



# DOG Watch

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

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## IN THE NEWS ...

### Identifying Parentage: It's a Guessing Game

When Western University researchers asked 920 people in dog-related professions and services to identify parentage of 20 mixed breeds in videos, they found wide disparity. More than half the participants agreed on predominant breeds in only seven dogs. Twenty-three percent said a mix was a Cairn Terrier. DNA showed the predominant breeds were 50 percent Miniature Pinscher and 12.5 percent Dachshund. At the time, DNA accuracy of identifying offspring of two different purebreds was 84 percent; today it's 90 percent.

Victoria L. Voith, DVM, Ph.D., DACVB, was following up on her 2009 study on the correlation of visual breed identification and DNA analysis. In the new study, published in the *American Journal of Sociological Research*, 70 percent of participants said their assessments are used in data such as dog bite statistics.

The researchers warn visual identification has far-reaching impact, including veterinary records, public policy, the judiciary, insurance, shelter adoptions and the lives of companion dogs themselves. ♦

## Could a Drug Prevent Heart Failure?

*Researchers pursue a new role for the medication, which is now one of the most effective in controlling the disease*

Congestive heart failure, characterized by the accumulation of fluid in the lungs and other body tissues, might appear to strike suddenly. In many cases, however, it results from a progressive underlying heart disease that, if detected early, can be managed to improve and extend a dog's life.

"Very often, we can help pets," says cardiologist Bruce G. Kornreich, DVM, Ph.D., Associate Director for Education and Outreach at the Cornell Feline Health Center.

"A disease might progress



Chihuahuas are among small breeds prone to mitral valve problems.

to heart failure, and the owner thinks, 'Oh, my goodness, this just happened.' But in most cases, the disease has been progressing for a while."

**Managing the Disease.** Early detection of heart problems is key to managing congestive heart failure. In that regard, veterinary researchers in a number of institutions are evaluating whether one of the latest and most effective drugs for controlling congestive heart failure, called pimobendan (brand name Vetmedin), might also serve as an effective preventive treatment for dogs with

(continued on page 6)

## Cold Laser Therapy Gains Acceptance

*Its benefits have yet to be scientifically validated, but experience suggests it can treat pain and inflammation*

Don't be surprised if your dog's veterinarian dons special dark goggles in the exam room and applies a handheld wand to targeted areas on your dog's body to speed up healing from surgery or ease pain from arthritis. The latest tool in pain management — called cold laser therapy — is quickly gaining acceptance from veterinarians in teaching hospitals and small animal practices across the country.

The therapy is being used on a variety of conditions, mostly musculoskeletal and wound-related, in an effort to reduce pain and inflammation.

**Human Medicine.** The medical treatment, also called low-level laser therapy, was first

introduced in human medicine nearly 50 years ago. It's been used on animals for about a decade, but only in the past few years has its popularity grown. The benefits, which so far haven't been proven by higher-level evidence or studies in veterinary patients, are considerable to judge by anecdotal reports.

Today, low-level lasers represent a cutting-edge therapy that is turning doubters into advocates. Among them is anesthesiologist Andrea Looney, DVM, Senior Lecturer in the Section of Pain Management at the Cornell University College of Veterinary Medicine.

"The results from using cold laser therapy have been pretty miraculous," says Dr. Looney. "We have seen improvement in mobility in

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## SHORT TAKES

### Attacks on Service Dogs Bring Calls for Protection

A national organization that advocates for the blind and partially sighted has called for federal legislation to protect service animals. In announcing the initiative, Guide Dogs Inc. said members around the country have reported "a frightening and increasingly frequent incidence of attacks on their guide dogs by uncontrolled dogs they encounter on their routes through neighborhoods and city streets."

Guide Dogs, which is affiliated with the American Council of the Blind, conducted a statistically small — but telling — survey to learn:

- ◆ 89 percent, or 106, of the 119 respondents said they had experienced interference with their dogs.
- ◆ 42 percent, or 50 respondents, reported experiencing full-blown attacks on their dogs.
- ◆ Nearly 51 percent had encounters with the same dog more than once.
- ◆ 47 percent planned alternate routes to avoid known problem dogs.
- ◆ Nearly 4 percent, or five of the guide dogs who had been attacked had to retire from working as a result.

