the increasing suburbanization of dogs causes tightness in the loin muscles, especially the insertion of the iliopsoas at the pelvic rim, due to dogs hard-loading the hind muscles when walking and running on concrete. One study showed that slightly over 30% of all dogs with some hind-limb lameness had the involvement of the iliopsoas.

Many dogs show a subtle intermittent lameness. The dog shifts more weight to the uninjured leg. Dogs who compete in dog sports may show problems specifically related to that sport. For example, a dog who competes in agility may start hitting bars while jumping or slow down when running through weave poles. Border Collies appear to be over-represented in studies of

iliopsoas injuries, but this may be skewed by the high number of Border Collies involved in highly active sports such as agility and disc-dog competitions.

Diagnosis

When your veterinarian examines and manipulates the leg, he may notice pain. Extension of the hip, especially if combined with internal rotation, generally causes a very painful reaction.

As is typical of all soft-tissue injuries, radiographs are not usually helpful for diagnosis. The one exception would be if a dog has a chronic injury with associated mineralization where the tendon attaches to the femur. Computed tomography (CT) and magnetic resonance imaging (MRI) are superb for the identification of iliopsoas problems but are expensive. Ultrasounds, in the hands of someone experienced at reading muscle and soft-tissue scans, can be wonderful for diagnosis, even differentiating acute versus chronic injuries.

Treatment

Once your dog has been diagnosed with an iliopsoas injury, the hard work begins. As is typical of soft-tissue injuries, a complete rehabilitation plan is important. All dogs benefit from restricted exercise while trying to heal this type of injury. For an acute injury, complete rest may be necessary initially.

If your veterinarian says the iliopsoas injury is secondary to another problem, that needs to be addressed. Common problems in these cases include a cruciate tear of the stifle, hip dysplasia, spinal deformities, and other orthopedic problems. The rehabilitation and treatment of the main problem sometimes allows the iliopsoas injury to "cool off" and heal.

Plan on a rehabilitation program of



This beautiful, muscular Basenji appears to be in great shape for a free run.

Types of Injuries

Injuries to the iliopsoas may come in three versions:

- ▶ **Chronic, long-term wear and tear of the tendon.** Usually from repetitive wear of the same area, such as in daily games of chasing a tossed ball.
- ▶ **Acute muscle tear.** Muscle tears may develop fibrous scar tissue over time which will limit a dog's activity.
- ▶ **Iliopsoas bursitis.** This is where the bursa, the fluid-filled sac that cushions the area between the bone and soft tissue, has been irritated or injured and becomes inflamed.

four to 12 weeks for most dogs, although it can take longer, depending upon the injury itself. Previously injured dogs may benefit from a lifelong program to help prevent future and recurring problems. Exercise and activity will need to be restricted, at least initially. Food puzzles, snuffle mats, quiet scent games, and the use of chew toys and items while crated can be invaluable.

Laser is a good rehabilitation tool, and most dogs handle it well. Lasers help increase circulation to the injured area, which speeds healing. It is done on an outpatient basis, and no sedation or anesthesia is required. Magnetic field therapy is a good complement to this. At home, your rehab therapist can teach you massage techniques and passive range of motion exercises to do. Always follow the directions exactly. Any changes could create more problems. Eventually, underwater treadmill and strengthening exercise may be added.

At home, you may be given exercises involving walking your dog backward or practicing lateral steps. The use of cavalletti (a series of low jumps) may help build strength. Your dog will have a set schedule of increasing exercise such as starting with short walks multiple times per day on leash. Walks will gradually lengthen in time but will be kept on leash (so controlled) for a long time.

Muscle relaxants such as methocarbamol and nerve-pain medications such as gabapentin may be prescribed to keep your dog comfortable while healing. Even if he appears fine with these medications,

your dog needs to follow his rehab restrictions as the medications are masking the problem to a certain extent. Acupuncture can be used to help with pain control. Chronic strains may benefit from heat therapy and therapeutic ultrasound.

Once a dog is improving with at-home and clinical rehab programs, he can gradually return to his regular sport with some precautions. An older dog with multiple concurrent problems (such as hip dysplasia and iliopsoas injury) may need to switch to a quieter sport like nose work instead of returning to agility. If he returns to active agility, he will need to build back up with very low, straight-line jumps and slowly adding height and turns. Weave poles should be added in last.

If your dog continually injures his iliopsoas and never improves, surgical intervention may help to relieve pain. The surgery involves cutting the tendon where it attaches to the femur. Most dogs will not go back to their former athletic status, but the tenectomy can relieve chronic pain.

Prevention

To help prevent iliopsoas injuries, do a consistent warm-up routine consisting of



Laser therapy, which is considered a cost-effective therapy by most, requires that everyone, including the patient, wear protective glasses.

walking, jogging, maybe a few low jumps, before strenuous activity, followed by gentle stretches. Your dog should also have a cool down period after activity, which may include icing.

