VOLUME 11
NUMBER 5

The Whole Dog Journal™

A monthly guide to natural dog care and training

May 2008 $5.95

FEATURES

ALSO IN THIS ISSUE

Gut Check

The pet food industry, a year after the recalls.

BY NANCY KERNS

A year ago, I was invited to speak about "super premium pet foods" at Petfood Forum, an annual symposium presented by Petfood Industry, a trade and marketing organization. Exhibitors at the event include pet food ingredient suppliers, manufacturers, laboratories, and packaging suppliers. Attendees include pet food company employees and executives. And there I was, an industry critic, invited to talk about how WDJ identified a top-quality dog food.

The timing was odd, because the pet food recalls were still being discussed in the nightly news, and the list of affected products was still expanding daily. The overall mood at the event, unlike industry trade shows I've attended in the past, was somber. I heard gossip in the elevators at the event hotel each morning about products whose representatives were present at the event. "Oh my," people would say to each other. "I just talked to those guys yesterday. I wonder if they will be here today." There was a definite sense that almost any company present at the event could be implicated in the disaster at any time. "It could happen to any one of us," I heard again and again.

Adding to the strange atmosphere was the fact that the organizers had hired extra security for the event, and closer attention was being paid to event identification badges than at any trade show I've ever been to. An insert in the registration package that participants received at the show discussed the possibility that members of the press could attempt to infiltrate the event; it even suggested steps that attendees could take if approached by a member of the media or "if someone is disruptive or is bothering you."

Given the circumstances, I was impressed that the organizers did not find a reason to uninvite me to the event! I was glad, because as it turned out, I had a number of intensely educational conversations with pet food industry representatives who seemed to have been pressed by all the tumult into self-reflection and openness – words that don't usually get applied to executives in that industry.

The year, organizers have expanded the event and added an extra day, "Petfood Focus on Safety," to address steps that are being taken industry-wide to prevent further pet food disasters. I'm very eager to learn whether there have been significant changes in the industry's standard operating procedure – and whether the movers and shakers of the industry remain shaken by the recalls of 2007 or have returned to business as usual. I think this will be an ideal time to determine which companies have really moved their quality control procedures forward, and which ones just pay lip service to quality assurance.

As always, I'll be looking for information that consumers can use to identify safe, top-quality pet foods. Given that our June issue will contain a review of frozen meat-based pet foods, I'll be doing some special investigating to determine what the makers of premium foods do to secure, test, and process their protein sources.

NK

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.

The Whole Dog Journal™

EDITOR-IN-CHIEF – Nancy Kerns
TRAINING EDITOR – Pat Miller
PUBLISHER – Timothy H. Cole
CIRCULATION DIRECTOR – Greg King

EDITORIAL OFFICE
E-MAIL: WholeDogJ@aol.com
MAIL: PO Box 1349, Oroville, CA 95965
PACKAGES: 1655 Robinson Street, Oroville, CA 95965

SUBSCRIPTION SERVICES
PHONE: (800) 829-9165
INTERNET: whole-dog-journal.com/cs
U.S. MAIL: PO Box 420235, Palm Coast, FL 32142-0235
CANADA: Box 7820 STN Main, London, Ontario N5Y 5W1

BACK ISSUES, WEBSITE INQUIRIES
PHONE: (800) 424-7887
E-MAIL: customer_service@belvoir.com
INTERNET: whole-dog-journal.com
U.S. MAIL: PO Box 5656, Norwalk, CT 06856-5656

REPRINTS
For price quote, contact Mona Kornfeld at (203) 857-3143
Minimum order 1,000

NEWSSTAND
Laura McMann, (203) 857-3100

THE WHOLE DOG JOURNAL (ISSN #1097-5322) is published monthly by Belvoir Media Group, LLC, 800 Connecticut Avenue, Norwalk, CT 06854-1631. Robert Englander, Chairman and CEO; Timothy H. Cole, Executive Vice President, Editorial Director; Philip L. Penny, Chief Operating Officer; Greg King, Executive Vice President, Marketing Director; Marvin Cweibel, Senior Vice President, Marketing Operations; Ron Goldberg, Chief Financial Officer; Tom Canfield, Vice President, Circulation; Michael N. Pollet, Senior Vice President, General Counsel. Periodicals postage paid at Norwalk, CT and at additional mailing offices. Printed in U.S.A. Revenue Canada GST Account #128044658. Canada Publishing Agreement Number #40016479.

Subscriptions: $39 annually (12 issues). Bulk rate subscriptions for organizations and educational institutions available upon request.

Postmaster: Please send address changes to THE WHOLE DOG JOURNAL, PO Box 420234, Palm Coast, FL 32142

THE WHOLE DOG JOURNAL, PO Box 39, Norwich, ON, N0J 1PO

Tale of the Lost Balance

"Vestibular disease" can affect any dog; old dogs are more vulnerable.

BY KATHRYN SOCIE

Aside from some stiffness and a little arthritis, Emma, a 13-year-old chocolate Labrador Retriever, had always been a happy, incredibly healthy dog, welcoming each new day with delight and bounding enthusiasm. One evening, though, things changed suddenly and scarily.

"I was at a friend's house when, after laying quietly in the corner, Emma stood up and came into the room stumbling. She was staggering, panting, and totally confused," says her owner, Ici Schemm. Something was very wrong, and then almost as suddenly, it was over.

After a visit to her veterinarian, Schemm learned that Emma suffered a bout of vestibular syndrome, a common condition in geriatric dogs stemming from inflammation in the nerves connecting the inner ear to the cerebellum, the control center for balance and spatial orientation. The duration of these incidents varies; so does the wide array of symptoms, with some dogs having relapses while others do not.

Don't panic if your older dog suddenly loses her balance, and has trouble standing or walking straight. Vestibular disease in older dogs is most often "idiopathic" – of unknown cause – and commonly resolves without any treatment at all.

Schemm describes the sudden onset as "very scary for Emma and me, too." Emma, fortunately, has not had another episode or shown any residual signs; she could be a poster dog for the most transient and benign form of vestibular disease. Other cases, however, can be much more serious.

The vestibular system

A dog's balance is provided by a network of interactive anatomical structures that permit the dog to perceive his orientation in space and inform his extremities as to how to move appropriately. The vestibular apparatus encompasses the labyrinth of the inner ear along with the cochlea of the auditory system. Hair cells deep inside the ear function as sensors, detecting the position of the dog's head. They also transmit this information to the balance system's control center, the cerebellum and brain stem, which sends messages to the muscles in the body to maintain the dog's posture and equilibrium.

Problems in the vestibular system typically reveal themselves suddenly, as the dog abruptly experiences problems with his balance. Emma's staggering was a classic sign of vestibular dysfunction, but dogs may display varying degrees of loss of equilibrium and balance. Other signs include tilting of the head, uncoordinated muscle movements on one side of the body, falling, rolling, deviation of one eye in a given head position, circling, disorientation, and nystagmus (an involuntary eye

What you can do . . .

- If your dog displays signs of vestibular dysfunction, remain calm. If you panic, you may increase your dog's fearfulness at his loss of balance.
- Consult your veterinarian for a full examination and to determine whether your dog is suffering from peripheral or central vestibular disease.
- Seek out a veterinarian who uses acupuncture, which has been shown to effectively help dogs cope with symptoms of vestibular dysfunction, especially nausea.

If your dog is suffering from any type of vestibular disease, he'll need your patience and support. He may grow depressed or peevish as he experiences difficulties in navigating without his usual equilibrium. As much as is possible, try to protect him from being bumped or picked on by his packmates or friends.

movement where the eyes rapidly move back and forth or rotate, commonly described as "flickering"). Nausea (including vomiting) may occur, especially within the first day of onset of other symptoms, and dogs frequently decline to eat for the first day or more.

As a rule, vestibular disturbance is asymmetrical; any head tilt, falling, or circling usually occurs toward only one side. If the condition is caused by a brain lesion (abnormal tissue), the direction of tilt or circling indicates on which side of the brain the lesion is located. The same is true for nystagmus, which tends to occur in a slow phase and a fast phase, with the slower movements indicating the side where the neurologic lesion is likely to be.

Types of vestibular disease

There are three broad types of vestibular disease in the dog: idiopathic vestibular disease, inner ear disease, and central vestibular disease. The first two types are also referred to as "peripheral vestibular disease." This means they involve either the receptor organs in the inner ear or the vestibular nerve. "Central vestibular disease" occurs when the brainstem or cerebellum is affected; this is the most serious type of vestibular disease.

"Idiopathic" means occurring without a known cause, and "idiopathic vestibular disease" is the most common type to be diagnosed. If the disease occurs in an older dog, his vet is likely to diagnose "old dog vestibular disease" – which suggests to many owners that old age is the cause. However, in this case, old age refers only to the patient, *not* the cause of disease.

In most cases of idiopathic vestibular disease, the dog's symptoms have a sudden onset and resolve over a few days or weeks. Some dogs, however, retain a head tilt for years, although they are able to adjust and balance themselves.

Inner ear vestibular disease tends to develop more slowly; while the dogs exhibit the same signs that are common to idiopathic vestibular disease (head tilt, nystagmus, circling, imbalance), these are often less severe and may be only gradually perceived by the dog's owner.

Bacterial infections are the most common cause of inner ear vestibular disease. Appropriate antibiotic therapy resolves most of these cases; sometimes sulfa drugs are added to the treatment regimen for their synergistic activity with antibiotics.

The prognosis is less favorable in cases where the bacteria has infected the inner ear bones or if the infection is fungal. Treatment may have to be continued for as many as six to eight weeks to defeat these more stubborn invaders.

The third type of vestibular disease is the least common; that's fortunate, because it also presents the worst odds of recovery. Central vestibular disease occurs when the brainstem or cerebellum is affected.

