## VOLUME 8 NUMBER 1 The Whole

A monthly guide to natural dog care and training

#### January 2005

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# **Putting Down New Roots**

Sweet Ivy is lovingly transplanted.

#### **BY NANCY KERNS**

ast month, I told you a bit about Ivy, a sweet Lab-mix puppy I was fostering. Yes, that's past tense. Ivy has found a wonderful home.

After Ivy recovered from kennel cough, and after I had the results of a vaccine titer test, confirming that Ivy had developed adequate immune protection against the most common puppy diseases, I started taking her with me on errands. I was socializing her, of course, but I was also fishing for a family.

I must be super lucky; I got a bite on one of our very first outings. I took Ivy to one of my

son's soccer games, on a field where three games were being contested. With six teams on the field, each with a dozen or more kids and scores of accompanying parents, siblings, and friends on the premises, there were plenty of potential candidates. I strolled around with Ivy and a pocket full of kibble, letting her fill her eyes and ears with the sights and sounds of kids running and kicking balls, and frequently offering her a treat when she sat quietly to observe the goings-on.

At one point, a woman with a Cattle Dogmix came over to see Ivy. I told her, as I told everyone who wanted to pet the puppy, "She's a foster dog; she's looking for a really good home." The lady said, "That's wonderful! I foster kittens all the time!" We chatted for a bit, and she left.

When she came back about 30 minutes later with a couple in tow, my pulse quickened. My new friend said, "This couple asked if they could pet my dog. Then they told me they were looking for a young Lab-mix to adopt. I told them that the dog they were looking for was over here!"

She was right. David and Diane were, in fact, looking for a female Lab-mix. They already have one wonderful black Lab-mix, Sassy, whom they adopted from a shelter nine years ago, but they wanted Sassy to help "train" a young dog before she got too old to enjoy it – smart! The couple seemed very taken with Ivy, and when I gave them the rescue group's contact information, they said they would fill

out an application right away. And they did!

A few days later, David came over to pick up Ivy. Any concerns I might have had about the adoption melted away as he unhesitatingly lifted up Ivy so she could sit next to him on his car's deluxe leather seats. That's a dog person!

In the weeks since they took her home, I've

seen Ivy twice, at the puppy kindergarten class I had enrolled her in and which they are continuing. David and Diane attended the first week; David and daughter Angela attended the next week. Ivy has clearly bonded with all the members of her family, paying close attention to their cues, and running to them when she is overwhelmed by rowdier pups in the class.

Maybe not all fostering will work out *this* well, but it sure has made me feel like I've made a difference.

**MISSION STATEMENT:** WDJ's mission is to provide dog guardians with in-depth information on effective holistic healthcare methods and successful nonviolent training. The methods we discuss will endeavor to do no harm to dogs; we do not advocate perpetrating even minor transgressions in the name of "greater good." We intend our articles to enable readers to immediately apply training and healthcare techniques to their own dogs with visible and enjoyable success. All topics should contribute to improving the dog's health and vitality, and deepening the canine/human bond. Above all, we wish to contribute information that will enable consumers to make kind, healthy, and informed decisions about caring for their own dogs.



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lvy excels in her puppy class with Angela and David.

# **Theory and Practice**

Every new dog requires individualized training and management.

#### **BY PAT MILLER**

he decision to add a new dog to the pack shouldn't be taken lightly. I counsel prospective owners of new dogs to be clear about their needs and preferences rather than making spur-of-the-moment rash decisions, because their success at integrating a new dog into an existing "pack" so often depends on their ability to make informed decisions. These choices include what kind of dog to adopt, how to prepare their home to accommodate the new dog, how to introduce the new dog to the existing household members, and how to incorporate her into family routines.

Bringing a new dog into the family can be fraught with unexpected developments, no matter how experienced a dog owner is, how well her home is prepared, and how



#### WHAT YOU CAN DO . . .

- Think long and hard before adding another canine family member. It's a lot of work, and can present challenges that you never anticipated.
- Develop a checklist of qualities you are want in your next dog. Decide which ones are nonnegotiable and which ones give you wiggle room – and don't deviate from the list!
- Don't despair when you experience a "What have we done?!" moment. Persist with a consistent, dog-friendly training program and it really will get better. Before you know it, peace will be restored to your pack.

good-natured the dogs are that she already owns. I've incorporated a new dog into my family dozens of times in my lifetime, counseled hundreds of clients about how to do it, and written a number of articles about it for this magazine (see "New Puppy Survival Guide," page 4), and I *still* am surprised by the issues that can arise when a new dog comes home. However, with preparation, flexibility, and dedication to principles of positive training and behavior management, most dog owners can get through the adjustment period with peace in the pack.

#### **Open your heart**

I recently had the chance to practice what I preach when the loss of Dusty, our valiant Pomeranian, left a vacant spot in our pack last spring. Dusty had been my almost constant companion for close to 15 years, and though it's been nearly five months, the pain of his passing is still close to the surface. I often tear up as I think of his dear little fox face and boundless good cheer.

One of the things I do to help ease the overwhelming hurt of losing a close companion is to remind myself that it also means there's room in our family for another. Without actively looking, I know that a new furry face will one day draw my attention and grab my heart, as surely as if I had hung out a "Vacancy" sign. So it was early this summer, when I was doing behavioral assessments at the Humane Society of Washington County, where my husband, Paul, serves as the executive director.

As is my custom on the day that I do assessments, I made a quick pass through the kennels before picking up paperwork for the day's list of dogs. In one ward, a brindle-and-white pixie with huge stand-up ears, a low-rider body, and an excessively generous tail with one decisive curl in the middle captured my attention. A Corgi pup? I glanced at her kennel card. Sure enough – a five-month-old Corgi, and a Cardigan at that. (Pembrokes are the Corgis with short tails, Cardigans have long tails.)



Author and trainer Pat Miller recently had the opportunity to take (and test!) her own advice about bringing a new dog home. This is Lucy, the newest member of her household.

I have long been enchanted by Corgis, and occasionally fancied adding one to the family some day. Perhaps this was the time?

Dashing back to the Operations Center, I placed the Corgi's paperwork on the top of the stack. I was determined not to make *too* rash a decision – we would at least evaluate her before I lost my heart.

#### Develop a list of desired traits

In my case, I knew that I was looking for a small- to medium-sized dog, with a preference for a short-coated female. With three other dogs in our home already, a smaller dog would fit better than a larger one, and with one neutered male dog at home who could sometimes be aggressive with other male dogs, estrogen seemed like a wiser choice than testosterone. I lean toward the herding and working breeds; I like their genetically programmed work ethic. As much as I adore our most recent addition to our canine family (Dubhy, the Scottie), I really wanted a dog who was more hard-wired to work closely with people, and one who would (I hope) grow up to be highly social with people and other dogs. And I like to adopt dogs who are five to 10 months old – past the worst of the puppy stuff, but still young enough to be programmable. With that checklist in mind, the young Corgi seemed to fit the bill – so far.

The results of her assessment were mixed. On the positive side:

■ She was highly social; she couldn't get enough of humans – so much so that I was confident she'd be a good off-leash hiking partner on our farm.

■ She was very bright and trainable; she quickly learned to offer sits during the training portion of the process.

■ She was resilient and nonassertive, responded well to the startle test, and offered appeasement signals rather than aggression during the "stranger danger" test.

In the negative column:

■ She did pretty persistent tail-chasing during the evaluation. Uh-oh... a dog with obsessive-compulsive behaviors at the tender age of five months. That's a red flag!

■ She never stopped moving. This little girl clearly is more energetic than the average dog.

■ She was very vocal – and her voice was

## **New Puppy Survival Guide**

The following is a partial list of articles, written by WDJ's Training Editor Pat Miller, that would be extremely helpful to any owner of a new puppy.

- Getting Off to the Best Start, January 1999
- Crate Training Made Easy, August 2000
- King Kongs, October 2000
- Putting Up With Puppy Teeth, November 2000
- Tethered to Success, April 2001
- Learning to Be Alone, July 2001
- Pees and Cues, December 2001
- Practiced Calm, February 2002
- New Dog Do's and Don'ts, April 2003

very shrill.

Despite my intent to make an unemotional clear-headed decision, I was smitten. I carried her into Paul's office and set her on the floor. He looked at her, glanced at my face, smiled, and said, "When are we doing the paperwork?"

We weren't quite that foolhardy. We were confident that Tucker and Katie could manage to live with her, but knowing that Dubhy can be selective about his canine friends, we arranged to bring him in to meet her. If he gave the nod of approval, we would adopt. One week later, Lucy (short for "Footloose and Fancy Free") joined the Miller family.

As we set about assimilating Lucy into our social group, I was humbled by the reminder of how challenging it really can be to adopt a young dog in sore need of good manners training. There's nothing like having to use the suggestions and instructions yourself that you routinely offer your clients to give you a much better appreciation for how well they sometimes work – and sometimes don't.

#### Modify to the individual

There are exceptions to every rule. No matter how well a technique may work with *most* dogs, there are *some* dogs who require their owners to stay flexible and be willing to tailor the technique to their needs.

Case in point: I frequently use tethering in my training center, and often offer it as a solution for dogs whose behaviors need to be under better management and control in the home. Such a simple, elegant solution – what could possibly go wrong? I was about to find out.

Lucy's initial introduction to the rest of

the pack was easy. We let them meet in the backyard, where the open space was more conducive to successful relationships. As we had expected, she offered appropriate appeasement behaviors to Katie "the Kelpie Queen" and was permitted to exist. She and Dubhy had already met and seemed to remember each other. She wriggled her way up to Tucker, the Cattle Dog-mix, and he accepted her annoying puppy presence easily.

Indoors, however, we discovered that at the tender age of five months she was already a dedicated cat-chaser. Perfect time for a tether, I thought – and quickly discovered that she still charged the cats when they entered the room, only to hit the end of the tether at full speed, moving a very heavy coffee table several feet, and risking injury to her neck. Tethered in my office, she promptly began guarding the entire space with ear-splitting barks and ugly faces.

She also gave shrill voice any time she was left tethered by herself in a room for even a brief moment. Leaving her a stuffed Kong or other valuable chew toy simply elicited serious resource-guarding behavior toward the other dogs. Too much tether time also triggered the obsessive/compulsive tailchasing that worried me during her evaluation. Life quickly became very stressful. I experienced more than a few "What have I



It took more time with her than it usually takes with other dogs, but Lucy learned to gently take treats from my hand.

done?" moments.

Ultimately – as in *four months later*! – I finally succeeded in getting Lucy to lie by my chair rather than chase the cats. To accomplish this, I had to use *less* tethering and more counter-conditioning and desensitization ("Cats make *really* good treats happen!"). Our cats can again tread softly into the living room to spend the evening on our laps without fear of a Corgi attack.

#### Appreciate the successes

On the bright side, Lucy was everything I had hoped for in other areas. Our first day home, we went for a long hike with the rest of the pack. Halfway through, I took a deep breath, crossed my fingers, and unclipped her leash. As I had hoped, she stayed with the other dogs, and came flying back when I called her.

I smiled to see her bounding through hayfields, leaping after the butterflies that scattered in her path. She quickly learned to paddle in the pond and stick her head down groundhog holes with the other dogs. She will even happily traipse alongside my horse as we ride the trails – an even better source of exercise than hikes with the pack! The daily exercise did wonders for her tailchasing, which vanished in less than a week, returned when we had to restrict her activity following spay surgery, and vanished again as soon as she could run in the fields.

Feeding time was another challenge. Lucy's propensity to resource-guard gave rise to a few dramatic meals, but the other dogs solved this one for me. Dubhy, a skilled resource-guarder in his own right, quickly set her straight about intruding on *his* dinner, and Lucy decided that she was best off with her nose in her own bowl. I knew that the commonly offered solution of feeding in crates wouldn't work for her. She already guarded her crate space from the other dogs. Adding food to the crate equation would have been a disaster!