Iliopsoas injuries should always be evaluated carefully with a look for concurrent problems. All abnormalities need to be addressed. Rehabilitation for iliopsoas injuries is extensive. The program set out for your dog needs to be followed carefully and fully. Shortcuts will lead to reinjury. This injury may require referral to a sports medicine veterinary clinic for accurate diagnosis and the best care plan. ■



Dogs can get pretty deeply involved in chasing a ball, like these Whippets, giving an all-out effort.

Gain Control of Tear Stains

Before anything else, find out if there's a medical condition of some type behind those excess tears

Are you having to wipe goopy gunk from your dog's eyes every day? Or are you frustrated that your dog's beauty is marred by rusty red streaks called tear stains? Before you reach for a commercial eye flush or tear-stain remover, have your dog examined by a veterinarian. Many medical conditions can cause excessive mucous discharge from the eyes and/or excessive tearing. In addition, many of these conditions, left unaddressed, can cause the dog to have pain and vision loss.

Dry-Eye Syndrome

The biggest cause of excessive mucous discharge from the eyes is keratoconjunctivitis sicca (KCS), also known as dry-eye syndrome. This condition is thought to be an immune-mediated attack on the tear-producing glands. Tears are part water, part mucous. With KCS, the water component of tears is diminished, resulting in an



It's easy to understand why a dog lover might be upset by tear stains, especially on the face of a dog as cute as this Japanese Spitz.

Causes You Should Know

Excessive tearing, called epiphora, can be caused by many different things, which is why you should have your dog examined. The list of possible causes includes:

- ▶ allergies
- ▶ conjunctivitis
- ▶ corneal ulcers
- ▶ distichiasis (abnormally positioned eye lashes irritating the cornea)
- ▶ entropion (eye lids that roll in resulting in haired skin rubbing on cornea)
- ▶ facial nerve paralysis (results in inability to blink)
- ▶ foreign bodies
- ▶ glaucoma (abnormally high intraocular pressure)
- ▶ nasolacrimal (tear duct) obstruction

accumulation of the mucous portion. The result is dry, uncomfortable corneas. Over time, the corneas will become diseased, with sight-altering corneal fluid accumulation, pigmentation, scarring, infection, ulcers, and eventually rupture of the globe.

KCS is most common in the Pug, Lhasa Apso, Shih Tzu, Boston Terrier, Cavalier King Charles Spaniel, and English Bulldog. Yorkies and Westies are also prone, but any dog can get it.

Your veterinarian can test your dog for KCS using a Schirmer tear test. It's simple. A paper strip is hooked over the lower eyelid for 60 seconds. Normal tears wet the strip up to at least 15 mm (half an inch). Less than that is considered abnormal. Many dogs with dry-eye syndrome don't wet the strip at all!

Treatment is for life and usually starts with a topical drop or ointment containing cyclosporine. If the dog doesn't respond to cyclosporine, your veterinarian may try topical tacrolimus. If that doesn't work, you likely will be referred to an eye specialist.

Other causes for excessive mucous

discharge from the eyes include bacterial conjunctivitis, either primary or secondary to other ocular abnormalities, and allergic conjunctivitis.

Some dogs with naturally loose, droopy lower eyelids will collect some mucus in the corners of their eyes, due to the excess microscopic debris tears constantly work to clear. For these dogs, a noticeable increase in the amount of mucous discharge and/or any signs of discomfort will be your clue to head to the veterinarian.

If your dog has a medical reason for the excessive tears (see sidebar), once corrected, that should solve your pup's ocular discharge problem. If no underlying problems are identified, and your dog still has watery eyes with tear staining, rest assured it's neither painful nor dangerous for your dog. At that point, you can feel confident the tear stains are just a cosmetic issue.

Simple Solutions

Sometimes simple changes in grooming habits will help with excessive tearing. If your dog has long hairs on her face or near her eyes, keep these hairs trimmed back. Long hairs rubbing on the eyes are irritating. Long hairs around the eyes also wick tears down the face, worsening tear staining. Cleanse the area around your dog's eyes at least once a day with a moist cloth or cotton ball.

Eye-wash solutions containing boric acid can be safely used. Never use hydrogen peroxide near your dog's eyes. If you rub a small amount of petroleum jelly onto the hairs near the inside corner of the eyes after cleansing, it can help keep the tear pigment from penetrating the hairs, which may help minimize staining on your dog's face.

Sometimes a simple diet change will help eliminate excessive tearing and tear staining. When this happens, it is likely the dog had an underlying food allergy. Probiotics have been purported to help minimize tear staining. Since probiotics are good for your dog in many ways, they're well worth a try.