A number of inflammatory diseases, infectious diseases, and neoplasia (abnormal or uncontrolled growth of cells) can all cause central vestibular disease. Canine distemper virus, granulomatous meningoencephalitis, toxoplasmosis, neosporidiosis, aspergillosis, cryptococcosis, steroid-responsive meningoencephalitis, Lyme's disease, Rocky Mountain spotted fever, and ehrlichiosis are the most common inflammatory and infectious diseases known to cause central vestibular disease in dogs. Treatment and prognosis for the vestibular disturbances depend wholly on the quick diagnosis and successful treatment of the disease or infection.

Diagnosing vestibular disease

A full neurologic examination is the starting point for diagnosis, followed by an otoscopic exam and blood tests.

Not all veterinarians are knowledgeable or experienced in performing full neurologic exams; ask your vet if she is confident in this area or would rather refer you to a more experienced colleague or specialist. A neurologic exam should include, at a minimum, observation of the dog's movement (in several gaits) and posture at rest; palpation for abnormal muscle tone and mass; and tests of the dog's reflexes and reactions to visual and minimally painful stimuli (such as pin pricks or pinches).

An otoscope can be used to reveal some problems within the ear, but special imaging (with x-rays or CAT scan) of the middle ear bones may also be in order. When a complete exam points toward a central vestibular problem, says Karen Kline, DVM, an associate professor at

Don't panic or get upset if she falls down or needs help getting up. Try to stay reassuring and calm, provide gentle assistance, and brightly encourage her to keep trying!

Many dogs who have suffered a case of idiopathic vestibular disease recover completely, but are left with a permanent head tilt. Fortunately, this generally does not preclude them from enjoying their normal activities; it just looks funny.

Iowa State University's College of Veterinary Medicine in Ames, Iowa, an MRI of the tympanic bulla (one of the inner ear bones) is the "gold standard" for definitive assessment.

In addition to a complete blood count (CBC) and blood chemistry panel, blood tests that check the level of various thyroid hormones, including T3 and T4, are often performed to rule out hypothyroidism. A common problem in dogs, hypothyroidism occurs when not enough thyroid hormone is produced, causing a wide variety of symptoms, often including weight gain, hair loss, skin problems, and, in some instances, vestibular dysfunction.

Treatment options

Since central vestibular diseases involve the brain stem and the cerebellum, "they are often a sign of something more ominous such as an inflammatory disease or a tumor," said Dr. Kline. "A central vestibular problem carries with it a more guarded prognosis, since often there is irreparable damage." The details of treatments for a central vestibular disease are best explored with your veterinarian.

Once diagnosed, most inner ear vestibular diseases respond well to treatment. In cases where hypothyroidism is detected, "a large proportion of patients will respond very well to medication," says Dr. Kline, and antibiotics are often used successfully to treat bacterial infections of the inner ear. Improvement is typically evident within 72 hours, with most dogs becoming completely normal in a week or two, although, again, in some instances a head tilt will persist.

Dr. Kline has found acupuncture to be highly effective for helping dogs with vestibular disease. Acupuncture seems especially helpful in relieving the patient's nausea.

Many owners, like Ici Schemm, worry the most when their senior dogs experience a sudden onset of dramatic symptoms, but, says Dr. Kline, this is actually one of the better scenarios for vestibular problems. "An old dog has a very good prognosis. Not all dogs have a terrible disease producing clinical signs, so try not to overprognosticate at first," she says. "Don't panic; just make an appointment for your dog to see her veterinarian as soon as possible." 🐾

Kathryn Socie is a freelance writer from Missoula, Montana. When she is not writing, she is out on the trail hiking or running with her dogs.

Keeping Four on the Floor

Teach your dog to greet everyone calmly and politely.

BY PAT MILLER

Recently, I switched the group class format at my Peaceable Paws Training Center to "Levels." Instead of a progressive curriculum with new exercises introduced each week, dogs and humans learn and practice a small, fixed set of behaviors until they're ready to progress to the next level, where they begin working on new skills. One of the Level 1 skills is "polite greeting." Because it can be a challenging behavior to teach, it's often the one that keeps a student in Level 1 the longest. Because it's an important good manners social behavior, it's also a Level 2 and Level 3 skill.

The polite-greeting skill difficulty increases with each level. For Level 1, the dog must sit for greetings and not jump up in at least 8 out of 10 times as someone approaches. For Level 2, the dog sits for greetings, and the greeter pets the dog on his head or scratches under his chin without the dog jumping up at least 8 out of 10 times. In order to complete Level 3, the dog must be able to walk up to another dog and human, with dogs walking on the outside, further away from each other, human on the inside, closer together, as they approach. Both dogs stop and sit while handlers stop, greet each other, shake hands, and walk on. (This is one of the 10 tests a dog must pass in order to achieve a Canine Good Citizen certificate from the American Kennel Club.)

Teaching this rambunctious pup to greet people calmly is a priority for this couple. If your dog is strong and you can't hold the leash firmly enough to prevent her from being reinforced for jumping, it may help to sit or to use a tether for this exercise. To prevent injury, the leash should be attached to her collar, not a headcollar.

What you can do . . .

- Commit to teaching your dog polite greeting behavior so he'll be a welcome canine citizen wherever you want to take him.
- Enlist the help of friends and family to practice polite greetings in different locations so your dog's good manners behavior generalizes to all kinds of people in all kinds of places.
- Exercise, exercise, exercise. A tired dog is far less likely to jump up than one who is bursting with energy.

So how does one go about teaching this desirable good manners behavior? It should come as no surprise to regular readers that the answer involves reinforcing the behavior you want, and making sure the behavior you *don't* want doesn't get reinforced.

On-leash, with strangers

Start with your dog on leash next to you. Have your helper approach and stop just out of leash-range, holding a tasty treat high against her chest. Hold the leash and stand still, waiting. Your dog will eventually get frustrated that he can't jump on the helper, and he'll sit to figure it out. The instant he sits, have your helper click her clicker (or use a verbal marker such as the word "Yes!") and pop the treat in your dog's mouth. This is called *reinforcing an incompatible behavior.* Your dog can't sit and jump up at the same time. If he consistently gets reinforced for sitting and doesn't get reinforced for jumping up, he'll choose to offer the behavior that gets rewarded.

When your dog is sitting, relax the tension a tiny bit so he's holding the sit himself, not being restrained by the leash. Only give him a little bit of slack, so

you can prevent him from contacting the approaching person if he decides to revert to the jumping-up behavior that (probably) has a long history of reinforcement.

Keep repeating this exercise. It can take as few as a half-dozen repetitions for your dog to start sitting as the helper approaches. At that point, if he tries to leap up to get the treat when it is offered, have your helper whisk it out of reach and say "Oops!" in a cheerful voice, and wait, just out of jumping range. When your dog sits again, your helper clicks (or says "Yes!") and offers the treat again. Your dog will soon learn to sit tight in order to get the treat instead of jumping for it, because jumping makes the treat go away.

Tethers are a valuable management tool. We like tethers made of plastic-coated wire cable, which is strong and chew-proof. Practice polite greetings with your dog tethered, to prevent him from jumping up (and practicing impolite greetings!).

In a variation of this exercise, *you* can click and pop the treat in his mouth when he sits. If you do it this way he'll start looking at you and sitting when a person approaches, instead of looking at the person approaching.

Repeat this exercise with as many different humans as possible: big ones, little ones, kids, seniors, dads carrying babies, moms carrying briefcases, and so on. When you're out walking and a stranger admires your dog and asks if she can pet him, hand her a treat and have her do the exercise. You'll be amazed by how quickly your dog starts sitting as he sees people approach him.

NOTE: In these exercises, it's important that you *wait* for your dog to sit of his own volition; do not *ask* him to sit. You want him to *choose* to sit without being asked, and the way to achieve that is to simply ignore the behavior you don't want and reward the behavior you do want. If you *ask* him to sit, he may learn that he should sit for people when you (or they) ask him to, but he's allowed to jump up if you don't ask.

On-leash, alone

Okay, so you don't always have a friendly helper handy. You can still practice this exercise on your own, by attaching your dog's leash to a solid object. Better yet, use a *tether:* a plastic-coated cable with snaps at both ends. One end can be secured around a heavy piece of furniture, or attached to a strategically placed eye-bolt. Or you can attach the tether to an eye-bolt screwed into a block of wood, slip the cable under a door, and close the door; the door holds the tether in place. (Good quality tethers can be purchased from BADDogs Inc., 866-588-2364 or pettethers.com.)

Walk about 30 feet away, then turn around and start walking back to your dog. As long as he is sitting, keep approaching. The instant he jumps up, stop. When he sits, move forward again. In this exercise, the reward for sitting is simply that you come closer. You can give your dog a food treat when you reach him and he's still sitting, but you don't have to toss him one every time he sits.

A Pleasant Visit to a No-Jumping Zone

I recently had the eye-misting good fortune of making an all-too-brief nostalgic visit to my old stomping grounds (and birthplace of Peaceable Paws) in California's Monterey and Marin Counties. A highlight of our trip was when my husband and I visited Carmel Beach, where dogs are allowed to run off-leash. We were reminded, and again amazed by, how beautifully most dogs can get along when they're allowed to interact regularly and naturally with others of their own species.

What also impressed us, and what I hadn't remembered from past visits to this very popular dog heaven, was that *not one dog* jumped up on us. To a dog, they were friendly, checked us out, looked for treats or balls, accepted a scratch or two under the chin, and then headed off to play in the surf with their four-legged beach pals. Not one sandy paw touched our jeans or sweaters.

We also saw no prong or shock collars, which led me to believe the dogs weren't being coerced into being polite. Rather, I think, meeting people at the beach (and dog-savvy people at that, who probably know not to reinforce jumping up) is such a ho-hum everyday occurrence for them that there's nothing to get excited about. In a perfect world, this would be true everywhere!

Prevent your dog from touching the person he wants to jump on; the physical contact itself is reinforcing. In this photo, the handler should have shortened the leash or the "greeter" should have stepped back out of range.