Lucy came with some other behavior challenges. When taking treats, her hard mouth – "sharky" – actually drew blood from my fingers during our first few weeks together. This time, the advice I usually give worked, although it took longer than I expected, and it was even more difficult in the presence of the other dogs.

I began offering treats to her enclosed in my fist. If she bit hard enough to hurt, I said "Ouch!" and kept my fist closed until her mouth softened. When she was gentle, I opened my hand and fed her the treat. It was a delight to feel her begin to deliberately soften her bite, even in the presence of the other dogs or with a very high value reward. Now, five months later, I realize I haven't "Ouched" for several weeks. Progress does happen!

#### Think outside the box

When a tried-and-true approach doesn't work, don't persist in hammering that square peg into a round hole. Instead, be creative and try to adapt your favored approach to your dog's situation.

Lucy decided early on that she didn't like going out the back door to the fenced yard. She quickly learned the back door means she'll be out in the backyard for a while with the other dogs. She much prefers the side door, which means either hikes in the field, stall-cleaning time, or off to the training center – all of which she adores.

All my first responses to the problem only made it worse. The door is at the end of a narrow hallway, so calling her or walking down the hall and turning to face her, only made her less interested in going out. I

tried continuing through the door onto the back deck myself, with no luck. Luring with treats worked twice; she got wise to that very quickly. Even though she is pack-oriented, she never fell for the trick of chasing the rest of the dogs enthusiastically out the door. Reaching for her collar to lead her out made her wary of my hands moving toward her.

We finally found two strategies that worked, and continue to use them both in hopes of getting her *happy* about going out the door rather than just tolerating it:

■ Fetch! Lucy *loves* retrieving, so I have made it a point to frequently pair going out the back door with an energy-eating round of fetch the doggie disc.

■ Leash! While Lucy quickly learned to avoid my reaching for her collar, she is happy to munch a treat from one hand while I slide a slip lead over her head with the other. Once leashed, she follows willingly out the back door and stands while I feed another treat and slip the leash off her head.

#### **Patience pays off**

I counsel owners not to adopt a second dog until the first is trained, because the difficulties encountered when trying to train two at once are more than most people can successfully take on. It's challenging enough to train one dog – and it's even harder to get much done if two or more dogs are out of control at the same time.

Although my other dogs are reasonably well trained, I made it a point to work with Lucy separately, at least at first, until she knew a new behavior, before I asked her to do it in the company of her canine companions. I had the luxury of a separate training center to work in, but even if I hadn't, I could have worked with Lucy outside while the others were in, or vice versa. I could have trained Lucy in one room while the other dogs were shut in another part of the house, or crated them with yummy, foodstuffed Kongs so they didn't feel deprived while I focused my attentions on the new kid. A dog can even learn to sit quietly in his own spot while watching another dog in training, knowing that the reward of his own

It took months, but Lucy learned how to accept her time on a tether quite calmly.

turn is coming soon.

Lucy is nowhere near perfect. While she heels beautifully in the training center, she'll still pull on leash outside unless she's wearing a front-clip no-pull harness, preferably the K9 Freedom Harness (available from waynehightower.com). I found myself losing my patience with her pulling until I started using the harness. Now we both have more fun when she has to walk on a leash. We both prefer the off-leash hikes, of course.

She still jumps up, but not nearly as much as she did at first. Our persistence in ignoring the jumping up and rewarding polite greetings is paying off. She still has a shrill voice, but doesn't use it quite as often as she used to. I must constantly remind myself – and Paul – to redirect her behavior when she's barking, rather than falling into the natural trap of yelling at her to be quiet.

She now spends a lot of time lying quietly on my office floor instead of traumatizing kitties, hasn't chased her tail in months, and chews only on toys provided for that purpose. She hasn't had an accident in the house for several weeks now, and although she and Katie have small arguments almost daily, I don't usually have to intervene.

Last night, as Paul and I sat watching TV, I looked up at all the dogs sleeping quietly on their beds, and realized that it's been quite some time since I've had one of those "What have we done?!" moments. She has become a full-fledged member of the pack. She will never be Dusty, but she is Lucy, and that's all she needs to be to stake her own claim to my heart. I hope your next adoption goes as well.

Pat Miller, CPDT, is WDJ's Training Editor. She is also author of The Power of Positive Dog Training, and Positive Perspectives: Love Your Dog, Train Your Dog. For book purchase or contact information, see "Resources," page 24.

# What Promotes Bloat?

Every dog owner should know the symptoms of this fast-killing disorder.

#### **BY SHANNON WILKINSON**

magine seeing your dog exhibit some strange symptoms, rushing him to the vet within minutes, only to have the vet proclaim his case to be hopeless and recommend euthanasia. For too many dog owners, that's the story of bloat, an acute medical condition characterized by a rapid accumulation of gas in the stomach.

In fact, that was exactly the case with Remo, a Great Dane owned by Sharon Hansen of Tucson, Arizona. "He was at the vet's in under seven minutes," says Hansen, in describing how quickly she was able to respond to Remo's symptoms. He had just arisen from an unremarkable, hour-long nap, so Hansen was stunned to see Remo displaying some of the classic symptoms of bloat, including restlessness, distended belly, and unproductive vomiting.

Despite Hansen's quick action, Remo's situation rapidly became critical. Radiographs showed that his stomach had twisted 180 degrees. Remo was in great pain and the vet felt the damage was irreversible. Hansen made the difficult decision to have Remo euthanized at that time.

Bloat, or more technically, gastric dilatation and volvulus (GDV), is a top killer of dogs, especially of deep-chested giant and large breeds, such as Great Danes and Standard Poodles. A study published in *Veterinary Surgery* in 1996 estimated that 40,000 to 60,000 dogs in the United States are affected with GDV each year with a mortality rate of up to 33 percent.

Gas accumulation alone is known as bloat, or dilatation. The accumulation of gas sometimes causes the stomach to rotate or twist on its axis; this is referred to as torsion or volvulus. Bloat can occur on its own, or as a precursor to torsion. In this article, to simplify the terms, bloat and GDV are used interchangeably.

Both conditions can be life-threatening, although it often takes longer for a straightforward gastric dilatation without volvulus to become critical. "Bloats without torsion can last for minutes to hours, even days in



Large- and giant-breed dogs, especially those with deep chests, are at greatest risk of bloat, but dogs of any size can be stricken. Nervous dogs and underweight individuals are also more likely to bloat than calm or overweight dogs.



- If you have a high-first breed, discuss with your vet the merits of a prophylactic gastropexy at the time of neutering.
- Familiarize yourself with the emergency veterinary services in your area, or anywhere you'll be traveling with your dog.
- Give several smaller meals daily to reduce your dog's risk.
- Consider feeding your dog a home-prepared diet; while there have not been studies that support the assertion, many dog owners who make their dogs' food swear that it prevents GDV.

low-level chronic situations, without it becoming life-threatening. But with torsion, the dog can progress to shock rapidly, even within minutes," explains Alicia Faggella DVM, DACVECC, a board-certified specialist in veterinary emergency and critical care.

"A dog can go into shock from bloat because the stomach expands, putting pressure on several large arteries and veins. Blood does not get through the body as quickly as it should," continues Dr. Faggella. In addition, the blood supply gets cut off to the stomach, which can cause tissue to die, while toxic products build up.

While some less acute cases of bloat may resolve themselves, it often takes an experienced veterinarian to know just how serious the problem may be, and whether surgical intervention is required to save the dog's life.

#### Life threatening emergency

Various studies have estimated the mortality rate for dogs who have experienced an episode of GDV, and while the results varied, they were all frighteningly high – from about 18 percent to more than 30 percent. The rates used to be much higher, however.

"Veterinarians over the past two decades have reduced dramatically the postoperative fatality rate from gastric dilatation-volvulus from more than 50 percent to less than 20 percent by using improved therapy for shock, safer anesthetic agents, and better surgical techniques," says Lawrence Glickman, VMD, DrPH, and lead researcher on a number of studies related to GDV at Purdue University in West Lafayette, Indiana.

In many acute cases of GDV, surgery is the only option to save the life of the animal. In addition to repositioning the stomach, it may also be "tacked" to the abdominal wall in a procedure called gastropexy. While dogs who have had gastropexy may experience gastric dilatation again, it is impossible for the stomach to rotate, as in volvulus or torsion.

#### **Causes of bloat**

Theories about what causes GDV abound, including issues related to anatomy, environment, and care. Research from Purdue University, particularly over the past 10 years, has shown that there are certain factors and practices that appear to increase the risk of GDV, some of which fly in the face of conventional wisdom.

"We don't know exactly why GDV happens," says Dr. Faggella. Some people do all of the "wrong" things, and their dogs don't experience it, she says, while some do all of what we think are the "right" things, and their dogs do.

The most widely recognized and accepted risk factor is anatomical – being a larger, deep-chested dog. When viewed from the side, these dogs have chest cavities that are significantly longer from spine to sternum, when compared to the width of the chest cavity viewed from the front.

This body shape may increase the risk of bloat because of a change in the relationship between the esophagus and the stomach. "In dogs with deeper abdomens, the stretching of the gastric ligaments over time may allow the stomach to descend relative to the esophagus, thus increasing the gastroesophageal angle, and this may promote bloat," says Dr. Glickman.

But it isn't just large- and giant-breed dogs that can bloat; smaller breeds do as well. "I've seen Dachshunds, Yorkies, and other small Terrier breeds with bloat," says Dr. Faggella. She emphasizes that all dog guardians should be familiar with the signs of bloat, and be ready to rush their dog to the vet if any of the symptoms are present.

Likelihood of an incident of bloat seems to increase with age. Purdue reports that there is a 20 percent increase in risk for each year increase in age. This may be related to increased weakness, over time, in the ligaments holding the stomach in place, Dr. Glickman explains.

Another key risk factor is having a close relative that has experienced GDV. According to one of the Purdue studies that focused on nondietary risk factors for GDV, there is a 63 percent increase in risk associated with having a first degree relative (sibling, parent, or offspring) who experienced bloat.

Personality and stress also seem to play a role. Dr. Glickman's research found that risk of GDV was increased by 257 percent in fearful dogs versus nonfearful dogs. Dogs described as having a happy personality bloated less frequently than other dogs. "These findings seem to be consistent from study to study," adds Dr. Glickman.

Dogs who eat rapidly and are given just one large meal per day have an increased susceptibility to GDV than other dogs. The Purdue research found that "for both largeand giant-breed dogs, the risk of GDV was highest for dogs fed a larger volume of food once daily."

The ingredients of a dog's diet also appear to factor into susceptibility to bloat. A Purdue study examined the diets of over 300 dogs, 106 of whom had bloated. This study found that dogs fed a dry food that included a fat source in the first four ingredients were 170 percent more likely to bloat than dogs who were fed food without fat in the first four ingredients. In addition, the risk of GDV increased 320 percent in dogs fed dry foods that contained citric acid *and* were moistened before feeding. On the other hand, a rendered meat meal that included bone among the first four ingredients lowered risk by 53 percent.

Another study by Purdue found that adding "table foods in the diet of large- and giant-breed dogs was associated with a 59 percent decreased risk of GDV, while inclusion of canned foods was associated with a 28 percent decreased risk." The relationship between feeding a home-prepared diet, either cooked or raw, hasn't been formally researched.

Anecdotally, however, many holistic vets believe that a home-prepared diet significantly reduces the risk of bloat. "I haven't seen bloat in more than five years," says Monique Maniet, DVM, of Veterinary Holistic Care in Bethesda, Maryland. She

- Unproductive vomiting
- Apparent distress
- Distended abdomen, which may or may not be visible
- Restlessness
- Excessive salivation/drooling
- Panting
- The dog's stomach feels taut to the touch, like a drum
- Pacing
- Repeated turning to look at flank/abdomen
- Owner feels like something just isn't right!