You may read any number of anecdotal reports of things—butter milk flour, parsley flakes, apple cider—before trying anything, including commercially available tear-stain removers, talk to your veterinarian first. Rusty tear stains are frustrating, but as long as any underlying medical conditions have been ruled out by your veterinarian, excessive tearing is not harmful to your dog. ■

All That “Woof, Woof, Woof”

Dogs always have a real reason for barking

Your dog barks in the yard. He barks looking out the front window. He barks when you leave the house. He barks when you come home. He barks and barks and barks . . .

While it may seem like your noisy pooch is just barking for the sake of barking, he does always have a reason to bark. You just might not consider the reason worthy.

Understanding that your dog has a reason for barking helps us resolve issues with compassion and understanding. You'll be more successful and stress your dog less if you address the cause of the barking rather than by using anti-bark collars, shock collars, and other negative devices on the market.

“Shock is nasty, ultrasound only works a few times, and citronella OK, but it's still punishment,” says Katherine Houpt, VMD, PhD, board-certified veterinary behaviorist and professor emeritus of medicine at Cornell University's College of Veterinary Medicine.

Why Dogs Bark

Dogs bark to communicate, both with each other and with us. You can probably recognize your dog's voice, as well as interpret how he is feeling based on the sound of his bark.

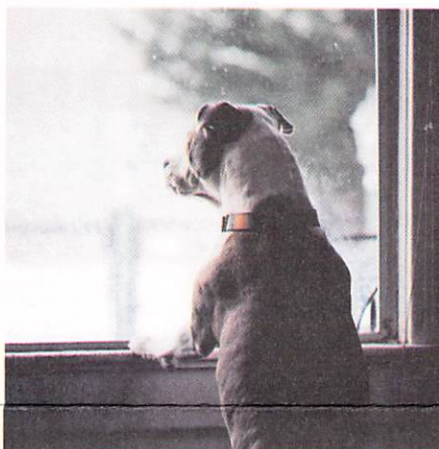
What's even more fascinating is that a series of studies by Hungarian researchers published in the *Journal of Comparative Psychology* (May 2005) and *Applied Animal Behaviour Studies* (November 2006, November 2011) have found that humans can correctly identify the emotional state of barking dogs purely by sound, and without necessarily having personal experience with dogs.

Here are some of the reasons that dogs bark:

Excitement or play. Your dog might be barking because you just came home, or as he greets a favorite playmate. Many dogs bark during play.

Alert or alarm. Your dog has spotted a stranger at the door or might have been surprised by someone coming around a corner. Alert barking can be triggered by less obvious events, too, such as a neighbor slamming their car door or a doorbell on television.

Territorial. This type of barking is



It's OK to praise your dog for alerting you to something. After all, dogs naturally protect us from danger. Telling him he has done his job well helps to bring his arousal level down and lets him know that you are aware of the “danger” and can take it from here.

motivated by protecting your dog's space. This might be your house, yard, and/or car. Some dogs consider a wider territory to “belong” to them, such as the route through the neighborhood where you walk regularly.

Fear and anxiety. Barking is a great way to make scary people or animals go away, so often a dog who feels threatened may bark a shrill, “Get away from me!” This type of barking is often part of other reactivity behaviors.

Frustration. Your dog may bark because he wants to do something or go somewhere but can't, such as a dog behind a fence or in a crate, or even on a leash trying to grab food on the ground.

Lonely or left behind. Your dog may bark as if to say, “Hey, you left me behind!” These barks are usually short and spaced out, with pauses for your dog to listen for your response or return.

Attention seeking or demand barks. If you've heard this bark, your dog really does seem to demand that you give him a treat or do something for or with him.

Boredom. If there's nothing else to do, why not bark? Barking due to boredom is particularly common in high-energy dogs who are not getting enough physical and mental stimulation.

Aggression. Dogs can bark as part of an aggressive behavior display. Aggression barks usually sound loud, deep, and possibly close together.

Find the Cause

Strategies to decrease barking depend on the motivation for the barking. You need to figure out why your dog is making such a racket. Listen to the bark. Does it sound happy, stressed, or frustrated?

Note any patterns for when and where barking occurs. Is there a specific time of day that is problematic (suggesting a recurring event that your dog monitors), or is there a context that results in more barking? For example, your dog might bark more in the yard when your neighbor's grandkids are visiting, or every day around 2:30 p.m. when someone jogs past your house.

For barking out windows, look beyond the immediate outdoor space. Check yards and roads that your dog can observe. Listen for unusual sounds, even ones that seem distant. Dogs have great hearing, and your pup might alert to rodents in the walls or a neighbor's pet making noise.