If you want to experiment with variations on this exercise, try turning your back on him or actually backing up a step when he gets up, and see if that convinces him to sit even faster. The idea here is that not only does the reward (you) *stop* when the dog gets up, the reward (you, your attention, and treats) actually goes farther away!

Off-leash practice

You come home from work, walk in the front door, and see your 80-pound dog flying over the back of the sofa. You know a brutal greeting is coming. There's no leash to restrain him. What should you do?

Turn your back on him! Watch him out of the corner of your eye, and continue to turn away and step away as he tries to jump on you.

Again, in a surprisingly short period of time your dog will sit in frustration to figure out why he's not getting his ration of attention. The instant he sits, say "Yes!" in a happy voice, feed him a treat, and pet him if he enjoys being petted (not all dogs do!). Yes, you have to have a treat with you when you walk in the door. I suggest keeping a jar of tasty biscuits on the front stoop. Or keep cookies in your pockets all the time, like I do.

If he starts to jump up again after he eats the treat, turn and step away. Keep repeating this until he realizes that "Sit!" gets the attention, not "Jump!"

You want to be sure to give the click or "Yes!" marker when he is sitting. Click (Yes!) means, "Whatever behavior you are doing at the instant you hear this word has earned you a treat reward." Because all living things repeat behaviors that are rewarding to them, using the click and reward for the sit will increase the likelihood that he sits when he greets people. If he's consistently rewarded for sitting, and *never* rewarded for jumping up, he'll quickly learn that jumping up is not a behavior worth offering.

When you do this exercise, be sure you don't teach your dog a "behavior chain" – a series of behaviors that get connected or "chained" together because the dog thinks the reward is dependent on the performance of all the behaviors, not just the last one.

Sometimes we use behavior chains to our benefit. A dog can learn to run an entire obstacle course for a reward at the very end without any direction from the owner because the obstacles have been chained in a particular order. In the case of jumping up, if you're not careful, your dog might learn the short behavior chain of "jump up, sit, reward."

The way to avoid this is to look for, and frequently reward, the times when your dog sits *without* jumping up first. We have a tendency to ignore our dogs when they are being good, and pay attention to them when they are doing inappropriate behaviors. If you remember to look for opportunities to reward the good behavior of sitting, your dog won't think he has to jump up to get your attention in order to get a reward for sitting.

Incompatible behavior

This works if your dog responds really well to the verbal cue for sit or down. When your dog approaches you, ask for a sit or a down before he has a chance to jump up, and reward that behavior with a click and a treat. With enough repetitions, he'll learn that the sit or down gets rewarded, and he may start to offer them voluntarily. Be careful; as noted above, he may learn to sit if you ask, but jump up if you don't.

Caution: This approach works only if your dog is *very* responsive to the cue to sit or lie down and does it the instant you ask. If you have to repeat the cue several times with your dog jumping up on you all the while, you are paying attention to him (rewarding him) for jumping on you, thereby rewarding that behavior and teaching him to ignore your verbal cues for sit or down at the same time. Oops!

Putting the jump on cue

I recommend this *only* when someone in the family finds a dog's antics endearing and wants to be able to invite him to jump up. In this case, you teach your dog to jump up on a particular cue such as the word "Hugs!" (*not* patting your chest, as too many well-meaning strangers and children will likely invite the behavior), and teach him that the *only* time he can jump up is when someone gives the cue.

This means that he gets rewarded only when he has been invited to jump up, and never gets rewarded for jumping up without an invitation. My now-long-gone terrier-mix, Josie, was allowed to jump up if I got on my knees, patted my shoulders and said "Hugs!" Not many well-meaning strangers and children will do that!

Time out on a tether

Put a comfortable rug or bed at each tether location. When your dog is out of control and jumping on the company (or you!), he gets a cheerful, "Oops, time out!" and a few minutes on his tether. If you know in advance that he's going to maul Aunt Maude the instant she walks in the door, clip him to the tether *before* you open the

door, and release him once he settles down. (Have Aunt Maude practice some polite greeting approaches while your dog is tethered, if she's able and willing.) If you release your dog and he revs up again, just do another "Oops, time out!" Remember, despite your frustration over his behavior, this is a cheerful interlude, not a forceful punishment. He'll learn to control his own behavior in order to avoid time-outs, and you won't need to yell at him.

Jumping up is a normal, natural dog behavior. Like so many other normal dog behaviors that are unacceptable in human society, it is up to you to communicate to your dog that jumping up isn't rewarded. Help him become a more welcome member of your human pack by rewarding an acceptable behavior that can take the place of jumping. If you put your mind to it, it may be easier than you think! 🐾

Pat Miller, CPDT, is WDJ's Training Editor. Miller lives in Hagerstown, Maryland, site of her Peaceable Paws training center. Pat is also author of The Power of Positive Dog Training*;* Positive Perspectives: Love Your Dog, Train Your Dog; *and* Positive Perspectives II: Know Your Dog, Train Your Dog. *See "Resources," page 24.*

Another Way to Stop Jumping: Body Blocking

Dr. Patricia McConnell, noted animal behaviorist and author of *The Other End of the Leash* and *For the Love of a Dog,* describes a process that she calls "body blocking," which simply means taking up the space to prevent your dog from doing so.

Next time you are walking in the door and your leaping Lab makes a running charge for you, clasp your hands against your stomach and lean slightly forward, blocking the space with your body. It also helps to look away, rather than make eye contact. Remember that you're not trying to bump into your dog (although he may bump into you), but are simply occupying the space he was hoping to occupy.

You may have to do several repetitions of this, especially if your dog has had lots of practice leaping, but it can be very effective if you are consistent. He can learn to wait for permission to jump up, whether you are standing or sitting, with just the tiniest of barely perceptible body movements on your part. Wouldn't that be nice?

This young lady is using a "body block" to discourage the Boxer from jumping up. The maneuver would be more effective if she stepped forward a moment sooner, when the Boxer was just beginning his jump.

This is not a "real" body block; in actuality, this woman had decided to step forward a moment before the puppy decided to jump up to steal a treat. But you can see how her forward movement caused him to hesitate and cancel his jump.

Shock Waves for Arthritis

A new form of therapy offers pain relief using sound waves.

BY MARY STRAUS

Last June, I received this note from Debbie Efron, of Manalapan, New Jersey: "Do you know anything about shock wave therapy for dogs with arthritis? I am considering this treatment for Taylor, my almost 13-year-old Labrador Retriever, who has arthritis in her hips, spinal column, and right hock, and has just torn a ligament in her right knee. It was recommended by my vet, Dr. Charles Schenck, who is a past president of the American Holistic Veterinary Medical Association."

Shock wave therapy? Is that like what they did to the Bride of Frankenstein? I had never heard of such a thing, and I was skeptical, to say the least, thinking it might be some new gimmick. But I was surprised and immensely intrigued by what I found.

Shock waves have nothing to do with electric shocks. They are actually high-energy focused sound waves generated outside the body that can be focused at a specific site within the body. In human medicine, extracorporeal shock wave therapy (ESWT) been used for over 25 years to break up kidney stones and gallstones (lithotripsy) without the need for invasive surgery ("extracorporeal" means "outside the body").

In 1992, doctors began using shock waves to treat a range of orthopedic conditions, including nonunion of bone fractures; plantar fasciitis (a cause of heel pain); tennis elbow and other forms of tendonitis; rotator cuff injuries; femoral head necrosis; and joint pain. New research is being done on the use of shock wave therapy to speed healing of wounds and burns, and other applications are under investigation.

Veterinary technician Tami Packham, at the Toronto Equine Hospital in Ontario, uses shock wave therapy on a client's dog. Because the shock waves can be painful, the procedure is generally performed under anesthesia or heavy sedation.

What you can do . . .

- Contact a veterinarian who offers shock wave therapy to see if your dog is a candidate for this form of treatment.
- Have a full physical exam done on your dog, including blood tests and x-rays, before the treatment.
- Continue to give nutraceuticals, such as glucosamine, to help your dog's joints.
- Remember that ESWT can help with pain and inflammation, but will not cure arthritis.

History of veterinary use

By the late 1990s, veterinarians began exploring the use of ESWT on horses to speed healing of broken bones (including those that failed to heal normally), treat tendon and ligament injuries, and ease the pain of arthritis.

The use of ESWT for horses has been evaluated at a number of veterinary schools, including Iowa State University, the University of Tennessee, Purdue University, the University of Wisconsin, Colorado State University, and the University of California at Davis. It has also been studied extensively in Europe, where it originated. Clinical trials demonstrate that ESWT is effective in treating

musculoskeletal disorders that include bone spavin, stress fractures, navicular syndrome, bowed tendon, bucked shin, arthritic joints, and more.

Experimental treatment of dogs using ESWT began in 1999, and several of the schools listed above have been actively involved in this research. Good results have been reported for treatment of various orthopedic conditions in dogs, but the number of controlled clinical studies is still very limited. Conditions likely to benefit from this treatment include:

- **Osteoarthritis** of the shoulder, hip, back, elbow, knee, wrist, and ankle
- **Hip dysplasia**
- **Chronic back pain** – relief of muscle pain due to spondylosis deformans, chronic intravertebral disk disease, and lumbosacral instability
- **Osteochondrosis lesions** (OCD)
- **Sesamoiditis** – inflammation caused by degeneration of small knuckle bones in the foot that can cause persistent lameness, particularly in racing Greyhounds and Rottweilers
- **Tendon and ligament injuries**
- **Tendonitis**
- **Fractures** (nonunion or delayed-healing)
- **Lick granulomas**
- **Cruciate ligament injury** – can speed healing after surgery, and may also assist dogs with partial tears to improve without the need for surgery

Treatment can be used alone or in combination with other therapies. Both young, athletic dogs and geriatric dogs can benefit. One manufacturer is promoting ESWT for four weeks prior to casting on toy dogs with broken legs when it is not possible to use screws.