## **Breeds at Greatest Risk**

In a Purdue University study of records from 12 veterinary hospitals, researchers found that purebred dogs were 2.5 times more likely to develop GDV than mixed breed dogs. This, and subsequent research, found the following breeds to be at a higher risk for developing GDV:

Airedale Terrier Akita\* Basset Hound Bloodhound\* Borzoi Boxer

Collie\*OlGordon Setter\*RcGreat Dane\*SaIrish Setter\*StaIrish Wolfhound\*WoNewfoundland\*

Old English Sheepdog Rottweiler\* Saint Bernard\* Standard Poodle\* Weimaraner\*

\* Breed included in at least one of the Purdue studies.

estimates that 75 to 80 percent of her clients feed a raw or home-cooked diet to their dogs.

Dr. Faggella also noticed a difference in the occurrence of bloat while in Australia, helping a university set up a veterinary critical care program. "I didn't see bloat as commonly there [as compared to the US]," she says. They feed differently there, with fewer prepared diets and more raw meat and bones, which may contribute to the lower incidence of GDV, she adds.

It is often recommended that limiting exercise and water before and after eating will decrease the risk of bloat. However, in one of the Purdue studies, while exercise or excessive water consumption around meal time initially seemed to affect likelihood of GDV, when other factors were taken into account, such as having a close relative with a history of GDV, in a "multivariate model," these factors were no longer associated with an increased risk of bloat.

Or, more simply put, "there seems to be no advantage to restricting water intake or exercise before or after eating," says Dr. Glickman.

#### **Preventive action**

Because the theories and research on what causes bloat aren't always in agreement, the ways to prevent GDV can conflict as well. One thing that everyone can agree on, though, is that feeding smaller meals several times a day is the best option for reducing the risk.

One of the top recommendations to reduce the occurrence of GDV from the Purdue researchers is to not breed a dog that has a first-degree relative that has bloated. Results of their study suggest that "the incidence of GDV could be reduced by approximately 60 percent, and there may be 14 percent fewer cases in the population, if such advice were followed."

In addition, Glickman says they recommend prophylactic gastropexy for dogs "at a very high risk, such as Great Danes. Also, we do not recommend that dogs have this surgery unless they have been neutered or will be neutered at the same time."

The concern about performing a gastropexy on an unneutered dog is that it "might mask expression of a disease with a genetic component in a dog that might be bred."

While gastropexy hasn't been evaluated in its ability to prevent GDV from happening the first time, research has shown that just five percent of dogs whose stomachs

## **Case History: Laparoscopically Assisted Gastropexy**

On May 6, 2004, Dusty, a nine-year-old Doberman, was in obvious distress. "He was panting, pacing, and wanting to be near me," his guardian, Pat Mangelsdorf explains. Dusty didn't have any signs of tenderness or injury, and his appetite and elimination were fine. Mangelsdorf wasn't sure what the problem could be. After a few hours, his behavior didn't improve, so she took Dusty to the vet.

"By that time, he had calmed a bit, and there still wasn't any tenderness or distension. Radiographs showed some arthritis in his spine, so we thought that was causing him pain," she says. A few hours later, Dusty lay down to rest and seemed normal.

Three days later, Mangelsdorf received a surprise call. "A radiologist had reviewed the X-rays and noticed that Dusty had a partial torsion," she says. The vet suggested that to help prevent another incident of torsion, Dusty's activity level, food, and water should be more tightly controlled, and a gastropexy should be considered to rule out future occurrences.

Mangelsdorf began researching her options. Was the surgery necessary? If so, which would be best, the full abdominal

surgery or the laparoscopic procedure? Before she could decide, Dusty had another apparent torsion episode. "He had exactly the same symptoms," says Mangelsdorf. Dusty spent a night at the emergency clinic, and more radiographs were taken, but they were inconclusive. Nevertheless, Mangelsdorf had made up her mind.

After reviewing the options and the potential risks and rewards, Mangelsdorf opted for a laparoscopically assisted gastropexy, rather than a traditional



A new procedure helped prevent Dusty from developing a fatal incident of GDV.

gastropexy with a full abdominal incision. "A laparoscopic gastropexy is minimally invasive, with just two small incisions," explains Dusty's surgeon, Dr. Timothy McCarthy, of Surgical Specialty Clinic for Animals in Beaverton, Oregon. Dr. McCarthy, who specializes in minimally invasive surgeries and endoscopic diagnostic procedures, has been performing this type of gastropexy for about four years.

This specialized procedure for gastropexy was developed by Dr. Clarence Rawlings, a surgeon and professor of small animal medicine at University of Georgia. The technique involves two small incisions. The first incision is to insert the scope for visualizing the procedure, the second incision is used to access the stomach for suturing. After palpating the stomach, it is pulled up toward the abdominal wall, near the second incision. The stomach is then sutured directly to the abdominal wall, as in a standard gastropexy. The incisions are then closed as normal, usually with staples.

"This is a very quick procedure. An experienced surgeon can do it in 15 minutes," says McCarthy. While quick, the sur-

gery isn't inexpensive. It costs about \$1,500 at McCarthy's clinic.

On July 27, Dusty underwent surgery. The procedure went well, without any complications. Later that evening, Dusty started heavy panting and shivering, but X-rays and bloodwork showed everything normal. With IV fluids, he was more settled in a few hours, and back to normal by morning.

"Afterwards, we did short walks, no stairs, and three or four small meals a day for two weeks," says Mangelsdorf. Gradually, she increased Dusty's exercise until he was back to normal levels. She added acidophilus as well as more moisture into his diet, including cottage cheese and canned food, while keeping his water bowl at lower levels so he doesn't drink excessive amounts at any one time. are tacked as a result of an episode of GDV will experience a repeat occurrence, whereas up to 80 percent of dogs whose stomachs are simply repositioned experience a reoccurrence.

#### **Controversial gas reliever**

After Remo's death, Sharon Hansen learned that some large-breed dog owners swear by an anti-gas product called Phazyme for emergency use when bloat is suspected. Phazyme is the brand name of gelcaps containing simethicone, an over-the-counter anti-gas remedy for people. GlaxoSmith-Kline, maker of Phazyme, describes it as a defoaming agent that reduces the surface tension of gas bubbles, allowing the gas to be eliminated more easily by the body.

Less than a year and a half later, Hansen had an opportunity to try the product when her new rescue dog Bella, a Dane/Mastiff mix, bloated. "Bella came looking for me one afternoon, panting and obviously in distress," explains Hansen, who immediately recognized the signs of bloat.

Hansen was prepared with caplets of Phazyme on hand. "I was giving her the caplets as we headed out to the car," says Hansen. Almost immediately, Bella began to pass gas on the short ride to the vet. "She started passing gas from both ends," Hansen says. By the time they arrived at the vet, Bella was acting much more comfortable, and seemed significantly less distressed.

At the vet's office, gastric dilatation was confirmed, and luckily, there was no evidence of torsion. Hansen credits the Phazyme for reducing the seriousness of Bella's episode. This is a generally accepted practice among guardians of bloat-prone dogs, but not all experts agree with it.

Dr. Faggella cautions against giving anything by mouth, as it could cause vomiting, which could lead to aspiration. "If you suspect bloat, simply bring your dog to the vet immediately. The earlier we catch it, the better," she says.

Dr. Nancy Curran, DVM, a holistic vet in Portland, Oregon, agrees that trying to administer anything orally could lead to greater problems. However, she suggests that Rescue Remedy, a combination of flower essences that is absorbed through the mucous membranes of the mouth, may help ease the shock and trauma. "Rescue Remedy helps defuse the situation for everyone involved. It won't cure anything, but it can be helpful on the way to the vet," she says, recommending that the guardian take some as well as dosing the dog.

## **Raised Bowls Raise the Risk!**

It has long been an accepted practice to elevate the food bowls of giant-breed and taller large-breed dogs. The theory is that, in addition to comfort, a raised food bowl will prevent the dog from gulping extra air while eating, which in turn should reduce the likelihood of bloat. However, this recommendation has never been evaluated formally.

It *was* included in the large variety of factors followed in a Purdue study,\* and one of the most controversial findings. The research suggests that feeding from an elevated bowl seems to actually *increase* the risk of GDV.

The researchers created a "multivariate model" that took into account a number of



Despite their popularity, raised bowls appear to be a bad idea.

factors, such as whether there was a history of GDV in a first-degree relative, and whether the dog was fed from an elevated bowl. Of the incidences of GDV that occurred during the study, about 20 percent in large-breed dogs and 52 percent in giant-breed dogs were attributed to having a raised food bowl.

The raw data, which don't take into account any of the additional factors, show that more than 68 percent of the 58 large-breed dogs that bloated during the study were fed from raised bowls. More than 66 percent of the 51 giant-breed dogs that bloated during the study were fed from raised bowls.

\* These findings were reported in "Non-dietary risk factors for gastric dilatationvolvulus in large- and giant-breed dogs," an article published November 15, 2000, in Volume 217, No. 10 of *Journal of the American Veterinary Medical Association*. The study followed more than 1,600 dogs from specific breeds for a number of years, gathering information on medical history, genetic background, personality, and diet.

# The holistic approach to prevention

"We may be able to recognize an imbalance from a Chinese medical perspective," says Dr. Curran. She's found that typically dogs prone to bloat have a liver/stomach disharmony. Depending on the dog's situation, she may prescribe a Chinese herbal formula, use acupuncture, and/or suggest dietary changes and supplements to correct the underlying imbalance, thereby possibly preventing an episode in the first place.

Dr. Maniet also looks to balance a dog's system early on as the best form of prevention. Each of her patients is evaluated individually and treated accordingly, most often with Chinese herbs or homeopathic remedies.

Both holistic vets also recommend the use of digestive enzymes and probiotics, particularly for breeds susceptible to bloat, or with existing digestive issues. "Probiotics and digestive enzymes can reduce gas, so I'd expect that they will also help reduce bloat," explains Dr. Maniet. Another avenue to consider is helping your fearful or easily stressed dog cope better in stressful situations. While no formal research has been conducted to confirm that this in fact would reduce the risk of bloat, given the statistics that indicate how much more at risk of GDV fearful dogs are, it certainly couldn't hurt. Things to consider include positive training, desensitization, Tellington TTouch Method, calming herbs, aromatherapy, or flower essences.

While there is an abundance of information on how to prevent and treat bloat, much of it is conflicting. The best you can do is to familiarize yourself with the symptoms of GDV and know your emergency care options. While it may be difficult to prevent completely, one thing is clear. The quicker a bloating dog gets professional treatment the better.

Shannon Wilkinson, of Portland, Oregon, is a freelance writer, life coach, and TTouch practitioner. For contact information, see "Resources," page 24.

# **Essential Information**

Custom-mix therapeutic essential oils to improve your dog's health.

#### **BY CJ PUOTINEN**

ast month's aromatherapy article ("Smell This, You'll Feel Better") introduced therapeutic shampoos, spritzes, and massage oils. If you and your dog tried any of the wonderful products recommended there, you may be ready to buy some essential oils and try your own custom blending for maximum effects.

Welcome to canine aromatherapy. According to Kristen Leigh Bell, author of *Holistic Aromatherapy for Animals*, "It's hard to imagine a condition that can't be prevented, treated, improved, or even cured with the help of essential oils."

Bell mentions dozens of health problems that have resolved with the help of aromatherapy, from allergies to anxiety, bad breath to burns. It's a fascinating branch of holistic medicine.

Essential oils, the foundation of aromatherapy, are the volatile substances of aromatic plants. They are collected, usually by steam distillation, from leaves, blossoms, fruit, stems, roots, or seeds. The water that accompanies an essential oil during distillation is called a hydrosol or flower water. Hydrosols contain trace amounts of essential oil and are themselves therapeutic. Other production methods include solvent extraction (a solvent removes essential oil from plant material and is then itself removed), expression (pressing citrus fruit), enfleurage (essential oils are absorbed by fat for use in creams), and gas extraction (room-temperature carbon dioxide or low-temperature tetrafluoroethane gas extracts the essential oil and is then removed). Each method has something to recommend it for a specific plant or type of plant.