In the "Dog Attack Handbook" on its website, <http://gdui.org>, the 1,000-member organization describes the escalating number of attacks against guide dogs as traumatic and costly, noting that training a handler-dog team can cost as much \$60,000. Moreover, the handbook says, when a guide dog no longer can work because of the physical or emotional effects of an attack, "It is devastating to the blind handler to lose this valued companion and source of mobility."

Inadequate and inconsistent laws too often prevent local law enforcement agencies from exercising the authority to view and treat these violent attacks as criminal acts, says Guide Dog President Laurie Mehta of Cincinnati, Ohio.

The organization's intent is to have a National Service Animal Protection Law with criminal penalties, so pet owners will



BIGSTOCK

The escalating number of attacks against guide dogs is traumatic and costly, one advocacy organization says, noting that training a handler-dog team can cost as much \$60,000.

be motivated to exercise care to control their dogs in public, says Don Brown, legislative committee chair.

The independent Guide Dogs Association in the U.K. has also called for legal protection for guide dogs, urging members of parliament to take action. Unleashed dogs have attacked eight guide dogs a month in the past two years, up from three attacks a month five years ago, the association says.

### Dog Food Recall

A bag of kibble contaminated with Salmonella prompted Nestlé Purina PetCare Company to voluntarily recall a limited number of 3½-pound bags of Purina ONE White Meat Chicken & Whole Barley Recipe Adult Dry Dog Food from a single production run.

The food, shipped to retailers in the U.S., has a "best by" date of October 2014 and a production code, found on the back or bottom of the bag, of 31071083. No illness related to the product has been reported, but the company advises customers who bought the food to discard it. For more information or to obtain a refund, please call 800-473-8546.

Dogs infected with Salmonella can have decreased appetite, fever and abdominal pain. Untreated, they can develop bloody diarrhea and vomiting. Infected but otherwise healthy pets can infect other animals or humans. People become infected handling contaminated pet food, especially if they don't wash their hands. ♦



# Parvovirus, the Master Survivalist

*It thrives in the environment and triggers potentially fatal infections around the world*

If you just adopted a puppy or shelter dog, you may be tempted to show him off at dog parks and other pet-friendly places that draw a canine crowd. But before you allow him to mingle with other dogs, usher him to the veterinary clinic for a health check and vaccinations against contagious diseases.

Topping the list of threats: the canine parvovirus (CPV). Since the late 1970s, this potentially deadly virus has proven to be a master survivalist, persisting in the environment and infecting dogs around the world.

**'Vaccinate Your Dog.'** "Our take-home message is simple: Vaccinate your dog," says Colin Parrish, Ph.D., Professor of Virology at Cornell's Baker Institute for Animal Health and Director of the Feline Health Center. He heads a team

of researchers studying viral diseases in dogs, cats and wildlife. He was part of an international group of scientists who recently met in London to discuss the global status of CPV variation and ways to develop better, stronger vaccines.

"Things are pretty steady right now, but with CPV, we have seen mutations arise every two or three years that have become widespread, sometimes spreading around the world," Dr. Parrish says. "In addition, viruses related to canine parvovirus are capable of infecting a variety of wildlife species in addition to dogs, so there are lots of hosts. Since the virus emerged in 1978 we have been keeping track of those mutations, in part to see if they will affect vaccine efficacy."

CPV is non-discriminate. It can infect any dog of any breed at any age. Most commonly, it attacks a dog's intestinal



Unvaccinated puppies and dogs may become infected stepping on feces containing the canine parvovirus. The virus can also be tracked into the home on the soles of shoes and clothing.

tract lining, causing diarrhea, vomiting, loss of appetite and weight loss. In less-common cases, it can harm the heart muscles in a very young puppy and cause sudden death. The virus occasionally can also infect cats.

**Sneaky and Strong.** The virus is sneaky and strong, capable of surviving for months in the ground and on surfaces. It is typically transmitted through contact with infected feces. An unvaccinated puppy or dog may become infected by inhaling, ingesting or stepping on feces containing the canine parvovirus. The virus can also be tracked into the home on the soles of shoes and clothing.