Most studies show significant improvement in a majority of animals treated, but this treatment is still in the experimental stage, and results are not always consistent. As use of ESWT becomes more widespread, it is likely that overall results will improve as more is learned about how this methodology is best applied and procedure protocols are refined.

Small animal practitioners interviewed in 2003 reported that approximately 70 percent of their patients demonstrated a remarkable response to treatment. Another 15 percent exhibited improvement that was not as significant as the first group. Some of these may improve further with a second treatment. About 15 percent show no improvement. Shoulders, backs, and hips seemed to respond best to ESWT, while treatment of knee injuries had the least response.

According to SanuWave, makers of the VersaTron shock wave devices for horses and small animals, most cases demonstrate very significant improvement within a week. A second shock wave treatment two to three weeks later often improves the results further.

Taylor's first treatment

I passed along my findings to Efron, and told her that if Taylor were my dog, I would definitely proceed with the therapy – in fact, I wanted to try it with my dog Piglet, who has severe degenerative joint disease in both elbows, but I was having difficulty finding a practitioner in my area.

Dr. Schenck felt that ESWT would benefit Taylor's hips and hock, and might possibly help her knee as well. He did not recommend it for the spine because he felt it works better where there is more soft tissue. He continued treating the spine with acupuncture instead. Dr. Schenck recommended a total of two sessions, three to four weeks apart, and told Efron to expect gradual improvement over six to eight weeks, with some regression possible in between treatments. Ultimately, he hoped for 80 percent improvement that would last six to seven months.

A few days after the first treatment, Efron sent me this report. "Taylor is greeting me at the door with a toy in her mouth, something she stopped doing weeks ago," Efron said. "She is eager to go for walks and pulls me around the block, with no limping and her back legs no longer buckle. She is playful again, wanting to wrestle and play 'steal the sock.' She is still stiff getting up, though, and cannot make it up the stairs in the house, though she will go up six stairs to go outside, without the need for support as she did before."

While at the office for Taylor's first treatment, Efron met a Golden Retriever with severe elbow arthritis, who had difficulty walking by age two. After ESWT treatment at age three, he was able to walk without a limp. He was returning a year and a half later for another treatment.

The hair on Taylor's back is growing back after being shaved for a shock wave treatment. Shaving reduces interference caused by air between the probe and the dog's skin; a gel is also used on the skin to improve transmission.

How does it work?

ESWT devices generate a series of focused high-pressure acoustic pulses (sound waves) that travel from the probe through the skin and soft tissue. When the waves meet tissue interfaces of different densities, such as where soft tissue, tendons, ligaments, cartilage, and bone meet, the energy contained in the shock waves is released and interacts with the tissue, producing both mechanical and cellular effects.

The shock waves appear to relieve pain and stimulate healing within the injured tissue, although the mechanism for these effects is unclear. Researchers believe that ESWT stimulates the body's own resources to speed healing, including increasing vascularization (blood supply) to the area being treated, and increasing osteoblastic activity resulting in accelerated bone growth, as well as other factors. The shock waves can also break up calcium deposits that are sometimes associated with tendonitis.

The reason that this treatment relieves arthritis pain is even less clear, but may

have to do with depletion of neuropeptides that lead to the sensation of pain and can contribute to the inflammatory response. Shock waves do not appear to slow the progression of osteoarthritis, but rather reduce the pain associated with it.

ESWT devices consist of a box that generates the waves and a wand (probe) that is used to target the waves to specific spots.

How shock wave therapy is performed

A physical exam is required to diagnose musculoskeletal disorder and to rule out neurological disease that cannot be treated with ESWT. It's important to identify all the painful areas that should be treated, including secondary issues that may have developed due to compensation for an injured or painful joint. Radiographs are usually required to help determine treatment, and other standard tests such as blood work and urinalysis may be done to ensure your dog is healthy prior to anesthesia.

Discomfort during treatment can range from mild to severe depending on the intensity used, so animals are usually heavily sedated or given short-acting general anesthesia. Low-intensity treatment may be done under light sedation. Pain medication, such as butorphanol, is given before the treatment. The machines that generate the pulses can be quite loud, which may be frightening to the patient, though some devices are quieter than others.

It takes only a few minutes to treat each site. The area to be treated must be shaved and a gel applied to ensure transfer of energy from the probe head to the patient's tissues, as any air between the probe and the skin will interfere with the mechanism. The veterinarian determines the energy level used and the number of pulses delivered based on the location, type, and severity of the disorder.

Protocol varies, but commonly anywhere from one to four treatments are done, two weeks to a month apart. The dog may be a little more sore for a few days following treatment, though sometimes the opposite is true and the treatment produces a short-term anesthetic effect, during which time you must be careful that your dog doesn't overdo it. Improvement may be seen right away, or it may take a few weeks to see the full effects of the treatment. The process may need to be repeated around once a year.

A complete veterinary examination – and, usually, radiographs – are required to help determine treatment.

Taylor's second treatment

Taylor experienced some regression two weeks after her first treatment, getting up more slowly and becoming more reluctant to go up steps. This may be partly due to the ruptured knee ligament, as she avoided pressure on that leg when she could. A second treatment was done three weeks after the first, and her improvement gradually resumed.

Six weeks following the second treatment, Efron reported, "I am quite pleased with the results – Taylor is almost her old self! Walks are getting longer, up to a mile with no limping or buckling, but still quite slow. She is swimming again twice a week, which she loves. She runs down a ramp, retrieves a toy we throw in, comes out of the water and wants us to chase her around the outside of the pool to get the toy again. She is on no medications at all, and she is happy."

Taylor still has limitations. "She will never run again," says Efron. "She won't go up the steps in the house, but she climbs the steps to go outside much better now. She still gets sore at times, such as after a long car ride."

Four months after treatment, Efron sent me an update. "I think Taylor is still improving somewhat. She does all of our old walks no problem, just a little slower. She even wants to chase her ball occasionally. We built a ramp off our deck, so she doesn't have to use the steps to go out, but she is doing better going up the flight inside our house at bedtime."

Safety issues

ESWT is generally considered safe, though high-intensity or prolonged treatment (beyond 1,000 pulses) might be capable of damaging tissue or bone. The energy intensity matters more than the number of pulses. It is possible that the analgesic (pain-relieving) effect can lead to overuse, which would make injury more likely, so it's important to moderately restrict activity as needed for a few days following treatment.

Care must be taken during treatment to avoid the brain, heart, lungs and intestines, as well as neurovascular structures (major nerves and blood vessels). ESWT is not recommended for dogs with clotting disorders due to the potential for bruising. Dogs that are immune-compromised may not respond as well to therapy, which is thought to rely on the body's own immune system for healing.

With proper use, side effects are insignificant, limited to some bruising of the skin where the pulses are applied if bubbles are present or good contact with the probe cannot be achieved. Treatment requires an in-depth knowledge of canine anatomy, and so should only be done by a veterinarian or under the direct supervision of a veterinarian by someone who has been trained in this procedure.

Piglet's experience

I wanted very much to try this new form of therapy with my dog, Piglet, about whose arthritis I've written in the past (see "Joint Decisions," March 2007). While Piglet has done remarkably well with a homemade diet, natural supplements, and prescription medications, she had slowed down several months earlier and was no longer taking long walks, cutting some as short as 20 minutes.

It was difficult to find a veterinarian in my area who offered shock wave therapy for dogs. The nearest vet school uses it for horses, but has not yet tried it for dogs. Efron suggested I contact the companies who make the devices to see if they could help, and one company gave me the names of two vets within driving distance.

I took Piglet to Dr. Jeffrey Smith, current president of the California Veterinary Medical Association, of Middletown Animal Hospital in Middletown, California. Dr. Smith has used ESWT to treat horses, dogs, and even a goat, with great success.

"About 80 percent of animals show marked improvement post treatment, though it may take up to 90 days to see this," Dr. Smith told me. "Ideally, treatment is repeated annually. Even in cases where no improvement is achieved, there are no negative side effects as one might experience with surgery or drug therapy."

Dr. Smith recommended two treatments for Piglet, one month apart. While he usually treats dogs under heavy sedation, we decided to use general anesthesia, due to my concern about Piglet's noise phobias, as well as her age and breed. The treatment went well, with only minor increased soreness for a day or two afterwards, possibly due to the long drive.

Unfortunately, Piglet did not experience marked improvement, possibly because of the excessive amount of bony growth around her joints. I didn't notice any changes following the first treatment, but two weeks after the second treatment, Piglet unexpectedly walked for twice as long as she had in many months. For half a year now, she has continued to take periodic long walks, up to two hours, every week or two, though most walks are closer to an hour.

Even without the marked improvement I had hoped for, I'm still glad that I tried it. The treatments were not hard on her, and I felt confident that they would do no harm. The improvement that she gained, while small, was meaningful and has allowed her to enjoy her walks more than before. At 16 years old, she's still remarkably healthy other than her arthritis, including being mentally sharp, and her walks mean a lot to her and contribute to her quality of life. If I had it to do over again, I would make the same decision in a heartbeat.

One dog's remarkable improvement

Dr. Smith told me about another dog he had treated a year earlier. Utah is a mixed breed (perhaps Pit Bull and German Shepherd Dog), weighs 45 pounds, and was 11 years old when she received shock wave therapy.

Utah's owner, Jane Rosett, MD, of Kelseyville, California, gave me the details. "Utah had problems with one elbow for many years, eventually reaching the point where she couldn't put weight on the leg at all," says Rosett. Like Piglet, Utah was given two shock wave treatments, one month apart. "I didn't see any improvement after the first treatment, and in fact I think she got a little worse. I was disturbed, as I thought I would see progress right away. But Dr. Smith explained that it can take some time for bone changes to take place," Rosett continues.