However they are collected, essential oils are highly concentrated. To produce one pound of essential oil requires 50 pounds of eucalyptus, 150 pounds of lavender, 400 pounds of sage, or 2,000 pounds of rose petals. No wonder they're expensive!

It's not the fragrance that imparts the medicinal or active properties of aromatic essential oils but the chemicals they contain. Essential oils can contain antibacterial monoterpene alcohols or phenylpropanes, stimulating monoterpene hydrocarbons, calming esters or aldehydes, irritating phenols, stimulating ketones, anti-inflammatory sequiterpene alcohols, antiallergenic sesquiterpene hydrocarbons, and expectorant oxides.

Plants are complex chemical factories, and a single plant may contain several types



While some dogs shy away from a mist bottle at first, once they enjoy the benefits of therapeutic aromatherapy, they usually stand still and happily soak up the spritzing.



- Start with an essential oil that offers a wide range of benefits and comes from a reputable supplier.
- See "A Word About Quality" (WDJ December 2004), a guide to identifying the best-quality therapeutic essential oils.
- Consult with an aromatherapist who has years of experience using essential oils on animals.
- Seek veterinary care whenever appropriate.

of chemicals. In addition, each chemical category may have several different effects. Aromatherapy is a modern healing art, and the therapeutic quality of essential oils are still being discovered. In other words, aromatherapy is a complex subject that deserves careful study and expert guidance.

#### **Getting started**

What essential oil should you start with? Everyone's favorite is lavender, *Lavandula angustifolia*, a powerful disinfectant, deodorizer, and skin regenerator. It helps stop itching and has psychological benefits; it's both calming and uplifting. Lavender is one of the few essential oils that can safely be used "neat" or undiluted, though dilution is recommended for most pet applications.

Here are a dozen things to do with a therapeutic-quality lavender essential oil:

1) Diffuse it in the room with an electric nebulizing diffuser (available from aromatherapy supply companies).

**2)** Add 10 to 20 drops to a small spray bottle of water and spritz it around the room. Be careful to avoid wood or plastic surfaces and your dog's eyes.

**3**) Place a drop on your dog's collar, scarf, or bedding.

**4**) Place two drops in your hand, rub your palms together, and gently run your hands through your dog's coat.

**5**) Add 15 to 20 drops to 8 ounces (one cup) of unscented natural shampoo, or add a drop to shampoo as you bathe your dog.

6) Add two to five drops to a gallon of final rinse water and shake well before applying (avoid eye area).

**7**) Place a single drop on any insect or spider bite or sting to neutralize its venom (avoid eye area; dilute before applying near mucous membranes).

8) Add 12 to 15 drops to one tablespoon

jojoba, hazelnut, or sweet almond oil for a calming massage blend.

**9**) Place a drop on a dog biscuit for fresher breath.

**10)** Add 15 to 20 drops to a half-cup of unrefined sea salt, mix well, and store in a tightly closed jar. To make a skin-soothing spray or rinse for cuts or abrasions, dilute one tablespoon of the salt in a half-cup of warm water.

**11**) Mix one teaspoon vegetable glycerine (available in health food stores) with one teaspoon vodka. Add 15 drops lavender essential oil, and add two ounces (four tablespoons) distilled or spring water to make a soothing first-aid wipe, ear cleaner, or wound rinse. Saturate a cotton pad, mist from a spray bottle, or apply directly to cuts or scrapes.

**12)** To remove fleas while conditioning your dog's coat, wrap several layers of gauze or cheesecloth around a slicker or wire brush,

leaving an inch or more of bristles uncovered. Soak the brush in a bowl of warm water to which you have added 10 to 12 drops of lavender essential oil, and brush the dog. Rinse and repeat frequently, removing hair, fleas, and eggs.

You can also blend lavender with other essential oils for a limitless variety of applications. Bell's favorites for pet use are listed on page 13. "With these oils," she says, "you can address a variety of common ailments: treat wounds; clean ears; stop itching; calm and soothe; deodorize; and repel fleas, ticks, and mosquitoes."

#### Asking your dog's opinion

Colorado aromatherapist Frances Fitzgerald Cleveland does more than consider which essential oils will work; she lets canine patients make the final selection.

"For any condition, there are several essential oils that would help," says Cleveland. "For example, a dog who suddenly becomes afraid of loud noises and needs a calming oil would be helped by lav-

## Tea Tree Oil: Buy Only Top-Quality Products and Dilute

Because tea tree oil (*Melaleuca alternifolia*) is widely sold and highly promoted as safe and effective for treating skin conditions, viruses, bacteria, and fungal infections, it's an ingredient in many pet products, and the oil itself is often recommended for use on pets.

In 1994, veterinarians at the National Animal Poison Control Center reported several cases in which dogs and cats treated with products containing tea tree oil experienced depression, weakness, a lack of coordination, muscle tremors, and behavioral disorders. In other cases, tea tree oil has caused burns or painful reactions in sensitive animals.

Bonnie Denenberg of Los Angeles applied a tea tree oil product recommended for hot spots and itchy, allergic skin conditions to her Shih Tzu/Poodle-mix, Zeiskeit. "My dog sustained chemical burns on his abdomen, inner thighs, and chest," she says. "He was hospitalized and given antibiotics, steroids, and various pain medications and salves."

Some aromatherapists avoid tea tree oil, substituting gentler essential oils with similar properties, such as sweet marjoram, ravensare, or tea tree's close cousin, niaouli. Others, including AromaDog's Faith Thanas, use small amounts of organically produced tea tree oil in some products. "There are many grades of tea tree oil," she explains, "and adverse reactions are more likely to be triggered by products containing low-quality tea tree oil in high concentrations."

Other considerations are the age and size of the dog and the animal's overall health. Larger, stronger,

healthier dogs are usually less vulnerable than smaller, weaker, or sicker dogs. If you have any question about the presence of tea tree oil in a shampoo or first-aid product, contact the manufacturer for guidance, substitute a different product, or consult a canine aromatherapist (see Resources, next page).

In *The Aromatherapy Book*, author Jeanne Rose describes how her dog, Sumo, was hit by a car and dragged. His most serious injuries were to his right rear leg, where the ligaments and tendons were severed and bones exposed. The veterinarian recommended amputation, but Rose used aromatherapy instead. She soaked gauze in a two-percent tea tree and lavender solu-

> tion (1 ml or 20 drops each of tea tree oil and lavender oil in 4 ounces of water) and wrapped it around the ankle, then bandaged the leg.

> This frequently repeated treatment disinfected the wound and stimulated cell growth. "Within two months the large wound was totally filled in with granular tissue and covered with scar tissue," she wrote. "Although the muscles and ligaments cannot regenerate, and the loss of a chunk of bone weakens the leg, Sumo-dog now has the use of his leg, it was not amputated, and he need only walk with an occasional limp."

> If you use tea tree oil, buy only the highest quality organic oil and consider blending it with an equal portion of lavender before diluting it for canine use.



reaction to a tea tree oil

product, requiring ex-

tensive veterinary care.

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ender, rose, violet leaf, basil, Roman chamomile, yarrow, or vetiver. But before giving her anything, let her smell each oil. I usually do this by offering the cap. If she runs to the other side of the room or turns her head away, that's not the right oil to use. Don't force it on her. Wait for her to find an oil she's interested in, that she wants to smell more of. She may even try to lick the cap."

Once you've found an essential oil that will treat the problem and that agrees with your dog, Cleveland suggests blending it with an easily digested vegetable oil, such as cold-pressed safflower oil. "Fill a fivemillilter bottle (which holds about one teaspoon) with the vegetable oil and add three to five drops of the essential oil. Now put a few drops on your fingertips and offer your hand to her. She might lick it off your fingers. Then apply a couple of drops to her paws and to a bandana scarf tied around her neck.

"It's fascinating to watch how these animals respond," Cleveland continues. "I've seen it work with my own animals and with clients' animals, and I've had an opportunity to work with orangutans and gorillas at the Denver Zoo. For all animals, but especially those who have been abused or who have never had an opportunity to make their own decisions in life, this approach is exciting because they get to choose, they get to say yes or no. Listening to what your dog has to say is important, plus it's a great way to bond. You're not doing anything threatening, you're doing something helpful and healing, and the animals respond."

#### **Blending secrets**

Selection in hand, you can blend a massage oil, coat spray, or other product that your dog will readily accept.

Essential oils can be diluted in vegetable carrier oils, preferably organic and coldpressed, such as apricot kernel, coconut, hazelnut, jojoba, olive, sesame, sweet almond, or sunflower oil. The general rule for canine use is to mix one teaspoon carrier oil with three to five drops essential oil or one tablespoon (½ ounce) carrier oil with 10 to 15 drops essential oil. Use standard measuring spoons, not tableware, to measure carrier oils; use an eyedropper or a bottle's built-in dispenser to measure drops. There are about 20 drops in 1 milliliter (ml), 15 drops in  $\frac{1}{4}$  teaspoon, and 60 drops in a teaspoon of most essential oils.

Essential oils can be mixed with water, but they will not dissolve. One way to dissolve essential oils in water is to add them to a small amount of grain alcohol, vodka, sulfated castor oil (also called Turkey red castor oil), vegetable glycerin, or any combination of these ingredients. Then add water, herb tea, aloe vera juice, hydrosol, or other liquid.

Because essential oils don't dissolve in water, they can't be rinsed away. If a drop of essential oil ever lands where it shouldn't, such as in your eye – or worse, your dog's eye – use a generous amount of carrier oil to remove it. Always keep vegetable oil and paper towels or soft cloths on hand for this type of emergency.

CJ Puotinen is author of *The Encyclopedia* of Natural Pet Care (Keats/McGraw-Hill) and Natural Remedies for Dogs and Cats (Gramercy/Random House). She wrote the foreword for Kristen Leigh Bell's *Holistic* Aromatherapy for Animals.

## **Recommended Resources**

#### **BOOKS ON AROMATHERAPY:**

*The Aromatherapy Book: Applications and Inhalations* by Jeanne Rose (North Atlantic Books, 1992)

*The Complete Book of Essential Oils & Aromatherapy* by Valerie Ann Worwood (New World Library, 1991)

Holistic Aromatherapy for Animals: A Comprehensive Guide to the Use of Essential Oils and Hydrosols with Animals by Kristen Leigh Bell (Findhorn Press, 2002, \$15). Available from aromaleigh.com and all booksellers. Kristen Leigh Bell no longer manufactures pet products, but the formulas for her popular Aromaleigh Pet Products are in the book.

A Pocket Guide to Aromatherapy and Pet Care by Joan Clark. \$6 from joanclark.com

#### **RECOMMENDED SOURCES:**

The following offer therapeutic-quality organic or wildcrafted essential oils, hydrosols, and carrier oils, plus aromatherapy supplies such as nebulizing diffusers and blending bottles.

The Aromatherapist USA, Las Vegas. (702) 413-9817, thearomatherapistusa.com

AromaTherapeutix, Seal Beach, CA. Offers excellent catalog, no Web site. (800) 308-6284

Naturesgift.com. This friendly, comprehensive Web site offers detailed information about aromatherapy, and its e-mail news-letter features pet reports.

Original Swiss Aromatics, San Francisco. (415) 479-9120, originalswissaromatics.com

Simplers Botanicals, Sebastopol, CA. (800) 652-7646 or (707) 887-2012, simplers.com

#### CANINE AROMATHERAPISTS:

Joan Clark, Lawrence, KS, (785) 887-1030, joanclark.com

Frances Fitzgerald Cleveland, Littleton, CO, (303) 378-6693, ffrogworks.com

Cathy Franklin, Visalia, CA, (559) 739-0709

Teresa Mazzella, Ontario, Canada, (519) 326-9312, angelscent.ca

Lorna Paxton, Los Angeles, CA, (310) 476-6314, happytailsspa.com

Faith Thanas, Leicester, MA, (508) 892-9330, aromadog.com

Andrea Warren, Columbia, SC, (913) 652-3318

## **Top 20 Essential Oils for Use With Pets**

The following essential oils are recommended by canine aromatherapist Kristen Leigh Bell

**Carrot Seed** (*Daucus carota*). Skin care, first aid, healing, scarring, skin conditions. Super gentle.

**Cedarwood, Atlas** (*Cedrus atlantica*). Improves circulation, helps deter fleas. Skin care.

**Chamomile, German** (*Matricaria recutita*). Also called blue chamomile. Skin-soothing anti-inflammatory. Burns, allergic reactions, skin irritations.