No specific treatment exists for the virus; it consists largely of supportive care. The standard plan calls for hospitalizing and isolating the affected dog. Antibiotics may be given to battle secondary bacterial infections. Where necessary, patients receive intravenous or subcutaneous fluids to replace the electrolytes lost due to chronic diarrhea and to counter weight loss. Dogs may be fed a bland diet.

Prevention — in the form of vaccines — is by far the best defense to protect your dog and to avoid incurring veterinary expenses that could reach thousands of dollars. Dr. Parrish strongly recommends new puppies and shelter dogs receive a combination core vaccination known as DHPP. It contains preventive agents designed to protect against four serious conditions: canine distemper, hepatitis,

*(continued on bottom of page 4)*

## STOP THE VIRUS IN ITS TRACKS

Microscopic but extremely resilient, the canine parvovirus can live in soil up to one year. Stopping the virus in its tracks requires a specific cleaning regimen. "This is a hardy virus, but that does not mean it is indestructible," says virologist Colin Parrish, Ph.D., at Cornell. "With the right cleaning protocols, you can effectively remove the virus in your home."

If you have young puppies or a dog infected with the virus, Dr. Parrish recommends using bleach diluted with water at a ratio of 1:32 (one part bleach to 32 parts water). "Avoid using pure bleach because it can damage surfaces, even stainless steel," Dr. Parrish cautions. "Fresh, diluted bleach acts to decompose the chemicals in this virus. Be sure to clean the floors, pet beds and feeding bowls thoroughly. Apply the diluted bleach, allow it to dry and then wash it off with water."

Other household cleaners may help to wash the virus off surfaces, but the virus is unaffected by the cleaning agents in these common household cleaners, including ammonia.

Fortunately, people are not susceptible to these viruses, but they can transmit them on their hands or track them into their homes on their shoes. If you have any doubts or concerns about eradicating the virus, consult your dog's veterinarian for more guidance.



# Why Do They Howl?

*It's one of the enduring mysteries of canine vocalization*

Mythology is rich in art, literature and explanation of why wolves howl at the moon. One reason frequently cited is a Norse myth that a pair of wolves chases the moon to summon night and day. The more practical reasons: Wolves howl at the moon because they're nocturnal. They raise their heads skyward so the sound travels a greater distance — as much as six miles.

Which brings us to howling in dogs. It remains one of the enduring mysteries of canine vocalization. We understand barks, growls and whines — most of the time. But howling? The usual explanation is that it's a vestige of their wolf ancestors' behavior. Wolves howl to round up the pack after members scattered in hunting. They howl to ward off other animals. But who knows if random howling expresses sublime happiness or the end of a long day chasing voles?

"The wolf ancestors howled more — or at least barked a lot less — and the breeds that howl most today are wolf-like Northern breeds such as Huskies and Malamutes as well as those breeds we have selected (bred) for howling such as Beagles and Bloodhounds," says animal behaviorist Katherine A. Houpt, VMD, professor emeritus at the Cornell University College of Veterinary Medicine.

It's believed that dogs howl for a variety of reasons, Dr. Houpt says, quoting from "The Manual of Clinical Behavioral Medicine for Dogs and Cats" by Karen Overall, VMD, Ph.D., DACVB: "Social contact, group cohesion, long distance communication, individual or group identification and statement of presence."

Separation anxiety can also play a role. "The dogs who howl when separated from their owners are usually one of the breeds I mentioned who have retained or been selected for howling," Dr. Houpt says. "They are trying to elicit social contact."

**Singing With Sirens?** Sirens trigger howling in some dogs, but it's not known if it's painful to their sensitive ears or they're singing along. "It may be an aversive sound," Dr. Houpt says. "It would be interesting to see if dogs avoid the siren by moving away from it when it sounds. Most of the dogs I have heard who howl at sirens are confined or tethered."

A study of nine wolves in two packs at Austria's Wolf Science Center suggests howling is voluntary rather than reflexive. Researchers found that when a pack member leaves, wolves howl more if it's a wolf with a higher social rank who shares an important relationship with them.