For many years prior to treatment with ESWT, 12-year-old Utah had problems with one elbow, to the extent that she could not put weight on that leg. A few weeks after her second treatment, she was sound again.

Then it happened. "Two to three weeks after the second treatment, she suddenly began running around like a puppy again!" says Rosett. "The improvement was rapid and dramatic, and she's been sound ever since, with only occasional mild limping."

Rosett offered a recent update on her 12-year-old dog, about a year and a half after the treatment. "Utah had been doing so well that I hadn't been giving her any medicine at all until a few weeks ago, when she began limping off and on. I'll probably be taking her to see Dr. Smith for another treatment soon."

Mechanisms for generating shock waves

There are three types of ESWT devices, which generate high-energy, focused shock waves. They consist of electrohydraulic, electromagnetic, and piezoelectric devices. All of these mechanisms convert electrical energy into a pressure wave within a fluid media (the body). No significant difference in effectiveness between these different methods of producing shock waves has yet been demonstrated. The FDA has approved electrohydraulic devices for treatment of multiple conditions in humans. Both Dr. Schenck and Dr. Smith use the VersaTron electrohydraulic device.

A fourth type of device produces low- to medium-energy radial waves, also called ballistic or pressure waves. This type of treatment is most accurately called radial pressure wave therapy (RPWT), but is also sometimes referred to as radial shock wave therapy (RSWT), unfocused shock wave therapy, or grouped together with ESWT. RPWT utilizes a projectile mechanism to stimulate a pressure wave.

Focused shock waves and radial pressure waves differ mainly in terms of the energy type and penetration depth. Shock waves produce maximum energy at the focal point inside the tissue, while the maximum energy of pressure waves is delivered to the skin surface and dissipates from there. For this reason, radial pressure waves are most suitable for treating areas near the surface. Because pressure waves radiate outward from the point of origin, they affect a broader area than focused shock waves, which can be more effective for certain conditions, such as dissolving tendon calcifications.

More treatments with less time in between are needed when using RPWT. Less sedation is required due to the lower

Zeus started out as a search and rescue dog, but was retired at age three years, due to hip dysplasia and elbow problems. Shock wave therapy has helped him regain about 80 percent of normal function as an active "civilian."

intensity of the pressure waves, which cause less pain than higher-intensity waves. Most studies in the U.S. have been done using ESWT, which are the only devices approved by the FDA for treating humans. Both device types are widely used in Europe.

Soft-focused waves

Manufacturers have begun developing new delivery heads to provide a wider variety of treatment options for various musculoskeletal needs. Now, there are devices that allow use of either a focused or soft-focused therapy head, depending on the area being treated.

Practitioners at the Toronto Equine Hospital in Toronto, Ontario, have used shock wave therapy on horses for the past eight years. Tami Packham, a technician there, became interested in its use in canine conditions after reading studies done by Iowa State's Dr. Scott McClure. Packham approached the hospital's Dr. Darryl Bonder, and with his help launched a pilot project where the machine and a technician are contracted to small animal veterinarians in the area. Acceptance by small animal veterinarians has been slow, with word-of-mouth among owners being the driving force behind most treatments.

The manufacturer says that the soft-focused waves are non-painful and can be applied without anesthesia or sedation, though this is questionable. "I have seen dogs treated with both focused and soft-focused waves, with and without sedation," says Packham. "Even with soft-focus, the treatment can be painful, so I prefer that dogs be sedated and given pain medication before treatment." In addition, some areas, such as the hips, can be difficult to treat without sedation due to the positioning required of the dog.

Packham describes the difference between the two types of treatment. "The focused head has a band width of 6mm, while the soft-focus head has a 25mm band width. The energy level is the same but more intense coming through the 6mm band as opposed to the 25mm band. I have tested both heads on myself and found them both painful." Note that soft-focused waves are true shock waves, not radial pressure waves, which are less intense than any shock waves.

Search and rescue dog improves

Zeus, a German Shepherd Dog who was trained and FEMA-tested for urban search and rescue, is owned by Rob and Shari Martin. "Zeus was x-rayed at age two, and found to have grade-4 hip dysplasia, as well as elbow problems," says Rob Martin. "His ability to work declined, and within a year, he was in so much pain that we were considering euthanasia."

That's when they met Packham. She explained about shock wave therapy to the Martins, who decided to try it for Zeus. After a single treatment, Zeus returned to about 80 percent of normal function. "Even though he could no longer do search and rescue, we were thrilled that he could enjoy a normal life as our pet," says Martin.

Six months later, he began to decline again, and by the end of a year he was back to where he started, so the treatment was repeated.

"Zeus was retired at age three due to severe dysplasia in both hips and elbows," says Packham. "Zeus has been treated for the past three years, one session each time. He continues to receive a treatment session about once a year." Zeus is now six years old and has received a total of four treatments.

Martin describes Zeus's response to treatment. "For the first three days after a session, he is like a puppy again, apparently due to the numbing effect of the treatment. During that time, we have to be careful that he doesn't overdo it. Over the next three or four days, he seems to have a lot of pain, even worse than before the treatment. He then begins to improve again, and by about the 10th day following treatment, he is zipping around with about 70 to 80 percent of normal function." Martin says that the short-term regression a few days after treatment was not as bad when soft-focused waves were used.

Zeus has received treatment with and without sedation, but Martin feels he does best when sedated, which allows higher-intensity waves to be used. "The treatment seems to last longer when he is sedated," says Martin. "It takes about eight months before he begins to decline, compared to six months following the lower-intensity treatment without sedation."

ESWT for spondylosis

Hayley is a 12-year-old Golden Retriever who was in so much pain from spondylosis (fused vertebrae) that the family was considering euthanasia. She had difficulty getting up and controlling her rear legs.

"We noticed rather rapid deterioration in Hayley's movement last fall," says Hayley's owner, Christine Crooks, of Binbrook, Ontario. "She would take up to 10 minutes to get out of her bed. When she walked through a door and turned, the back half of her body would not follow and she would fall. When she lay on the ground to rub her back and tried to kick her legs up

in the air, only the front half would go up, while the bottom half just lay there. She had difficulty going up and down the stairs. And she looked just plain sad. She also had trouble lying in one place for long."

Packham told the Crooks about shock wave therapy, and Hayley received a single treatment in November. She experienced a lot of pain after the procedure and had to take pain medication for two or three days.

"About a week after her procedure, I noticed that she was getting up effortlessly," says Crooks. "Throughout the next week, we noticed constant improvements – she would walk out a door and turn, and her whole body would follow. She almost ran up and down the stairs. But the day that I started crying with emotion was the day that she lay on the ground and kicked all four legs up in the air."

Crooks says this treatment has had a remarkable effect on Hayley's life. "Her disposition improved greatly – we all talk about how our 12-year-old dog is like a puppy again. Our veterinarian even said that we have to slow her down a bit to prevent her from injuring her spine. She likes to run in the snow and jump if we throw a snowball, so we have to remember that she still has a condition. To date, four months after the treatment, she continues to do remarkably well."

Packham says, "The dogs go home with pain medication because they are usually very sore for three days post treatment. On average, we see improvement that lasts for six to eight months, and then they start to degenerate again." At that point, the treatment can be repeated.

Cost of treatment

The cost for ESWT can vary considerably, depending on which type of machine is used, how many sites are treated, whether your dog is anesthetized or just sedated, and what tests are needed before treatment. The lowest price I've heard of was $125 for treatment with RPWT without anesthesia (devices that generate radial pressure wave are less expensive and therefore the treatment may also be less expensive, though more treatments are usually required). Treatment with ESWT will commonly run around $200 to $300 per site, plus the costs for exam, tests, pain medication, and anesthesia or sedation.

To give examples, Efron paid $425 per treatment for Taylor, with each treatment covering multiple sites. I paid $290 per treatment site (total $580 for both elbows) each visit. These prices do not include charges for sedation/anesthesia, pain medication, tests, or exams.

Still doing well

Taylor, the Lab who is owned by the people who originally asked me about ESWT, is still doing well, eight months after treatment. "Taylor is on no medications, but she gets a lot of supplements and a raw diet," says Efron. "I think her improvement peaked about eight weeks after the second treatment, and she's been great on

Spondylosis had almost completely crippled Hayley, but after only one ESWT treatment, she improved to the point that her veterinarian advised her family to "slow her down" from playing rambunctiously in the snow.

walks ever since. We went to the beach last weekend. Taylor was so energetic and she was begging me to throw a ball. I threw one five feet and she trotted to retrieve and was happy as can be. Then my husband threw a leash and she ran a little. She was so happy and like a puppy again. I had tears in my eyes. Nothing makes me feel better than to see her like this."

Because ESWT is still considered experimental, especially in dogs, it can be difficult to find a veterinarian who offers it. I recommend asking the device manufacturers to see if they have sold any to vets in your area; contact information can be found in the sidebar, below.

You can also try contacting veterinary schools and large-animal vets in your area. Because shock wave therapy is used more commonly with horses, you might find a large-animal veterinarian who is willing to treat your dog, which can be done in cooperation with your own vet if needed. 🐾

Mary Straus does research on canine health and nutrition topics as an avocation. She is the owner of the DogAware.com website. She lives in the San Francisco Bay Area with her 16-year-old dog, Piglet.