**Chamomile, Roman** (*Anthemis nobilis*). Intensely calming and antispasmodic. Wound care, teething pain.

**Clary sage** (*Salvia sclarea*). Different from common garden sage. Gentle, sedating, calming.

**Eucalyptus radiata** (*Eucalyptus radiata*). The gentlest, best tolerated, most versatile eucalyptus (there are many). Anti-in-flammatory, antiviral, expectorant. Diffuse as room air cleaner, deodorizer, flea repellent.

**Geranium** (*Pelargonium graveolens*). Tonic, antifungal. For skin ailments, yeast overgrowth, fungal ear infections. Ticks dislike all rose fragrances, including this one.

**Ginger** (*Zingiber officinale*). Fresh, warm, spicy (don't settle for ginger that smells stale, musty, or rank). Motion sickness, indigestion (see Peppermint), useful in massage oils for sprains, strains, dysplasia, arthritis.

**Helichrysum** (*Helichrysum italicum*). Horrible smelling, incredibly effective essential oil (some people and dogs do like it). Also called Immortelle or Everlasting. Heals skin conditions, cuts, abrasions, wounds, injuries. Relieves pain.

**Lavender** (*Lavandula angustifolia*). Used by the makers of pet aromatherapy products more than any other essential oil. Gentle, antibacterial, antipruritic (anti-itch), stimulates rapid healing, acts as a central nervous system sedative, very relaxing, deodorizing.

**Mandarin, Green** (*Citrus reticulata*). The sweetest essential oil, very relaxing. For fear, anxiety, stress. Avoid red mandarin, which is not the same, and use only organic green mandarin. This is not a distilled oil but is pressed from the rind of the fruit.

**Marjoram, Sweet** (*Origanum marjorana*). Pleasing, smooth herbal fragrance, calming, antispasmodic effects, strongly antibacterial. A recommended replacement for tea tree oil in blends for pets. Bacterial skin infections, wound care. Repels insects. Reduces undesirable behaviors of intact males.

Myrrh (Commiphora myrrha). Ancient resin with deep, warm,

earthy fragrance. Anti-inflammatory, antiviral. Puppy teething pain, irritated skin. Boosts immune system. Opoponax myrrh *(Commiphora erythraea)* has similar properties and repels ticks.

**Orange, Sweet** (*Citrus sinensis*). Popular, uplifting, pleasant. Calms, deodorizes, repels fleas, treats skin conditions. Use organic sweet orange oil to avoid pesticide residues. Pressed, not distilled.

**Peppermint** (*Mentha piperita*). Digestive aid; stimulates circulation for injuries, sprains, strains, arthritis, dysplasia. Insect repellent. Relieves pain and itching. To prevent nausea and motion sickness, mix one tablespoon vegetable oil, seven drops ginger, and eight drops peppermint; give three drops orally.

**Ravensare aromatica** (*Cinnamonum camphora*). Gentle, antiviral, antibacterial.

**Rose** (*Rosa damascena*). Expensive, wonderful, makes any shampoo, spray, or grooming product luxurious. Stabilizes central nervous system. Calming. Add one to two drops to blends for itchy, irritated, or dry skin.

**Thyme linalol** (*Thyme vulgaris*, chemotype linalol). Common garden thyme has six known chemotypes, or chemical profiles. Thyme linalol is the most gentle and useful. Relaxing, antibacterial, antifungal without the harsh skin irritation associated with common thyme. Balancing tonic.

**Thyme thujanol** (*Thyme vulgaris*, chemotype thujanol). Like thyme linalol plus immune system stimulant, liver detoxifier, antiviral. Kurt Schnaubelt, PhD, founder of the Pacific Institute of Aromatherapy, recommends applying thyme thujanol immediately after a tick or tick bite is discovered in order to help prevent Lyme disease. For immune-boosting blends or when a powerful antibacterial is needed without caustic, skin-irritating effects.

**Valerian** (*Valeriana officinalis*). Relaxing, helpful for separation anxiety or fear of loud noises, storms, fireworks, new situations.

#### A RECIPE FOR "CALM DOG MIST"

When she manufactured pet products, Bell's best-seller was Calm Dog Mist. To make it yourself, place one teaspoon vegetable glycerin, one tablespoon grain alcohol or vodka, one teaspoon sulfated castor oil, and 10 drops grapefruit seed extract in an 8ounce cobalt blue, green, or opaque spritzer bottle. Add three drops valerian, two drops vetiver, four drops petitgrain, three drops sweet marjoram, and two drops sweet orange essential oil. Add seven ounces spring or distilled water (fill to top).

If desired, add several drops of flower essences such as Rescue Remedy or gemstone essences such as rose quartz. Shake well before using. Calm Dog Mist can be spritzed into your hands and massaged into the dog's neck and chest, sprayed on bedding, or misted into the air.

# **Breathing Lessons**

A clear, vital respiratory system is central to your dog's robust health.

### BY RANDY KIDD, DVM, PHD

he respiratory system functions rather miraculously. Vital for life, critical for the health of the whole body, it's one of the major ways the dog's body unites his external environment with his inner milieu. As a primary site of contact with the outer world, the lungs are susceptible to diseases that can be caused by any airborne germ, irritant, or toxin that happens to be floating around.

Holistic practitioners understand that respiratory symptoms can be an indication of disease *or* a sign of healing – the key is differentiating between the two. Some alternative and complementary medicines have proven to be beneficial for many respiratory conditions, especially mild diseases and those that have become chronic.

### Architecture of respiration

In addition to the nose, larynx, and pharynx (which were discussed in detail in "Know the Nose," WDJ November 2004), the respiratory system consists of the trachea, bronchi, bronchioles, alveoli, and the parenchymal tissue of the lungs.



WHAT YOU CAN DO . . .

- Seek out a holistic veterinarian for help with treating your dog's chronic cough. Some alternative medicines excel at increasing respiratory system health.
- Consider the air quality in your home as a factor to improve if your dog has respiratory illness.
- Include your dog in any sort of meditation or yoga practice you do. Relax and breathe deeply together.



The dog's left lung has two lobes; its right lung has four lobes. The trachea conducts air in and out of the lungs; the air is moved by relaxation and contraction of the diaphragm.

From the trachea to the alveoli, a map of the lungs would look like a tree – each branch dividing into many, ever-smaller branches until the end point of several *million* alveoli is reached. Each alveoli is a round receptacle where gas exchange occurs via contact of the inspired air with blood across an extremely thin layer of tissue surrounding the alveolar capillaries.

The respiratory system performs several functions. Its most important utility is to act as a gas exchange: it delivers oxygen for distribution to the body, and removes carbon dioxide produced by living cells. In addition, the respiratory system filters out particulate matter, maintains the body's acid-base balance, acts as a blood reservoir, protects its own delicate airways by warming and humidifying inhaled air, and is active in producing substances that initiate the immune system response. The upper airways also provide for the sense of smell and play a role in temperature regulation in panting animals.

Normal respiratory rates vary, depend-

ing on the size of the dog, from 10 to 30 breaths per minute; larger dogs have slower rates. Panting – a rapid, open-mouthed, and shallow breathing pattern – is a normal canine reaction, brought on by exercise and/ or the need to cool the body.

In the healthy animal, particulate matter and the small amounts of mucus that are normally generated are removed by cilia (minute hairs that line the trachea and bronchi) and coughed up or swallowed. Many microorganisms live in the normally healthy respiratory system; their pathogenicity is held in check by local and systematic immune factors.

According to Western medical practitioners, disease of the respiratory system occurs when irritants greatly increase the amount of mucus produced (in excess of what the animal can expel naturally), when the immune system allows for attachment and growth of pathogenic microorganisms, or when local cells are stimulated to become malignant (from excess exposure to carcinogenic toxins, for example).

#### **Alternative view**

Traditional healers have long respected the healing power of correct breathing, and their ways of thinking about the respiratory system reflect this understanding.

For many cultures the breath is equivalent to the Qi (pronounced "chee" and often spelled chi) or *Prana* (vital force) that circulates throughout the body and gives it life and vitality. From this view, respiratory disease may be considered the result of a weakened protective Qi – from a deficiency of Lung Qi production or dissemination.

In most Eastern cultures (and some other cultures) considerable attention is paid to helping people stay healthy by teaching them proper breathing methods – through various forms of meditation, postures (yoga asanas), and active or passive exercises meant to enhance proper breathing.

In Traditional Chinese Medicine the lungs are thought to regulate the Qi of the entire body; a disharmony of the lungs can produce deficient Qi or stagnant Qi anywhere in the body.

The Chinese herbal mixture "Jade Screen" – which includes astragalus (Astragalus membranaceus) – and acupressure points are often used by traditional Chinese medical practitioners to strengthen both Lung and protective Qi. These practitioners also credit the lungs with helping to move moisture through the body. Disharmonies of the lungs' water-moving function, they say, can result in urinary dysfunction, edema (especially in the upper body), or problems with perspiration. A dog with robust lung health will have a bright, shiny coat and will be resistant to developing colds, persistent coughs, and other aggravating illnesses.

#### Signs of disease

Any kind of practitioner would recognize coughing as a first sign of respiratory disease. A sudden onset of coughing may be a dramatic indicator of serious disease – pneumonia, secondary symptoms of other viral diseases such as distemper, or lung tumors – or not-so-serious disease, such as common colds or kennel cough.

There are also more subtle signs to watch for, and since some of these signs may be related to either heart or lung problems, it is important to differentiate between the two. Exercise intolerance is the most prominent of these signs. A dog will demonstrate this by lagging back during her daily walks; wheezing, gasping, and straining for air when she is forced to exercise, when she climbs a flight of stairs, or jumps up on your

## **Relax and Breathe With Your Dog**

Recently I have been including my canine companion, Pokey, in my morning meditation and brief yoga routine. Meditation and yoga are both disciplines that scientific research *and* yoga masters tell us help to balance our physical, mental, and spiritual aspects. Perhaps most importantly, both yoga and meditation help us become aware of our patterns of breathing. Many of the ancient healing traditions (and today's more enlightened holistic practitioners) believe that proper breathing is a prime ingredient for achieving overall health.

I have never been a great meditator. Although I have tried numerous techniques to overcome the relentless chatter (as the yogis say we should do), I can never seem to get my thinking mind to shut up. And my old tattered and torn body doesn't even begin to contort into the pretzel-like forms you see in the yoga magazines – although I actually am more flexible now than I was when I played college football several decades ago! So, it's not been easy for me; in fact, only recently did I begin to understand the importance of correct breathing, and guess who the teacher was who helped me learn this? Although I have taken formal lessons, read dozens of books, and been associated with numerous health and fitness practitioners who teach the power of proper breathing, the best breath-work teacher I have ever had is my Pokey.

I simply have my healthy young Lab-mix lie beside me as I assume my own "modified-for-the-stiff-of-joint" lotus posture (which for me is, in reality, the corpse pose). Then, so I can feel how he is breathing, I rest one hand on Pokey's lower ribs and upper abdomen.

Pokey's breathing is almost never shallow, forced, constrained, or constricted as commonly occurs when we humans are anxious, fearful, angry, or depressed. Most of the time, he is almost totally present in his physical being, in the "now" – that state of natural balance the masters want us to try to achieve. His breathing is natural, full-bodied, not restricted by fear, anxiety, or depression. My "dog enhanced" meditations with Pokey have taught me how to breathe fully into my lungs, how to shut off my mental chatter.