**Wolves howl at the moon** because they're nocturnal. Hear wolves howling at Austria's Wolf Science Center at [www.cell.com/current-biology](http://www.cell.com/current-biology), using the keywords "wolves howling."

The study, conducted with the University of Veterinary Medicine in Vienna and published in the journal *Current Biology*, indicates relationship rather than emotion explains variations in howling, as shown by normal levels of the stress hormone cortisol in the wolves' saliva, the researchers say.

Skeptics question if a study of unrelated wolves in captivity is an accurate gauge of behavior in the wild or if it has any meaning for domestic dogs, but ABC News might be onto something in its report of the study. It asked, "Can animals with fewer cognitive powers voluntarily let out a howl because a good friend has gone away? The Austrian research showed they can." ❖

## MEDICINE

**PARVOVIRUS** ... (continued from page 3)  
parainfluenza and parvovirus. The vaccine contains modified live viruses that replicate but do not cause the diseases.

"The standard procedure calls for giving puppies three rounds of vaccination to protect them against these viruses," says Dr. Parrish. "Initially, maternal antibodies transferred during the first feeding protect them. The first vaccine is therefore generally given at around 6 to 8 weeks of age when the maternal antibodies are at a low level in the puppies."

The American Veterinary Medical Association recommends that dogs receive a booster one year later and then every three years. "There is no danger of giving these vaccines every year, but every three years is generally recommended," says Dr. Parrish.

Another option after the initial series of vaccinations is to request a titer test. It involves drawing a blood sample at the veterinary clinic and having it tested at a lab to determine antibody levels. The levels can determine how well

your dog is protected against the diseases. "The titer test is very predictable in showing the level of antibodies present," says Dr. Parrish.

His parting advice: "It is very important to follow the vaccine protocols to keep your puppy safe. You do not need to keep him isolated or indoors during the time required for the series of three inoculations, but be cautious about the dogs he is around. And wash your hands to help remove the virus, especially if you are at an animal shelter." ❖



## LASER... (continued from the cover)

dogs, even in senior-aged dogs. Older dogs with osteoarthritis in the hip, knee, lower back and elbow may also have organ decline that precludes the use of a slew of oral pain meds and joint supplements. This laser is a nice way to treat these geriatric dogs."

Dr. Looney clarifies that cold lasers are not the same as surgical lasers. When used correctly, there is no danger of cuts or burns to the skin. "Cold lasers don't coagulate or cut tissue, but they are able to positively affect all kinds of healing processes," she says. "Any tissue with pain or inflammation can be affected."

### Generating Energy.

Cold lasers use low-light wave lengths to generate energies within the cells, much as photosynthesis works in plants. In a typical treatment session, a dog is made comfortable on a blanket or towel in a quiet exam room. A veterinarian or technician applies a laser to a specific area to relieve pain. The frequency of treatment and the length of each treatment are determined case by case based on the area to be lasered and the depth necessary to penetrate.

Dr. Looney cites these advantages of using low-level lasers in treating medical conditions in dogs:

- ◆ Pain and inflammation are considerably reduced. During the procedure, a dog will feel warmth comparable to a heat lamp and afterward may feel looseness in the tissues.
- ◆ Lasers don't require pets to be sedated or the affected areas to be shaved.
- ◆ The lasers safely complement other



A dog will feel warmth from a low-level laser but isn't at risk of burns and cuts as may occur with surgical lasers.

pain-fighting treatments, such as medications, acupuncture and physical rehabilitation. Some dogs won't accept acupuncture needles for post-surgery therapy, but a noninvasive treatment like lasers seems to have a soothing effect on them. "It's sad to say that the average antibiotic or pain medication may not completely relieve the pain or aid in the healing," says Dr. Looney. "Even though an animal may be on a non-steroidal medication, the surgical site may still hurt, a sore may not readily heal and hair may not grow back. The lasers will add another means to healing."