Resources Mentioned in This Article

VETERINARY SHOCK AND PRESSURE WAVE DEVICES

VersaTron, made by SanuWave, Alpharetta, GA. VersaTron produces focused electrohydraulic waves. This appears to be the most widely available and most studied machine in the U.S. (866) 581-6843 (US and Canada) or +41 (0)71 6868 900 (Europe); sanuwave.com

VetGold, made by TRT Nonvasiv, Woodstock, GA. VetGold devices produce either focused high-energy or soft-focused low-energy electrohydraulic waves, depending on the head that is used. The low-energy waves are most suitable for tendon and musculoskeletal applications, while the high-energy waves are used for treating bone injuries. (877) 966-1315; trtllc.com

Duolith Vet and **Masterpuls,** made by Storz Medical, Switzerland. Duolith Vet is a combination focused shock wave and radial pressure wave therapy device. Only one type of wave is generated at a time. Masterpuls produces radial waves. Sold in the US by FOCUS-IT, (800) 270-1141; eswt.net

PiezoVet 100, made by Richard Wolf GmbH, Knittlingen, Germany. This device generates focused piezoelectric waves. US office in Vernon Hills, IL. (800) 323-9653; richardwolfusa.com

Swiss Dolorclast Vet, made by Electro Medial Systems (EMS), Switzerland. Swiss Dolorclast Vet uses radial pressure waves. North American division is located in Dallas, TX. (972) 690-8382; ems-company.com

PRACTITIONERS

See the author's arthritis Web page for up-to-date information on ESWT, including a list of veterinarians offering this treatment: dog-aware.com

Dr. Jeffrey Smith, Middletown Animal Hospital, Middletown, CA. (707) 987-2000; 987-2000.vetsuite.com

Dr. Charles Schenck, Harlingen Veterinary Clinic, Belle Meade, NJ. (908) 359-2000; harlingenvet.com

Tami Packham, Toronto Equine Hospital, Toronto, Ontario. (905) 405-9500; torontoequinehospital.com

REFERENCES

"Shock Wave Therapy Can Help Promote Bone Healing and Reduce Pain," University of Illinois College of Veterinary Medicine, October 2005.

"Shock Wave Therapy: More Shock Than Wave?" European Society of Veterinary Orthopaedics and Traumatology Conference, 2006.

"Advances in Extracorporeal Shock Wave Therapy for Dogs," *Veterinary Practice News,* 2002.

"Update on Extracorporeal Shockwave Therapy," *Veterinary Practice News,* 2004.

"Extracorporeal Shock Wave Therapy: What? Why? Safety?," Iowa State University College of Veterinary Medicine.

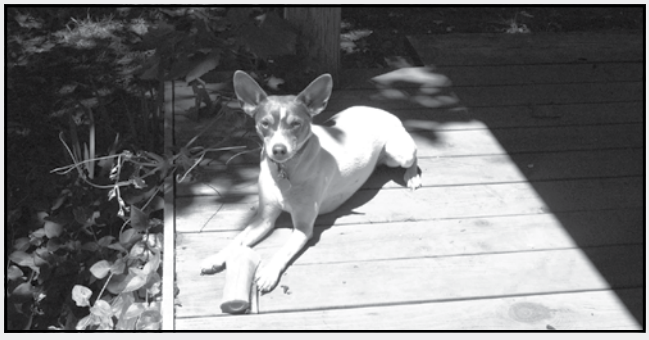
"Initial Experience with Extracorporeal Shock Wave Therapy in Six Dogs," Peter H. Laverty, BVSc, MACVSc, and Scott R. McClure, DVM, PhD, Dipl. ACVS. From the Department of Veterinary Clinical Sciences, Purdue University.

"Clinical Evaluation of Extracorporeal Shock Wave Therapy for Management of Canine Osteoarthritis of the Elbow and Hip Joint," by Francis DA; Millis DL; Evans M; Moyers T. University of Tennessee, Department of Small Animal Clinical Sciences. (A blind clinical study of nine dogs with osteoarthritis of the elbow and hips was performed, with five dogs receiving ESWT and four dogs receiving sham treatment. Results were evaluated using force plate analysis of gait, measurement of comfortable range of motion, and lameness at a walk and trot on days 0, 14, and 28. Significant improvement ranging from 2 to 20 percent during that period was observed for most dogs receiving ESWT.)

"Clinical Evaluation of Extracorporeal Shock Wave Therapy to Reduce Clinical Signs and Pain Associated with Chronic Osteoarthritis in the Canine Patient," by Peter H. Eeg B.Sc., DVM, Poolesville Vet Clinic LLC, Poolesville, MD. (A clinical trial performed on 20 dogs with chronic degenerative osteoarthritis compared the effects of shock wave therapy using the VersaTron device to a control group maintained on Rimadyl (non-steroidal anti-inflammatory drug). 85 percent of the treated dogs showed a reduction in clinical signs equal to or greater than the control group after 14 days.)

"Extracorporeal Shockwave Therapy as a Treatment for Lameness in Horses and Dogs: General Information and Specifics about the Use of Shockwave Therapy in Orthopaedics at the University of Wisconsin-Madison," by Peter Muir BVSc, MVetClinStud, PhD, Diplomate ACVS Assistant Professor, Small Animal Orthopaedics; and Ryland B. Edwards III, DVM, MS, Diplomate ACVS, Clinical Assistant Professor, Large Animal Surgery.

"Essential Facts of Physiotherapy in Dogs and Cats," by Barbara Bockstahler, David Levine, Darryl Millis.



Build Better Behavior

"Constructional Aggression Treatment," a promising new approach to modifying canine aggression.

BY PAT MILLER

That loud buzz you hear is the sound of the dog behavior and training community discussing a controversial new approach to modifying aggressive behavior in dogs. The developers of "Constructional Aggression Treatment" (CAT) claim that the shaping-based operant protocol produces stronger and much faster results than the classical counter-conditioning process widely used by training and behavior professionals today.

CAT was devised and tested by Dr. Jesús Rosales-Ruiz, a behavior analyst and associate professor of behavior analysis at the University of North Texas, and Kellie Snider, a board-certified associate behavior analyst. Snider completed her MS in Behavior Analysis at UNT in 2007 with Dr. Rosales-Ruiz as her graduate research advisor and the CAT procedure as the topic of her thesis research.

Canine behavior experts frequently use classical conditioning techniques (including counter-conditioning) to help change how dogs feel about and respond to the stimuli that triggers their aggressive behavior. In other words, classical counter-conditioning changes the dog's *emotions* in order to change his *behavior*. In contrast, CAT utilizes "operant conditioning," where the goal is changing the dog's *behavior* in a way that will likely produce a *subsequent* emotional change.

In order to best explain how this novel technique works, allow me to back up and discuss some behavioral theories that explain both the development of canine aggression as well as the techniques that are conventionally used to change the dog's response to stressful stimuli.

This German Shepherd Dog can be very reactive around other dogs. Here, he begins to respond aggressively to another dog's unexpected approach. Note that his owner was caught unaware, and doesn't have his leash in an effective position to control his response.

What you can do . . .

- If your dog displays aggressive behavior and you are committed to working to change his response to his aggression-triggering stimuli, consider buying *Constructional Aggression Treatment: Shaping Your Way Out of Aggression* (tawzervideos.com, 888-566-3003). This is a 10.5-hour DVD that costs $125.
- If you like what you see, share the video with your qualified, positive training professional and discuss whether the procedure may be appropriate for your dog.
- If so, gather appropriate people to help you and try it out – and, please! – share your results with us!

The genesis of aggression

Conventional thinking is that aggression is the behavioral result of an emotional response (fear, anger, frustration, etc.) that has been classically conditioned due to an association between two stimuli (events). For example:

- A small child hugs a puppy too tightly, hurting the puppy. The puppy associates pain with small children, and becomes fearful and aggressive toward small children as a result.
- A large, aggressive dog attacks a

smaller, unassertive dog, causing multiple injuries. The small dog associates large dogs with attack and pain and becomes fearful and aggressive toward large dogs.

- Teenagers tease a dog in a yard behind a fence. The dog becomes aroused, angry, and aggressive toward teens.

So, the thinking goes, the best approach to modifying a classically conditioned response is with counter-conditioning – a subset of classical conditioning in which you change the dog's emotional response. You do this by pairing the fear- or anger-causing stimulus with something that creates a happier response, thus giving the stimulus a new, positive association.

Food is commonly used to counter-condition, because it's hard to eat yummy treats and be significantly angry or afraid at the same time. Also, food is a "primary reinforcer"; our dogs are hardwired to like food; they don't have to *learn* that it's valuable to them.

You can use other things to change associations in place of, or in addition to, food. With humans, money, jewelry, and other *conditioned reinforcers* (items with *learned* value) can be used to create and change associations. Think of the enamored suitor, wooing the object of his affections, plying her with all sorts of goodies to create a positive association while she plays hard to get. Dogs aren't much impressed with diamonds and Cadillacs, but a rousing game of tug or fetch-the-ball can give a worried dog a positive association with a previously aversive stimulus.

A counter-conditioning procedure goes like this:

- Present scary stimulus (say, a small child) at a distance great enough that the dog is worried ("Uh-oh, there's a *child!"*) but not so worried that he goes into a barking, lunging frenzy. This is called the "sub-threshold" distance.

- The instant the dog sees the child, start feeding tiny bits of something very yummy, such as canned or boiled chicken.

- Keep feeding until the child is out of sight, then stop feeding.

- Repeat this process until the appearance of the child at this distance consistently causes the dog to look joyfully at you in anticipation of chicken. This is called the *conditioned emotional response* (CER), or the "Where's my chicken?" look.

- Now increase the intensity of the stimulus and repeat the process. With a child, you might increase intensity by bringing the child a little closer, or by staying at the original distance and having two children appear, or one child running, skipping, or singing, or . . .

Eventually, due to the change in the dog's emotional response to the presence of a child, then to the presence of children, the dog's behavior changes. He comes to like children, so he's no longer aggressive toward them.

How CAT is different

CAT's founders acknowledge that aggression may be, initially, an emotional response, based in classical conditioning. However, they assert that operant conditioning quickly begins to play a much larger role than it's often given credit for. They suggest the dog quickly learns that growling, barking, lunging, and snapping are highly successful strategies for making the threat leave, and so the behavior is negatively reinforced (the dog's behavior makes a bad thing go away).