A Quiet Pup

Once you know why your dog is barking, you can implement strategies to quiet him. Some solutions might include:

- ▶ Apply translucent window clings so your dog can't look out.
- ▶ Block access to windows.
- ▶ Give your dog a long-lasting, safe chew to entertain him.
- ▶ Stock your house with toys your dog likes to play with.
- ▶ Give your dog daily mental and physical exercise to wear him out a bit. Mental stimulation, like a little training (sit-stand-down-sit-stand-down) often tires dogs out quickly.
- ▶ Implement micro training sessions into bathroom breaks. Any time you get up from your desk or the couch, have your dog practice a trick or behavior he knows.
- ▶ Give your dog random, calm praise or rewards when he is resting quietly.
- ▶ Play music or leave the television on to mask outdoor noises.
- ▶ For multiple-dog households, separate the dogs during the day if their play tends to get vocal.
- ▶ Rotate which dog is in the yard if they egg each other on.
- ▶ Prevent fence running by either blocking your dog's view (solid fence, dog-safe plants to obscure view) or only letting him loose in the yard at times when the area is usually calm.

(continues on page 8)

Help For a Grieving Dog

The canine who was left behind is enduring real physical and emotional stress

Q Two weeks ago we lost one of our dogs to cancer. Her name was Mandy, and she was a sweetheart. She was a black Cocker Spaniel that we got as a pup of 8 weeks old. She was just 13 when she passed.

My husband and I are devastated by the loss. Our only consolation is that Mandy was not in pain and she died in her sleep, in her bed surrounded by people who loved her. I was scratching her head when she looked up at me and took her last breath. It is comforting that she knew I was there and heartbreaking to lose her.

I'm writing about our other dog, Kandi, also a 13-year-old Cocker Spaniel. The sweetest animal ever created. She and Mandy were together for over 11 years, we rescued Kandi.

The problem is that Kandi is very depressed. She is lost, and I can tell she has no idea what is going on. She is eating and drinking but she sleeps a lot and looks like a lost soul. I know at certain times she is looking for Mandy and has no idea what has happened.

We can't leave her alone. The couple of times we did she was able to get through the barrier we put up to keep her in the kitchen and she ran upstairs and set off the alarm, twice. Now we barricade her in and it looks like we are caging a lion.

We give her a lot of attention, take her outside often but we don't know what to do other than that. Any advice you can give me will be greatly appreciated.

A I am so sorry for your loss. Mandy sounds like a wonderful dog and a good companion for Kandi. The longer dogs have been together the more often the surviving dog will grieve, especially if they had a good relationship. Most dogs



Make no mistake: Losing a close friend changes your life and causes you pain, no matter what your species.

show their grief by a decreased interest in food, becoming less active, not playing, vocalizing more and demanding more attention.

In Kandi's case, her grief seems to be manifest as separation anxiety. I would ask your veterinarian to do a full physical examination, including pain assessment and blood work, because of her (late middle) age and because the stress of losing Mandy may have exacerbated an underlying health problem.

If she is healthy and the separation anxiety persists, psychoactive medication (the two FDA-approved medications are Reconcile and Clomicalm) could be prescribed.

Meanwhile continue your efforts to

reinstate her interest in life. She is not too old to be enrolled in a nose-work class, which most dogs enjoy and isn't too physically taxing for an older dog. At home, hiding treats or using puzzle toys might help.

To deal specifically with the separation anxiety, work on her Stay command in the kitchen where you plan to leave her when you are away. Once she will stay for 30 seconds when you are right in front of her begin to increase the distance between you. Once she will reliably stay when you are a yard away from her, begin to step out of her sight. Once she will stay even when she can't see you, you can move on to leaving the house for very short periods.

We know that dogs are empathetic in that they will mirror their owners' emotions. Kandi misses Mandy, in part, because you miss her. Most veterinary schools have Pet Loss Support lines to help owners deal with the loss of their pets. Cornell's is 607-218-7457.

Finally, should you replace Mandy? No dog will replace Mandy, but Kandi might benefit from a companion. The companion should be smaller than her and of the opposite sex. ■

(Barking, continued from page 7)

- ▶ Teach your dog to ring a bell to ask to come inside to give him an alternative to barking at the door.
- ▶ Review crate training to make sure your dog is comfortable in his crate.
- ▶ Put your dog away in a safe place when company comes over if he is fearful.
- ▶ Teach your dog both to bark on cue ("Speak!") and to be quiet on cue.

Work with a veterinary behaviorist for barking due to fear or aggression.

Barking is a natural canine behavior, so it can take some patience to quiet a noisy hound. But you can decrease barking if you identify the cause and work to address either the external or internal (i.e., your dog's mental and emotional status) factors behind it. ■



Do You Have a Behavior Concern?

Send your behavior questions to Cornell's renowned behavior expert Katherine Houpt, VMD, Ph.D., shown here with Yuki, her West Highland White Terrier. Email to dogwatcheditor@cornell.edu or send by regular mail to DogWatch, 535 Connecticut Ave., Norwalk, CT 06854-1713.



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