Try spending a few minutes daily meditating with your dog, observing how he breathes, and perhaps trying to mimic his breathing patterns; it may be extremely beneficial for your health as well as your dog's.

When you meditate and do yoga postures, include your dog. Give him time to calm down and let him assume his natural breathing pattern. This may take a few sessions before he understands that this is a time of relaxation, not play time.

Practice breathing as your dog does by matching your breathing patterns to his. You can do this with your eyes closed if you place your hand on his lower chest. The timing between your breaths may not be exactly in synch, but the idea is to learn how to create a breathing pattern that transitions naturally from inspiration to expiration and that moves air into the farthest depths of your lungs. All this requires full relaxation and usually means that you will need to concentrate on being sure that your abdomen – not your upper chest – expands as you inhale.

There is evidence to indicate that the benefits of meditation or yoga are energetically transferred to those in the same room with the practitioner, even to those who are only watching and not actively practicing the discipline. So as you learn how to control your breathing to create a better flow of your personal *Qi*, your dog's *Qi* will

also become better balanced. Double the pleasure; double the

benefits.

(Note that this exercise assumes that your dog has normally healthy lungs. If he is

showing any of the signs of respiratory dysfunction described in the main body of this article, seek veterinary care.)



Every dog should have an annual veterinary examination – after age seven, perhaps two per year – including a check of his lungs and heart with a stethoscope.

bed; and she may tend to sit in an elbowsout posture. Exercise intolerance and the accompanying signs listed above are the classic symptoms of heart disease, and whenever they are seen, it is time for a visit to the veterinarian.

The same symptoms as those seen with heart disease, however, may also be a sign of aging. Some experts believe that the respiratory system declines in efficiency by up to 50 percent over a lifetime. Bronchial passages constrict, fibrous tissue in lungs increases, and the functional capacity of the alveoli is reduced. In addition, many dogs, over the years, have been exposed to lung damage caused by inhaled allergens, foreign bodies, and microorganisms – all of which can decrease functional lung capacity.

Your dog should visit his vet at least once a year for an annual physical – perhaps twice a year after he's reached about seven years of age. Use a veterinarian who takes the time to put a stethoscope to the dog's heart and chest to listen for abnormal sounds. If there is some question about the functional capacity of your dog's heart or lungs, further testing such as radiographs or an EKG may be indicated.

My own feeling is that the annual physical is absolutely necessary, to monitor how the dog is doing on a yearly basis. Please note that an annual vaccine is absolutely *un*necessary, although this is the reason many vets give for seeing your dog every year. In my opinion, it is time for those of us in the veterinary profession to concentrate on the annual physical exam rather than on selling vaccines.

#### Kennel cough and colds

The two most common afflictions of the respiratory system are the "common cold" and kennel cough. Both of these ailments are usually instigated by any of a number of viruses, often followed by secondary bacterial invasion. The severity of the symptoms varies widely, but in most "colds" they are mild and include wheezing, coughing, reluctance to move, and perhaps a mild fever.

Kennel cough (a.k.a. infectious tracheobronchitis), on the other hand, can produce symptoms that appear extreme, with a dry, hacking cough accompanied by frequent, intense gagging. I've had caretakers rush their kennel-coughing dog in to see me, thinking he has a bone caught in his throat. Despite its appearance, a typical case of kennel cough is not life-threatening, and it tends to run its course in a few days to a week or so. But it is a disease that is frustrating for pet and caretaker alike.

Kennel cough results from inflammation of the upper airways. The instigating pathogen may be any number of irritants, viruses, or other microorganisms, or the bacteria *Bordetella bronchiseptica* may act as a primary pathogen. The prominent clinical sign is paroxysms of a harsh, dry cough, which may be followed by retching and gagging. The cough is easily induced by gentle pressure applied to the larynx or trachea.

Kennel cough should be expected whenever the characteristic cough suddenly develops 5 to 10 days after exposure to other dogs – especially to dogs from a kennel (especially a shelter) environment. Usually the symptoms diminish during the first five days, but the disease may persist for up to 10-20 days. Kennel cough is almost always more annoying (to dog and her caretaker) than it is a serious event.

# Other diseases of the respiratory system

**Pneumonia** is inflammation of the lungs with consolidation (hardening) of the tissues, and this inflammation can be from any number of sources – viral, bacterial, fungal, trauma-induced, or as the consequence of an allergic reaction. Oftentimes the initial stimulus for inflammation comes from airborne toxins – cigarette smoke, city smog, fumes from household cleansers, and outgassing from numerous sources such plastic food dishes or the formaldehyde found in household insulation, new carpets, and furniture.

Pneumonia is not a common malady in

dogs, and when it occurs, the symptoms may vary from mild to extreme; in severe cases the disease can be life-threatening. If your dog has extreme difficulty breathing, or if he has stopped eating and is very reluctant to move, it's time to see the vet. Antibiotics and supplemental oxygen can be lifesaving at this stage.

Likewise, neither **asthma** nor **emphysema** are common problems in dogs, although they do occasionally occur. Asthma is a condition that causes recurrent bouts of wheezing and respiratory distress due to constriction of the bronchi, and is often allergy-induced. Emphysema is an abnormal accumulation of air in the spaces between the alveoli of the lungs. Both conditions can be difficult to diagnose correctly, often requiring radiographs to determine the extent of damage.

Any dog who demonstrates periodic bouts of respiratory distress or who has had a chronic problem with breathing should be taken to a veterinary hospital for further evaluation. Holistic veterinarians (including me) have had excellent success treating asthma using acupuncture, coupled with immune-system boosters and other herbs to aid breathing.

**Trauma** that causes tissue damage and/ or bleeding into the lungs can also be a cause of respiratory distress. The typical lung trauma case goes something like this: The dog arrives at the emergency clinic in respiratory distress. The owner reports that the dog had been out running loose for a while and he returned like this – a sudden onset. These dogs have often been hit by a car, and the major damage has been internal, to the lungs or diaphragm. Again, whenever your dog is in extreme respiratory distress, it is time to visit your vet.

Respiratory involvement can come **secondarily**, from other sources in the body, such as an extension of gingivitis from the mouth, diabetes (which lowers resistance to disease), and other infections such as distemper, parainfluenza, or adenovirus. The most common source of secondary respiratory problems, however, comes from the **heart.** 

**Cardiac insufficiency,** whatever the cause, can cause a decrease in respiratory efficiency, and the clinical signs of coughing, wheezing, and exercise intolerance. Heart conditions, including heartworm infection, need to be differentiated from primary lung involvement, and your vet's stethoscope is the first step here, perhaps followed up with X-rays and other tests.

Lung tumors can be either primary (originating in the lung tissues) or secondary (metastasizing from other parts of the body and lodging in the lung tissues). Both of these can create nasty tumors that are difficult to treat, whatever method you choose to use. My experience with these is that if there is anything that can help them, it will be classical homeopathic remedies. Since it is thought that many lung tumors are instigated by contact with airborne toxins, it's important that we do all we can to eliminate them from our own and our dog's environment.

#### Care of the respiratory system

Oxygen is the most lung-friendly nutrient available for man or beast. Make sure your dog's lungs (and outlying tissues) are adequately supplied with oxygen, by taking – at *minimum* – a daily 20- to 30-minute walk at an easy trot pace (the pace where you can carry on a normal conversation with your dog so passersby will think you are crazy).

I also think that a daily anaerobic romp – sprinting to retrieve a ball, for example – helps to expand the functional capacity of the lungs. Be sure to have your dog's heart and lungs evaluated by a vet before you begin a new exercise program.

The second most important thing to do for the health of your dog's lungs is to eliminate all the toxins you possibly can. Many of the commonly found air pollutants cause irritation to the airways of the lungs and this irritation stimulates mucus production. The mucus in turn stimulates coughing. Other irritants cause the smooth muscles to constrict around the alveoli, eventually causing asthma or emphysema. Finally, many of the air pollutants are known carcinogens; persistent contact with them is a disaster waiting to happen.

While exploring ways to eliminate air pollutants is beyond the scope of this article, it is definitely a topic for you and your family to explore. As a first step, though, make sure your (and your dog's) house and living environment have adequate ventilation.

The next (and final) step to assuring respiratory health is to energize the immune system. Proper diet, limited stress, along with vitamins A, C, and E and other antioxidants such as the culinary herbs and Coenzyme Q10 are all beneficial to the immune system. Herbs that are directly beneficial for the immune system include echinacea and astragalus. Check with your holistic vet for correct dosages of these supplements and herbs.

# Alternative medicines for respiratory conditions

There are two important things to remember about alternative medicines and the respiratory system:

1) In Western medicine, it is often impossible to treat a condition without knowing the cause; in most alternative medicines (Chinese medicine and homeopathy in particular), the treatment is always for the condition itself, regardless of the cause.

2) Holistic treatments begin with the realization that most respiratory infections are really signs of the body's healthy effort to expel toxicity – via mucus from the nose, sneezing, puffy red eyes with mucus-like secretions, and coughing and phlegm.

While the Western medicine man will focus intensely on diagnostic procedures to try to determine a specific diagnosis, the alternative practitioner observes symptoms as they occur and treats accordingly. And, whereas the Western practitioner's treatments are often aimed toward palliation of symptoms (easing the cough, for example), the alternative practitioner understands that respiratory symptoms may be a good sign that the body is responding in a healing manner.

## Air Pollutants, Indoors and Out

Air pollutants that can irritate your dog's (and your own) lungs are numerous. Most people think the greatest risks are posed by outdoor pollutants, such as pesticides and herbicides (applied to lawns and gardens), automobile exhaust, soot, dust, and smog.

You may surprised to learn that there are even *more* air pollutants found inside homes, including cigarette smoke, volatile organic compounds, radon, formaldehyde (now found as a strengthening agent in many new clothes, carpets, furniture, drapes, and household insulation), wood smoke, asbestos, solvents, benzene, polychlorinated biphenyls (PCBs), insect repellents, and aerosols. Studies show that indoor air in homes is, *on average*, two to 20 times more polluted than the outdoor environment. Indoor chemical concentrations can rise to as much as 100 times the outdoor air concentration!

Sadly, our pets are at an even higher risk than we are when exposed to poor indoor air. Many common solvents have a higher molecular weight than air; thus they settle toward the floor, where our dogs spend most of their time. And due to their smaller body mass and higher rate of respiration,



dogs (and small children), are more susceptible than we are to toxins in the air. Between all-pervasive air pollutants and persistent use of anti-flea and anti-tick products, our pets are exposed to high levels of potential toxins on a continuing basis.

The effects of secondhand smoke on household pets should not be underestimated. Cigarette smoke is an irritant that increases mucous production, stimulates coughing, causes constriction of the smooth muscles around the lungs' alveoli (as in asthma and emphysema), and is a known carcinogen. If you still smoke, quit – or at least take it outside, where you don't threaten the already too short life of your beloved companions.

It may not be realistic to think we can rid our pet's environment of all of today's toxins (not a reason to quit trying, however!), but we can make sure our homes have plenty of ven-

> tilation. Recent evidence indicates that newer "airtight" houses can create a huge amount of internal toxin build up. If it feels and smells stuffy in your house or in

> > the area where your dog stays, it probably is. Open a window or provide more ventilation via some other manner. (For more information about the effects of indoor air pollution on dogs, see "No Room to Breathe," WDJ October 2001.)

■ Herbs. There are several herbs that may be beneficial for treating respiratory conditions. The following have been used to treat the symptoms seen with respiratory disease. Herbal dosages and method of delivery vary with the needs of the animal; check with your herbal practitioner.

Herbs that enhance the **immune system** include echinacea (*Echinacea spp.*), astragalus (*Astragalus membranaceus*), Siberian ginseng (*Eleutherococcus senticosus*).