By definition, behavior that is reinforced continues or increases. Snider and Rosales-Ruiz posit that if you prevent the dog from receiving reinforcement for the unwanted behavior (aggression) and reinforce his desired behavior (friendly, affiliative actions), his behavior will change. When the behavior changes, the

Using a classical conditioning technique: A reactive dog is exposed to the stimulus that usually provokes an aggressive response, but the stimulus is presented at a distance that keeps his response "sub-threshold."

The moment the dog noticed the stimulus (in this case, another dog entering the training room, about 80 feet away), his owner starts feeding him delicious treats. He takes the treats roughly, indicating tension.

With enough repetitions, the dog begins to associate the entrance of the other dog into the training room with being fed a treat. He begins to look at his owner ("Where's my chicken?") the moment he sees the other dog.

emotion that triggers the aggression will change as well.

CAT used for dog-dog aggression

Here is how the CAT procedure would be used to modify the behavior of a dog who shows aggression toward other dogs:

The subject dog (the one with the aggressive behavior) is set up in an area where the trigger stimulus can be presented at a distance that does not trigger a big response from the subject dog (this is called "sub-threshold"). In this case, the trigger stimulus is another dog; note that people or objects can be the triggering stimuli in other cases.

Ideally, the environment where the procedure is carried out is the same or similar to the one in which the undesirable behavior normally occurs. This reduces the amount of future generalization required. The owner – not a trainer – holds the dog's leash, which also keeps the stimulus picture as close to reality as possible and reduces the amount of generalization needed.

Other than restraining the dog, the owner does nothing else in terms of training – no clicking, no treating. The behavior of the stimulus dog becomes the sole reinforcer for the subject dog's behavior.

The stimulus dog (sometimes called decoy or trigger dog) and handler approach the subject dog until sub-threshold signs of stress are noted by observers. This is the "threshold." The handler and decoy dog stop and wait for *any* decrease in the subject dog's stress behavior, at which point the decoy and handler immediately turn and walk away, reinforcing the subject dog's more appropriate (less stressed) behavior.

If the subject dog barks, lunges, or offers other aggressive behavior as the decoy dog leaves, the handler and decoy immediately return to baseline to again wait for decreased signs of stress. Then they again attempt to leave. This is repeated until the subject dog no longer offers escalated stress behavior when the stimulus dog and handler attempt to leave. When this happens, they retreat to a greater distance to give the subject dog an opportunity to relax.

An assistant marks the location where the threshold behavior occured, and the stimulus dog and handler return to this mark after a 15-second "cool-down" period. This return-and-leave process continues until the subject dog no longer shows signs of stress at baseline, at which point the handler brings the stimulus dog closer to the subject by a distance predetermined by the trainer – less if the dog is likely to be easily triggered, more if the dog is perceived as able to handle a larger increment of decreased distance.

Eventually it should be possible for the stimulus dog to approach with no aggressive reaction from the subject. In fact, in a successful procedure the subject dog begins to genuinely and happily *invite* the stimulus dog closer for more interaction. This point in the procedure is called *switchover.*

After switchover, the stimulus dog and handler continue to approach the subject dog in small increments until the two dogs can actually engage in friendly behavior with each other. The researchers labeled this part of the process *interaction.*

Why does it work?

Remember, many dogs who behave aggressively toward other dogs do so as a result of learning that their barking, growling fit results in the other dog going away. Because that behavior has been successful in the past, it's been reinforced, and the behavior has continued or increased.

In contrast, in a CAT procedure, the subject dog is presented with a different reinforcement scenario. The behavior that worked so well before – barking and lunging – no longer works. Instead of making the other dog go away, it actually makes her stay close or come back! A new behavior – acting calm – now makes the "bad approaching dog" go away. So, in theory, the subject dog learns to offer calm, relaxed behaviors to make the other dog go away.

Eventually the subject dog *becomes* calm and relaxed because he no longer needs to act aggressively to make the other dog go away. Lo and behold, once the subject dog *becomes* calm and relaxed about the other dog approaching, he actually gets *happy* about having the other dog approach; the change in his emotional response follows the change in his behavioral response.

Who Let the CAT out? CAT-Like Methods

Constructive Aggression Treatment (CAT) isn't the first or only behavior modification program to utilize operant conditioning to modify aggression. This tact was also taken in a procedure devised by now-deceased British dog trainer and behaviorist John Fisher that he dubbed the "Two Reward System." A similar process is used by Trish King, the Marin (California) Humane Society's Training Director, in what she calls "abandonment training." However, these programs differ in many of their operational details.

In both of these procedures, the dog is tethered to a solid object, and when the dog reacts to the trigger stimulus, not only does the stimulus (i.e., approaching dog) stop and stand still, but the owner "abandons" the dog, by quickly walking away, adding negative punishment (the dog's behavior makes a good thing – the owner – go away). When the dog offers appropriate behavior, he is reinforced in two ways: the "bad thing" (other dog) goes away and the owner returns; hence the name, "two-reward system." (In contrast, in the CAT procedure, there is no negative punishment, where the dog's behavior makes a good thing go away.)

Supporters of two reward/abandonment training system acknowledge that the system doesn't work for all dogs; the dog has to *care* that his owner leaves (and returns) in order for the negative punishment/second reward piece of the process to be useful. They say if it *is* going to work, it works quickly.

Critics of the two reward/abandonment training systems are concerned that in addition to the potential drawbacks of CAT (using negative reinforcement, subjecting both dogs to stress), the two reward/abandonment training systems add an additional stressor: the dog is abandoned by his owner when he's stressed, with the owner sending the message, "You can't rely on me to be here when you need me the most." Snider comments, "With CAT, we don't want the dog to learn that his owner is likely to ditch him when the going gets tough. We want him to learn that there are kinds of behavior that work to get other dogs to leave them alone – nice behavior – and there are kinds of behavior that don't work any more – aggression."

Rosales-Ruiz and Snider have worked with or received reports of almost 100 dogs using the CAT procedure, and the results, they say, are overwhelmingly encouraging. Dogs with a lifetime history of aggression toward other dogs have become completely canine-social-appropriate. Dogs with a long record of aggression toward humans have become safe and friendly. Not every single one, of course, but the majority of dogs have done mind-bogglingly well with the procedure.

Things to consider

The dog training and behavior community has not yet embraced the procedure with open paws. As striking as the reported results may seem, there are some significant potential obstacles to the widespread use of CAT. Trainers who might consider using this procedure professionally are struggling with some of the challenges:

■ **The sessions can be intensively time-consuming.** Individual CAT sessions may run from as little as one hour to as much as eight, and require a number of helpers. When possible, the founders recommend sticking with it at least until you see switch-over (the point at which the subject dog's behavior changes to actually offering distance-decreasing behavior such as soft body wags, ears back, soft and/or squinty eyes) and preferably all the way through interaction. Snider suggests setting aside three full days to work with an individual dog and owner.

Snider points out, however, that classical conditioning and desensitization (CC&D) is also time-consuming. Many owners practice CC&D on their own for months or years with less effect.

■ **It's costly.** Good training and behavior professionals may charge anywhere from $50 to hundreds of dollars per hour for their time. Three full days, eight hours per day, at hundreds of dollars per hour equals a lot of money spent in a short period of time. Of course, if it works, it may be worth almost any amount to an owner, and, over time, it may not be significantly more costly than ongoing CC&D with a trainer.

■ **It's staff-intensive.** Done well, the procedure requires at least several humans – the owner, the trainer, the handlers of several stimulus dogs (or presenters of whatever the trigger stimulus may be), and perhaps a person to videotape the procedure for later review. This can also add to the cost, if assistants are paid.

■ **It can be stressful to the subject dog.** In some cases where the procedure has failed, the subject dog has continued to practice the bark/lunge strategy that's been successful for him in the past, rather than offering – and switching over to – calm, relaxed behavior. Some trainers trying the procedure have pulled the plug early in the process rather than continue to subject the dog to the level of stress apparent as the old strategy failed to work. Other trainers have persisted for long periods of time (hours) before either giving up or ultimately achieving success.

On these counts, in CAT's defense, Snider says, "Even with those dogs that did not completely switch over because the trainers didn't take it that far, we have almost universally seen dramatic improvement. Trainers who are new to this procedure may need more practice and guidance before they learn to how to keep the dog below threshold by adjusting the environment in some way. If you don't work below threshold, it's not really CAT . . . and it's unlikely to work as well. It's too difficult for dogs to produce desirable behaviors when they are over threshold, and this is no different from CC&D."

■ **It can be stressful to the stimulus dog.** The stimulus dog will be asked to repeatedly approach a dog who is sending very clear "Don't approach!" signals and appears to be more than willing to back the signals up. This can take a toll on the good nature of the neutral/friendly dogs being asked to play decoy. In fairness, the same can be said of dogs used as decoys in conventional CC&D sessions.

■ Even when all goes according to plan, **trainers may be reluctant to complete the final piece of the process** – interaction – and rightly so. Misjudgment on the part of the trainer can result in injury to the stimulus dog (or trigger person/s). Again, to be fair, this is a risk whenever working with aggressive dogs.

■ **It may not be positive.** One definition of "positive training" holds the position that positive trainers use negative reinforcement only as a last resort, after positive reinforcement and negative punishment have failed. Negative reinforcement, by definition, requires the presentation of something at least mildly aversive to the dog, and sometimes the presenting stimulus is significantly aversive.

Snider and Rosales-Ruiz offer CAT as a first approach, not after exhausting what are traditionally considered more positive methods. In fact, they say the less the dog has been worked with using other methods, the easier and more successful CAT is likely to be.

In response to these points, Snider says, that in her opinion, CAT can be more positive than desensitization. "With desensitization, often trainers move closer if the dog gets calm (which constitutes punishment of calm behaviors) and move away when the dog is stressed (reinforcement of stressed behaviors). That's one reason it takes longer!

"Also, sometimes the presenting stimulus is significantly aversive in CC&D programs, too. You can't train an animal to accept something that is not there, and prior to treatment, having it there is stressful. The best you can do is present it at low intensities, which is an integral part of CAT just as it is of CC&D."