- ◆ Treatments are affordable. Sessions generally cost \$20 to \$50 each and may total \$200 to \$400 for a pack-

age of treatments over six weeks. By comparison, the cost for hip or elbow replacement in a dog averages \$5,000. Osteoarthritis medications may run high on monthly basis. For pets with chronic conditions, such as osteoarthritis, Dr. Looney says after completing a full session, these pets usually need only shorter, follow-up sessions monthly or every other month. "The public has been spurring us on in the veterinary community to find options that are less expensive to treat their pets and laser therapy meets that request," she says.

- ◆ The sessions are short, lasting between three and 30 minutes, depending on the pet's condition and size.

One caveat, however: low-level laser therapy is not recommended for dogs with cancerous masses. The laser beam could increase blood flow to cancer cells.

Otherwise, there is no evidence that this form of laser therapy has produced harmful side effects, Dr. Looney says. In fact, as more owners hear about the therapy, they request it for their pets, prompting more training sessions at veterinary conferences. "It takes, on average, about a month or two for a veterinarian to feel comfortable using this form of laser therapy," she says. "There is a learning curve involved, but the more we use it, the more we learn about it and what it can treat."

Dr. Looney expects peer-reviewed studies to emerge as more veterinarians use low-laser therapy. "I wish I could say what the next step will be, but I do urge interested pet owners to speak to their veterinarians about this new option in managing pain and chronic inflammation." ♦



## HEART ... (continued from the cover)

heart problems who have not yet progressed to congestive heart failure.

"Pimobendan as a preventive would be a major development," Dr. Kornreich says. "But there is no demonstrated benefit right now, so we wouldn't usually prescribe it if the pet weren't in congestive heart failure." To increase their dogs' chances of survival, owners should be aware of the early warning signs and call the veterinarian if such symptoms appear. They include:

- ◆ Coughing
- ◆ Difficulty breathing
- ◆ Increased respiratory rate
- ◆ Lethargy/weakness
- ◆ Distended abdomen
- ◆ A bluish colored tongue
- ◆ Collapse

Mitral valve insufficiency (MVI) is the most common heart disease in dogs, and an estimated 75 to 80 percent of all canine cardiac cases are diagnosed with this condition. MVI is characterized by a leaking mitral valve, which is located between the left atrium and the left ventricle.

MVI is most prevalent in small breeds such as the Cavalier King Charles Spaniel, Miniature and Toy

Poodle, Dachshund, Lhasa Apso, Maltese, and the Chihuahua, Dr. Kornreich says. The increased incidence of MVI in these breeds suggests that MVI may



The Canine Heart

MARTY BEE

involve a genetically based, heritable mechanism. It is important to note, however, that any breed can be affected by MVI.

On the other hand, large breed dogs are susceptible to a condition called dilated cardiomyopathy. DCM is characterized by a thinning of the walls of the ventricles (which are the major muscular pumps) in the heart. Breeds that appear to be most affected include Doberman Pinschers and Great Danes. With DCM, the heart becomes enlarged and weakened, preventing it from pumping blood efficiently. (Please see sidebar.)

**The Many Causes.** Although MVI and DCM cause the vast majority of congestive heart failure in dogs, there are many other causes. These include rhythm irregularities, congenital heart defects, including those that cause narrowing of major blood vessels, and infectious processes such as heartworms.

It's common for dogs to arrive at the hospital in heart failure without a heart problem ever having been detected previously, Dr. Kornreich says. "Often we will have patients come in with coughing, exercise intolerance and/or an increased respiratory rate, and that's when we discover that they have a problem such as a leaking mitral valve."

## TWO CONDITIONS' EFFECT ON THE HEART

The two most common causes of congestive heart failure in dogs are mitral valve insufficiency and dilated cardiomyopathy. Although both can cause the heart to fail, the conditions are notably different.

The hearts of dogs, like all mammals, are comprised of four chambers. The upper left and right chambers are called the atria, and the lower left and right chambers are called the ventricles. Each of the chambers has an inlet and an exit valve to prevent backflow of blood. The heart

moves blood through the body by alternately contracting and relaxing, thereby pushing blood through each chamber of the heart. When either of those motions weakens, a dog is at risk for congestive heart failure.