Herbs with antibiotic activity (for lung infections) include Oregon grape root (Mahonia aquifolium), goldenseal (Hydrastis canadensis), and echinacea. Herbs for bronchial congestion include oregano (Origanum vulgare), bloodroot (Sanguinaria canadensis), thyme (Thymus vulgaris), and ginger (Zingiber officinale).

Herbs for **acute bronchitis** include marshmallow (*Althaea officinalis*), cinnamon (*Cinnamonum camphora*), turmeric (*Curcuma domestica*), echinacea, fennel (*Foeniculum vulgare*), chamomile (*Matricaria chamomilla*), and peppermint (*Mentha piperita*).

To ease **coughing**, try the following herbs: marshmallow, pleurisy root (Asclepias tuberose), oats (Avena sativa), calendula (Calendula officinalis), licorice (Glycyrrhiza glabra), peppermint, elder (Sambuscus nigra), thyme, coltsfoot (Tussilago farfara), and mullein (Verbascum thapsus).

My own preference has been to use licorice root to ease the cough (and for its adaptogenic qualities), echinacea for its immune-stimulating properties, and Oregon grape root for its infection-fighting abilities. I then consider adding other herbs as the symptoms indicate.

■ Massage may prove beneficial in preventing and treating respiratory diseases. Dogs can become very anxious whenever their breathing is difficult or restricted, and anxiety tends to constrict breathing. A whole-body massage may be relaxing enough to help produce more normal breathing patterns.

■ Acupuncture is one of the best ways to treat respiratory disease, and it has been shown to be especially helpful for treating asthmatic patients. Acupuncture points along the Lung and Large Intestine Meridian are the primary points to use, with additional points possibly located along the Spleen, Kidney, and/or other Meridians, depending on the symptoms. When treating a wet cough, in addition to herbs for bronchial conditions and coughing (see the herbal section, above), your veterinary acupuncturist will consider removing "dampness" from the lungs by needling the Spleen-6 and Kidney-3 acupressure points, while also enhancing the immune system by stimulating Large Intestine-11. You can use acupressure on the same spots (ask your acupuncturist to show you their locations). Use moderate pressure over the spots for several minutes, or until your dog seems to be uncomfortable with the pressure. Don't continue past that point!

The Lung and Large Intestine Meridians (the paired Meridians that are associated with lungs and respiratory function) run on either side of the dog's forearm; to stimulate points along this meridian, massage up and down the forearm beginning at the shoulders and extending down to the dew claw and first digit of the paws.

Each Organ system, in the Traditional Chinese Medicine way of thinking, has an emotional component attached to it. Sadness and grief are related to the lungs, and an excess of sadness or grief may weaken Lung *Qi*.

■ Flower essences can be very helpful for treating emotional disturbances, and if your dog has problems with lung disease, especially if the problems are persistent or recurring, think about the possibility of sadness or grief as contributing factors. Consider flower essences whenever there is the potential for your dog to be sad or grieving, such as when a human member of the family leaves through divorce, or a fourfooted companion who has lived with the family passes on.

When your dog seems to be grieving, try the flower essence remedies Star of Bethlehem, pine, and/or wild rose. If she seems to be extremely gloomy and utterly sad, try mustard or wild rose. If the sadness is the result of homesickness (from a recent move, for example) try honeysuckle and clematis. Walnut is an excellent remedy anytime there has been a transition in the family – a family member suddenly leaving, for example, or after moving from one house to another.

Flower essences can be used singly, or up to five remedies can be combined and used together. Remedies are typically diluted. Use several drops per ounce of spring water, and a few drops of this dilution can then be given orally, a few drops added to the dog's water, or the diluted solution can be placed in a misting bottle and spritzed over the dog's body. (See "Flower Power," March 1999, for more information about flower essence remedies.)

■ Homeopathic remedies. There are literally dozens of homeopathic remedies that have been shown to be helpful for treating all sorts of respiratory illnesses, again depending on the symptoms observed. Examples include:

• For a **dry, spasmodic cough:** Belladonna, Bryonia, Stannum

• For **coughing and difficult breathing:** Arsenicum alb., Kali carb., Lycopodium, Phosphorous

• For asthmatic breathing: Apis, Sulphur, Lobelia inflata

• For cases of "heart cough": Naja, Prunus v., Spongia

For more information about homeopathy, see "Tiny Doses, Huge Effects," WDJ June 2000.



Dr. Kidd and his "breathing coach," Pokey.

Dr. Randy Kidd earned his DVM degree from Ohio State University and his PhD in Pathology/Clinical Pathology from Kansas State University. A past president of the American Holistic Veterinary Medical Association, he's author of Dr. Kidd's Guide to Herbal Dog Care and Dr. Kidd's Guide to Herbal Cat Care (see page 24).

# Tail of the Lost Wag

# Suspect "limber tail syndrome" if your whippy-tailed dog stops wagging.

#### **BY C.C. HOLLAND**

ne day last summer, Lucky, my normally exuberant mixed-breed dog, returned with my husband from an off-leash hike exhibiting little of her boundless energy. She made a beeline for her bed, so we joked that she was out of condition; she'd had knee surgery six months earlier and we assumed she hadn't fully regained her stamina.

But as the hours ticked by and she continued to show little interest in moving, we got concerned. She changed positions very gingerly and seemed to have a hard time sitting and lying down. Worse, we couldn't even coax a single happy tail thump from a dog who usually wielded that appendage with abandon. She looked at us with sad eyes and drooping ears, telegraphing that something wasn't right.

I started worrying about all the possible

things that could have happened. Did she eat something foul on the trail? Had she reinjured her knee? She was eating and drinking, and her temperature was normal, but clearly this was not a healthy animal. An emergency examination was in order.

Our veterinarian examined her from stem to stern, and it was in that latter area she spotted the problem. "I think she has a sprained tail," she opined. "It should heal on its own within a week, but if she seems really tender, you can give her an antiinflammatory."

Sure enough, within four days Lucky's drooping and strangely silent tail regained both its loft and its wag. Still, I was surprised that in the years I've written about dogs I'd never heard of a sprained tail. It turns out that the malady is well known among trainers and handlers of certain dog



- your dog's tail lies limply or stops wagging in wag-worthy situations.
- Review the activities that preceded the onset of limber tail, so you can avoid retriggering the condition.

breeds, and while "sprain" is something of a misnomer, the affliction has a formal name: limber tail syndrome.



This is the normal tailset of Jackol, a three-year-old Rottweiler/Shepherd-mix. Last April, he suffered "limber tail" (right) after a four-hour car ride and a half-day romp on a beach. Photos courtesy Dr. Elaine Coleman and Jeremy Collins, Auburn University.



It was a 1999 Auburn University study that pinpointed the nature of the muscle damage that causes limber tail.

#### A tail without a wag

The syndrome seems to be caused by muscle injury possibly brought on by overexertion, says Janet Steiss, DVM, PhD, PT. Steiss is an associate professor at Auburn University's College of Veterinary Medicine and coauthor of the 1999 study on limber tail that pinpointed the nature of the muscle damage. Researchers used electromyography (EMG), imaging, and tissue testing on dogs affected with limber tail and concluded that the coccygeal muscles near the base of the tail had sustained damage.

The muscle injury of limber tail is characterized by a markedly limp tail, which can manifest in several different ways.

"You can see varying degrees of severity," says Dr. Steiss. "The tail can be mildly affected, with the dog holding the tail below horizontal, or severely affected, hanging straight down and looking like a wet noodle, or anything in between."

In some dogs, the tail may stick out a couple of inches before drooping; others may exhibit raised hair near the base of the tail as a result of swelling. Depending on the severity of the injury and the dog's tolerance to pain, some animals – like Lucky – may have difficulty sitting or lying down. And many dogs reduce or eliminate wagging entirely, probably due to soreness.

Limber tail can occur in any dog with an undocked tail, but certain breeds, espe-

cially pointing and retrieving dogs, seem particularly susceptible to it. Among these breeds are Labrador, Golden, and Flat-Coated Retrievers; English Pointers and Setters; Beagles; and Foxhounds. Both sexes and all ages can be affected. Other common names for the condition are "cold tail" (especially among Retrievers, who often exhibit symptoms after swimming in frigid water), "limp tail," "rudder tail," "broken tail," or even "dead tail."

The condition resolves over the course of a few days or a week and usually leaves no aftereffects. According to Dr. Steiss, there is anecdotal evidence that administering anti-inflammatory drugs early in the onset can help shorten the duration of the episode, but no veterinary studies have yet confirmed this.

The exact cause is unknown, but according to Dr. Steiss, there are a few different factors that seem to be linked to limber tail. Overexertion seems to be a common precursor, especially if an animal is thrown into excessive exercise when he or she is not in good condition (as in Lucky's case).

"For example, if hunting dogs have been sitting around all summer and then in the fall, the owner takes them out for a full (weekend of hunting), by Sunday night suddenly a dog may show signs of limber tail," she says. "The dog otherwise is healthy but has been exercising to the point where those

> tail muscles get overworked."

Another risk factor is prolonged confinement, such as dogs being transported in crates over long distances. If competition dogs are driven overnight to a field trial and don't have a few breaks outside the crate while they're on the road, says Dr. Steiss, they may arrive at their destination with limber tail.

Uncomfortable climate, such as cold and wet weather, or exposure to cold water may also trigger limber tail. Retrievers seem particularly prone to exhibiting symptoms after a swimming workout, and some, says Dr. Steiss, are so sensitive to temperature that they show signs of limber tail after being bathed in cold water.

#### A tricky diagnosis

For an owner, the sight of a normally active tail hanging lifelessly can be alarming. After all, dogs' tails are barometers of both mood and health, and a tail carried low and motionless could indicate anything from nervousness to serious illness. Limber tail syndrome has been around for a long time, but it isn't very common and many veterinarians – especially those who don't work regularly with hunting or retrieving dogs – aren't familiar with it. Consequently, a variety of diagnoses can be given.

Limber tail can be mistaken for an indication of a disorder of the prostate gland or anal glands; a caudal spine injury; a broken tail; or even spinal cord disease. The allpurpose phrase "sprained tail" might also be used.

Ben Character, DVM, a consulting veterinarian in Eutaw, Alabama, and a member of the American Canine Sports Medicine Association, specializes in sporting dogs. He's seen plenty of cases of limber tail but doesn't call it a sprain.

"Sprain is a bad word for it because a sprain indicates a joint and problems with the ligaments surrounding a joint," Dr. Character explains. "As far as we know, this is all muscular."

"'Sprained tail' is kind of a catchall, nonspecific phrase that simply means something's wrong with the tail," agrees Dr. Steiss. "The tail has all kinds of joints because it has many tiny vertebrae, but sprain isn't the correct term here."

How can an owner tell if limber tail is the cause of a dog's discomfort? Look to the circumstances surrounding the onset of the droopy tail, suggests Dr. Steiss, especially if any of the risk factors were present.

"Limber tail has an acute onset. It is not a condition where the tail gets progressively weaker," she says. "Instead, it is an acute inflammation. Typically, the tail is suddenly limp and the dog may seem to have pain near the base of the tail. Over the next three to four days, the dog slowly recovers to the point where by four to seven days he's usually back to normal."

Dr. Character says it's a tough clinical call to make. "In order to really diagnose limber tail, you'd have to do electromyopathy (of the tissue) or do radiography to examine the inflammation, and a general practitioner just won't be able to do that."

## Limber Tail Checklist

You might suspect your dog has limber tail syndrome if:

- The tail is somewhat or completely limp.
- Your dog has difficulty sitting or standing.
- There was no obvious injury (i.e., a slamming door or an errant foot) to the tail.
- It occurs soon after extreme activity, prolonged transport, a swim in cold water, or a sudden climate change.
- His vital signs are good and he's still eating and drinking normally, despite the floppy tail.
- The tail shows gradual improvement over a few days.