With mitral valve insufficiency, when the heart contracts, the left ventricle is unable to sufficiently push the blood out to the body. Because of a thickened, irregular valve (the mitral valve between the left atrium and left ventricle), blood leaks back through into the left

atrium and can then back up into the lungs. This causes coughing and difficulty breathing.

In dilated cardiomyopathy, the walls of the heart become abnormally thin. As a result, the heart becomes enlarged and weakened, preventing it from pumping blood efficiently. As with mitral valve insufficiency, when the heart's left ventricle can't adequately pump blood to the body, the blood can back up into the lungs and ultimately lead to congestive heart failure.



At other times, veterinarians may suspect heart disease when they hear a murmur or irregular heartbeat during a routine checkup, prompting them to order additional tests. Veterinarians will listen closely to a dog's lungs and feel the abdomen for the presence of excess fluid. This fluid may accumulate because the heart can't move blood forward effectively, causing blood to back up in the cardiovascular system and resulting in leakage of fluid into the lungs and surrounding organs.

**Extensive Testing.** Depending on the findings of a physical examination, veterinarians may suggest additional blood and urine tests or a chest X-ray. Blood and urine tests can help identify other problems, such as impaired liver or kidney function, that might result from heart disease or that may be impacted by cardiac medications that may be prescribed. In addition, an electrocardiogram, which measures electrical activity in the heart, can help detect and evaluate abnormal rhythms.

The gold standard for identifying heart disease in pets, however, is echocardiography, which is an advanced method that uses sound waves to image the heart in an effort to identify structural and functional defects. "The only down side to echocardiography is that it might not be feasible for some owners because it is expensive," says Dr. Kornreich, who estimates that an echocardiogram can cost as much as \$500.

Dogs with heart disease, including those who survive congestive heart failure, will likely be on medication for life. No known drugs can repair a damaged heart, but they can enable pets to live comfortably and can extend the lives of dogs with heart disease. Dogs with congestive heart failure are likely to be prescribed diuretics, angiotensin-converting enzyme (ACE) inhibitors and/or pimobendan.

Diuretics rid the body of excess fluid by promoting urination. They help stop coughing and respiratory distress when fluid builds up in the lungs. The

most commonly used one is furosemide (Lasix). ACE inhibitors decrease the effort required by the heart to pump blood by relaxing and expanding blood vessels throughout the body, while also decreasing the fluid volume in the cardiovascular system. However, ACE inhibitors and diuretics can have negative effects on the kidneys of patients, so veterinarians must monitor a dog's kidney function regularly and adjust doses as needed when these drugs are prescribed.

Meanwhile, pimobendan, especially when combined with diuretics and ACE inhibitors, has rapidly become an accepted treatment option for CHF treatment in dogs since the drug's FDA approval in 2007. Like ACE inhibitors, one of the effects of pimobendan is that it opens the blood vessels and eases resistance in the circulatory system. A number of studies have demonstrated its effectiveness at improving quality of life and survival in dogs with CHF resulting from either MVI or DCM.

Pimobendan dosage is based on a pet's weight. Treatment for a large dog can cost up to several hundred dollars a month. Treatment for smaller dogs might be around \$75 a month.

**Standard of Care.** "This is an evolving area, but at this point, pimobendan has become pretty much a component of the accepted standard of care for dogs," Dr. Kornreich says. "However, if owners can't afford pimobendan, there are other options that are significantly cheaper, although they might not be as effective as a protocol that includes



**Echocardiography, a test using sound waves** to create moving pictures of the heart, is among the tools veterinarians such as cardiologist Bruce G. Kornreich, DVM, Ph.D., use to diagnose heart disease.

pimobendan." These options most commonly include combinations of diuretics and ACE inhibitors.

All dogs on therapy for CHF should be checked at least every six months by their veterinarian and in many cases more frequently than this. Monitoring can include blood tests, chest X-rays or other screenings. It's important for owners to monitor their dogs at home for changes in respiratory rate/effort and energy levels.

The prognosis for dogs who experience congestive heart failure varies depending on many factors, including the underlying disease and severity of symptoms.