To view a video of a dog with limber tail, supplied by Dr. Janet Steiss, associate professor at Auburn University's College of Veterinary Medicine, see vetmed.auburn.edu/ index.pl/steiss and scroll down to "Selected Publications."

#### **Effects of limber tail**

While an episode of limber tail can be unsettling for an owner, it doesn't hamper most dogs' ability to function normally.

"For your average hunting dog, it probably won't make a difference," says Dr. Character. "The tail is involved in balance when they run, but how much that's going to knock them off their game . . . it may not be enough to notice."

However, competition dogs can be sidelined: "Athletic dogs competing in field trials will not be able to compete when the tail doesn't have its normal motion, since the condition will be obvious to the judges," says Dr. Steiss.

Limber tail doesn't recur with any regularity among dogs that have already experienced one episode, according to Dr. Steiss: "In the majority of cases it happens once and doesn't happen again," she says. "But there are a few dogs where, if put into the same situation, it happens more than once."

That was the case with Hannah, a Lab/ Pit Bull mix owned by Miriam Carr, a dog care specialist in Richmond, California. Carr operates a dog-exercise business, PawTreks, specializing in off-leash outings. Often, Carr's trips include swimming opportunities for her clients' dogs. Her own dogs, of course, get to participate in *every* outing. "Hannah was very active – she went to the park every single day – so she was in great condition," says Carr.

After Hannah suffered several incidents of limber tail, however, Carr had to limit the dog's participation in the activities that seemed to trigger the limber tail incidents. "When Hannah swam with other dogs she was more competitive and would swim harder to get to the ball first, and that sort of set off the problem with her tail," says Carr. "When we finally realized that was the problem, we wouldn't let her swim with groups of dogs."

It was smart management on Carr's part. In rare cases, a dog's tail can be permanently affected by recurrent episodes, says Dr. Steiss. "A few can injure the muscle so severely that the tail may not be straight again. Probably, there's been a significant loss of muscle fibers plus scar tissue build-up in the tails in those dogs," she explains.

#### More dogs being affected?

Before 1990, limber tail wasn't often recognized outside hunting- and sporting-dog circles. But in 1994, Auburn University's College of Veterinary Medicine launched a

## What to Do If Your Dog Has Limber Tail

- Check with your vet to rule out any other possible ailments.
- Rest your dog.
- Ask your vet if an anti-inflammatory medication may be appropriate for the first 24 hours. (See "Administer With Care," WDJ June 2003, for more information and warnings about anti-inflammatory use.)
- Gradually return your dog to activity.
- Try to determine what factors seemed to cause the limber tail and avoid them in the future.

canine sports-medicine program and researchers (including Dr. Steiss) decided to take a closer look at the tail disorder after talking to owners and trainers in the region.

"These trainers were saying, 'Hey, this is a problem. We see it frequently, and nobody really knows what it is," says Dr. Steiss, who had a special interest in muscle disease and was intrigued by the strange injury. Although it seemed uncommon in the dog population as a whole, it sprang up with regularity among Pointers in the area. In one instance, an Alabama kennel discovered that 10 of its 120 adult English Pointers had been affected with limber tail in one morning.

In 1997, Steiss and her colleagues began an epidemiological study (believed to be the first) of sporting dogs in the southeastern United States. A total of 3,066 dogs were included in the study, two-thirds of which were used for hunting. The survey yielded information about the characteristics of limber tail in 83 dogs. The publication of the study results made more vets aware of the syndrome, so it's not clear whether the perceived rise in the number of limbertail cases is due to improved diagnosis or an actual increase in occurrence.

"It's definitely being recognized more often, (but) we hope it is happening less frequently in sporting dogs as trainers become aware of the specific risk factors," says Dr. Steiss, who is also entertaining another explanation for the increased frequency. "One thought I had is that in recent years more people are being becoming physically active and they may want to include their dogs in jogging, hiking, and other strenuous activities. It is possible that we may see more dogs coming down with this disorder, or other athletic-related disorders, simply because they're participating in more physical activities with their owners."

#### Life after limber tail

According to Dr. Steiss, researchers don't believe there's any underlying pathology to the muscles in afflicted dogs, nor is there any suggestion that a propensity for limber tail is genetic. As noted, while some breeds may be more prone to it – most likely due to their higher activity levels – any dog with a full tail is susceptible.

If your dog develops limber tail, treatment should include at least a few days of rest. Depending on the advice of your veterinarian, you may also administer an anti-inflammatory in the first 24 hours, under the direction of a vet. There is no evidence that anti-inflammatories speed healing, but some owners say they've noticed faster improvement when the medications are part of the mix.

Owners should also consider what activities their dogs were engaged in prior to the onset of the condition. Limber tail will show up quite soon after the triggering event, usually within hours or overnight. If you can isolate what it was that brought on the condition, whether it was a over-long off-leash hike or a swim in cold water, you can avoid repeating the situation.

Finally, ease your dog into any intense activity to slowly improve his condition. Many cases occur when a dog is a couch potato in the off-season and then plunges back into hunting or training full time.

As for Lucky, we haven't seen a recurrence, but we also committed ourselves to gradually increasing her activity until her physical strength matched the demands of her workouts. Her tail is once again thumping away at full speed – and we aim to keep it that way.

*Freelance writer C.C. Holland, of Oakland, CA, is a frequent contributor to WDJ.* 

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# **Skip This Peanut Butter**

*Is Skippy's "Squeez' It" a perfect training treat? We think not!* 

#### **BY CJ PUOTINEN**

hat could be more convenient? Many trainers are recommending Skippy's "Squeez' It" as a convenient training tool because it can be used to dispense a peanut butter treat right into the mouth of a dog who deserves a reward. The dog loves it, and his handler's hands stay clean and dry. No wonder this product is getting rave reviews from trainers.

But wait a second. What's in that blue plastic squeeze tube? Roasted peanuts are the first ingredient, followed by sugar, salt, and partially hydrogenated rapeseed, cottonseed, and soybean oils.

"Forget it," says holistic veterinarian Stacey Joy Hershman of Nyack, New York. "Peanuts are covered with pesticides unless they're organically grown, which these peanuts are not. And dogs simply aren't meant to eat sugary, salty foods, which can predispose them to tooth and gum disease, diabetes, gastrointestinal upsets like vomiting and diarrhea, and liver and kidney problems. In addition, peanut butter is fattening and shouldn't be given to overweight dogs. It also shouldn't be given to those prone to diarrhea, since peanut butter can act as a laxative."

If peanut butter *does* agree with your dog's digestive tract, only an organic prod-



uct should be used. Peanuts are among America's most chemically treated crops.

Sugar is a serious problem in any pet food. Some holistic veterinarians blame grains, sugar, and other carbohydrates for the epidemic of obesity and diabetes in America's dogs. Sugar makes up nearly 10 percent of Skippy's Squeez' It.

What about salt? This product contains 160 milligrams of salt per

serving. Dogs do need sodium, but there are better sources than refined table salt, which has been stripped of its trace elements, bleached, and treated with chemicals.

#### Avoid "partially hydrogenated" anything

Vegetable oils have always been problem ingredients for food processors. Because unsaturated and polyunsaturated vegetable oils are unstable and quickly go rancid, they are often refined, a process that strips them of nutrients while giving them a longer shelf life. Because they remain liquid at room temperature, these oils are often "hydrogenated," a plasticizing process that makes them solid, like margarine.

Hydrogenated vegetable oils are popular with food processors because they reduce cost, extend the storage life of products, and can improve flavor and texture. Unfortunately, hydrogenation creates trans fatty acids, or trans fats, which are similar but not identical to natural fats.

Because of their links to heart disease and type 2 or adult-onset diabetes, trans fats have – finally – caught the attention of the U.S. Food and Drug Administration (FDA), which recently announced that beginning in 2006, food manufacturers will be required to list trans fats on their products' labels. In the meantime, consumers fending for themselves can read ingredient lists and avoid products that contain hydrogenated or partially hydrogenated vegetable oils.

While there have not been studies about the effects of trans fats on dogs, the wealth of information about their deleterious effects on humans – and common sense – suggest they should be avoided. "The hydrogenated fats in Skippy peanut butter concern me more than anything else in this product," agrees clinical nutritionist Krispin Sullivan of Woodacre, California.

#### Go natural – and organic

Peanut butter is very fattening; a tablespoon contains about 100 calories. A motivated dog with a generous trainer can quickly consume a lot of calories. But unless your dog is very overweight a few pea-sized dabs of natural peanut butter isn't likely to do lasting damage, and it does contain protein, fat, niacin pantothenic acid, biotin, other B vitamins, vitamin E, iron, calcium, potassium, and tryptophan, an amino acid that benefits the nervous system.

To take advantage of the nutritional benefits of peanuts without subjecting your dog to the detrimental ingredients in most commercial peanut butters, look for peanut butter made from organically raised peanuts and salted with unrefined sea salt. Most health food stores carry several brands, and many grind their own. You can grind your own, too, with the help of a food processor.

"Using plain peanut butter that doesn't contain additives or grinding your own avoids the problems that added vegetable oils create," says Sullivan.

As for that handy blue dispenser, it's easy to replace the contents of Skippy Squeez' It tubes with better peanut butter. For easy refilling, use room-temperature or slightly warmed creamy (rather than chunky) organic peanut butter, screw the flip-top lid back on, and give that dog a little treat.

#### WHAT'S AHEAD

#### **Top Dry Foods**

Our annual report on truly "premium" dry dog foods, and how you can identify them.

#### **Scents-Ability**

Training Editor Pat Miller explores all the things a dog can do for us using his superior sense of smell. Plus, how to make your dog's nose work for <u>you!</u>

#### **Hot Shots**

Do you know which vaccinations your dog can (and should) skip, and which ones should not be missed? Experts say some "shots" do more harm than good. We'll tell you which are which.

#### What a Wolf Eats

Proponents of raw diets often draw on presumptions about the diet of the wolf to justify their approach. We examine the wolf diet – and whether it is an appropriate model for our dogs.

#### **Head Halters**

More and more types of these useful training tools are available to dog owners . . . but they are not for every dog.

# RESOURCES

#### BOOKS

WDJ Training Editor Pat Miller is author of two books: *The Power of Positive Dog Training* and the brand-new *Positive Perspectives: Love Your Dog, Train Your Dog.* Both books are available from DogWise, (800) 776-2665 or dogwise.com

*Dr. Kidd's Guide to Herbal Dog Care* and *Dr. Kidd's Guide to Herbal Cat Care* are published by Storey Books, (800) 441-5700 or storeybooks.com

The Encyclopedia of Natural Pet Care and Natural Remedies for Dogs and Cats, by WDJ contributor CJ Puotinen, are available from DogWise, (800) 776-2665 or dogwise.com. Puotinen is also author of several books about human health including Natural Relief from Aches and Pains, available from your favorite bookseller.

#### TRAINING AND INSTRUCTION

The Association of Pet Dog Trainers (APDT) has references to member trainers in your area. Write to PO Box 1781, Hobbs, NM 88241, call (800) 738-3647, or view its database of trainers at apdt.com

Pat Miller, CPDT, Peaceable Paws Dog and Puppy Training, Hagerstown, Maryland. Train with modern, dog-friendly positive methods. Group and private training, Rally, behavior modification, workshops, intern and apprentice programs. Call her at (301) 582-9420 or see peaceablepaws.com

Shannon Wilkinson, life coach and certified Tellington TTouch Practitioner, Portland, OR. Learn gentle methods to positively influence your dog's

#### behavior, health, and performance. Private sessions, group lessons, demonstrations, full- and half-day workshops. (503) 234-6361 or shannon wilkinson@earthlink.net

#### **HOLISTIC VETERINARIANS**

American Holistic Veterinary Medical Association (AHVMA), 2214 Old Emmorton Road, Bel Air, MD 21015. (410) 569-0795. Send a self-addressed, stamped envelope for a list of holistic veterinarians in your area, or search ahvma.org

## ATTENTION, BUSINESS OWNERS!

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