"The most important thing is to take your dogs to the veterinarian for yearly checkups," Dr. Kornreich says. "In many cases, if we identify a heart problem early, we can significantly improve the pet's quality of life in the long term." ♦





**Katherine A. Houpt, VMD, Ph.D.,** diplomate of the American College of Veterinary Behaviorists and emeritus professor at the Cornell University College of Veterinary Medicine, provided the answer on this page.

**Please Share Your Questions**  
We welcome questions of general interest on health, medicine and behavior. We regret however, that we cannot comment on specific products and prior diagnoses. Please send correspondence to:

DogWatch Editor  
800 Connecticut Ave.  
Norwalk, CT 06854  
or email [dogwatcheditor@cornell.edu](mailto:dogwatcheditor@cornell.edu).

## COMING UP ...

### HOW DOGS SEE



### REVERSE SNEEZING



### CHANGES IN COAT COLOR



### LUPUS

## A Rescue Has Such a Fear of Humans She Avoids Touch

**Q** I recently accepted a foster dog — a 1-year-old female Terrier mix who is terrified of humans. No trainers in my area are willing to take her on because of this phobia. Marli was found half starved with open sores and worms. She weighed 10 pounds and had been kept in a cat cage, and would have been euthanized. Friends of mine who run a rescue took her from the shelter, where she had been taken, took her to the vet and called me.

I have three other rescues, and they have accepted her. She has put on weight and is reasonably housetrained at this point, but she's made little progress in accepting humans. The most she will do is touch my finger. I've tried the usual touch-treat and giving her space to no avail.

My intent is to have her accept humans, hoping at some point she would be adoptable. I would be grateful for any suggestions you might have to help this pup who must have been through some terrible experiences.

**A** You are very kind to take on such a difficult case. You have been doing just the right thing — touch and treat. Every time you touch the dog, you give her a treat so she associates human touch with something good, in this case food. Even though that is as far as you have gotten in the three months you have had her, that is still progress.

First, I think you should experiment with her behavior with and without each of your other dogs. She may be more confident with another dog present. We know that dogs can learn from one another, but the pupil will learn only from a dog socially dominant to her. I bet that applies to humans, too, and is the reason the good sisters made me stand up and say "Good morning" when they walked into the classroom — just to be sure I knew who was dominant, even though I was taller than the teacher. I learned pretty well, too, although all that Shakespeare has not been of too much use, but I digress.

*If Marli is more eager to take the treat when another dog is there, then you can try touching the other dog on the chest and giving him a treat several times and then see if she will accept that. If she will, you*

*can, after two dozen touches, proceed to scratching her chest. That is the place most dogs like to have scratched. Avoid patting her on the head. You can tell what dogs don't like because, if they don't run away, they will lick their lips, show the whites of their eyes and shake their coats as if they were wet.*

*This process would be sped up if Marli were less fearful. Your veterinarian can prescribe a drug that both stimulates her appetite and also makes her less fearful. You can hide the tablet in a Pill Pocket or a piece of cheese. Most of the drugs that do that are related to Valium. They act on nerve cells that inhibit other nerves and the drug works by inhibiting the inhibition. Dogs can have paradoxical reactions so be sure to let your veterinarian know if she becomes agitated.*

*There is an over-the-counter preparation called Anxitane which contains theanine — an ingredient in green tea. Surprisingly, it has been shown to help with phobias in dogs.*

*You can also try aromatherapy. Lactating bitches (nursing mothers) produce a substance in the skin around the nipples that probably acts to attract the puppies to the right place to suckle. That substance has been synthesized and is marketed as Dog Appeasing Pheromone (DAP), Adaptil or Comfort Zone. It is available as a diffuser and in a collar. You should probably use the diffuser unless your home is too open-plan, in which case the odor would diffuse too widely to be effective. Marli probably would not appreciate a collar being applied.*

*Best of luck to you both. ♦*



**Marli, a Terrier mix,** had been kept in a cat cage and weighed only 10 pounds.

#### CORRESPONDENCE

The Editor  
DogWatch  
800 Connecticut Ave.  
Norwalk, CT 06854  
[dogwatcheditor@cornell.edu](mailto:dogwatcheditor@cornell.edu)

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