Snider also points out that even positive reinforcement *can* be used in ways that produce problematic behaviors. "As Dr. Rosales-Ruiz has said, it is not about the name of the procedure, it's about the emotionality produced by the procedure. Properly done, CAT produces happy, friendly dogs while working hard to remain errorless – which means keeping the intensity of the stimulus low enough that it is not overwhelming to the learner."

Pat's CAT journal, day 1

My own mind is still not made up about CAT. I have done the procedure once (I'll describe this in detail below) with a dog I know well, owned and handled by Certified Pet Dog Trainer Jolanta Benal, of Brooklyn, New York. Jolanta is a friend and trainer for whom I have much trust and respect.

Going in, we were both cautious and somewhat skeptical, albeit hopeful, and we were both ready to stop the procedure at any time if either of us was uncomfortable with what we were seeing. I was happier with the results than I had dared hope to be, and will offer it on a limited basis to clients who I think can make the necessary commitment and whose dogs I feel are appropriate candidates.

Jolanta and I spent three days trying out the CAT procedure. Our subject dog was

Juniper, Benal's six-year-old neutered Pit Bull-mix. Juni has been dog reactive/aggressive since puppyhood, and several of his littermates also have aggression problems. At least two have been euthanized for aggression.

Juni is extremely friendly with humans, in large part due to growing up in Brooklyn, where Jolanta made it a point to socialize him well with a wide variety of humans. Unfortunately, living in NYC, anywhere he goes, Juni encounters other dogs – and the socialization didn't work with those, despite Jolanta's best efforts. Juni does have a circle of canine friends he can play with, including 13-year-old Cattle Dog-mix Izzy, with whom he lives.

Jolanta has done a considerable amount of work with Juni. They attended our Reactive Rover Camp and did well, easily progressing to parallel walking with other dogs by the end of the third and final day of camp. Juni could control himself, but was not relaxed and friendly with the other dogs, and it didn't carry over to the urban home environment.

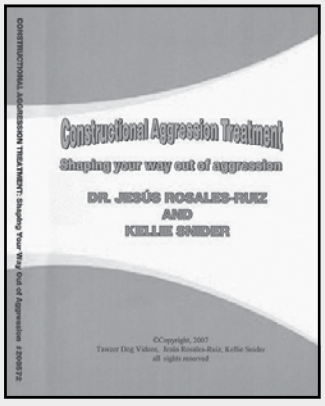
Back in NYC, Jolanta found it pretty impossible to keep Juni sub-threshold – one of the challenges of ongoing counter-conditioning work with a reactive dog. Jolanta does a good job of keeping Juni focused on treats when necessary, and he has a very effective "run away" escape behavior. (As described by Patricia McConnell in her excellent booklet, *Feisty Fido,* a reactive dog is taught "Run away!" as a fun game, whereby the owner walks with the dog by her side, and suddenly says "Run away!" or some other cue in an excited tone of voice, then quickly turns and runs playfully in the other direction. Each time, at variable distances, the owner reinforces the fun aspect of the game with yummy treats or with a quick game of tug, until "Run away!" takes on a positive classical association. As a result, when the reactive dog and owner are out walking and a dog appears unexpectedly, the owner can use the "Run away!" cue to get her dog to happily turn and run with her, away from the other dog, rather than having a super-threshold eruption.)

We started the CAT process on Monday in early March, in the Peaceable Paws training center. Not ideal in terms of "recreating the actual environment," (our farm is nothing like NYC!) but we wanted to maximize potential for some success, and it's impossible to control intensity of stimulus in the Big Apple.

Why It's Called "Constructional"

With their study of a protocol using negative reinforcement alone to modify aggressive behavior, and presentation of their findings to the dog training and behavior community, behavior analysts Kellie Snider, MS, and Jesús Rosales-Ruiz, PhD, have introduced a term not widely used by dog trainers: "constructional."

It's a little surprising that the term hasn't been seized upon prior to this by positive dog trainers, as it so perfectly describes the approach that many of us follow, and that we exhort our clients to adopt: "Tell your dog what you want him *to do,* not what you *don't* want him to do." Said another way, "Reinforce your dog for the behaviors you *want*, and manage his environment to prevent him from being reinforced for the behaviors you *don't want*."



The constructional approach (a term devised by Dr. Israel Goldiamond in the 1970s) mirrors the positive training approach described above, whether you're modifying aggression (as in the CAT procedure) or simply shaping any of an infinite number of other behaviors you could teach your dog. In fact, the title of Snider and Rosales-Ruiz's DVD on CAT refers to shaping: "Constructional Aggression Treatment: Shaping Your Way Out of Aggression."

Behaviorist B.F. Skinner maintained that errors are not necessary in order for learning to occur. Old-fashioned training methods that rely on corrections are described by behavior analysts as *pathological* – where the dog is punished for incorrect behavior choices and stumbles upon the correct behavior through trial and error. The pathological emphasis is on "correcting" inappropriate or "wrong" behavior choices.

With the constructional approach, the emphasis is on the desired target behavior: creating (constructing) desired behavior repertoires rather than eliminating undesirable ones. Reinforce your dog for the behaviors you want, rather than punishing him for the ones you don't want.

Why not just call it operant conditioning? Because the four principles of operant conditioning encompass behavior-*reducing* options (punishment) as well as behavior-*increasing* ones (reinforcement). Although Skinner defined and worked with all four principles, he indicated his clear preference for the constructional (reinforcement) aspects of his learning theory.

Dr. Rosales-Ruiz says, "In shaping there are no errors to correct, only behaviors to shape," and he bemoans the proliferation of trial-and-error learning in "traditional" training. He describes one example, of teaching a dog to walk at heel: "The dog may be too far forward, too wide, or lagging behind; if the dog is not in the correct heel position, the lead is jerked. The dog is left with overwhelming anxiety, during which it must try to puzzle out what the solution is: 'What am I supposed to do to avoid punishment?' "

Anyone who has ever had to learn, solve puzzles, or make important decisions under conditions of overwhelming stress and anxiety knows what a challenging proposition that can be. We *know* that living organisms don't learn well under extreme stress.

"Errors are not necessary for learning to occur," Rosales-Ruiz echoes Skinner. Still referring to Skinner, he says, "Errors are a function of poor analysis of behavior, a poorly designed shaping program, moving too fast from step to step in the program, and the lack of the prerequisite behavior necessary for success in the program."

Rosales-Ruiz says, "The constructional approach is implicit in clicker training, and in this sense their practitioners are also behavior analysts."

CPDT Jolanta Bernal, of Brooklyn, New York, and her dog-reactive dog, Juni. CAT training has helped Juni learn new and better responses to dogs.

A dozen trainers attended one or more days of the three-day program to learn and assist. Our first stimulus dog was Amber, a small, mature female Rhodesian Ridgeback who belongs to Peaceable Paws apprentice Susan Sarubin.

Susan presented Amber at a distance of about 75 feet from Juni (one end of the training room). Juni immediately erupted, barking and lunging, hackles up. Jolanta had warned us that his threshold distance is "line of sight," barring any efforts to divert his behavior. Juni confirmed the veracity of her warning. So "just inside the door" was our baseline.

It took several repetitions before Amber was able to enter the room without Juni erupting. Even then, Juni was still pretty tense. We did several more repetitions with Juni erupting when Amber and Susan turned to leave; they had to turn back toward Juni and return to the baseline mark. We looked for, and accepted, very small signs of relaxation from Juni as the trigger to make the stimulus dog (Amber) go away – the flick of an ear, blinking, a slight lowering of the head. When we got to the spot where no eruption took place, we began moving the marker closer, one foot at a time. It seemed like it took an eternity, but was actually no more than 10 minutes.

We worked with Amber as the only stimulus dog on the first day. At about 35 feet we began getting attention-soliciting affiliative behavior from Juni: soft tail wagging, relaxed body, ears back, squinty eyes. We continued to decrease the distance, and at about 10 feet (near the end of the session) we lost the soft behavior; Juni again began growling, barking, and even added a snarl (lips curled up) – a behavior we hadn't seen before. We continued to repeat presentations at that distance until Juni relaxed again, although not to the point of the soft, waggy behavior we had seen previously.

We worked a total of three hours on that first day, with two breaks. In debriefing the session, Jolanta and I agreed that if we encountered a "stuck" spot again we would back up the stopping point to a place where Juni offered stress behavior but didn't go over threshold, and work there until he again showed soft, friendly behaviors. Later conversation with Dr. Rosales-Ruiz confirmed that this would have been an appropriate step. As it turned out, we didn't need it.

CAT, day 2

On the second day, we introduced Willow, a spayed Shepherd/Collie-mix owned by DC-area Certified Pet Dog Trainer Pen Brown. Juni immediately erupted upon presentation of Willow at 75 feet. This was disappointing; we were hoping to see more of a change in Juni's behavior upon initial presentation. We were, however, able to progress more quickly this time; Juni's barking stopped after just a few repetitions, and at the first-hour break we had moved the marker to about 35 feet and were getting soft, solicitous responses from Juni.

We switched dogs after the first break, introducing Bonnie, my three-year-old Scottie-mix. Snider and Rosales-Ruiz would probably have suggested proceeding to interaction with one dog before switching, but none of us were confident enough with the procedure to do this. In addition, Jolanta wanted to work on generalizing to as many different dogs as possible, knowing that she would face a constantly changing cast of canine characters back home in New York.

Juni had met Bonnie at a Reactive Rover Camp many months prior, parallel walking with her without incident on the last day of camp. Now, with CAT, there was some barking on the initial presentation of Bonnie at 75 feet, but it was less intense than with Willow, and we progressed forward rapidly. Between 40 feet and 10 feet we got very playful behavior from Juni: play bows, full body wags, and several "Don't go away!" vocalizations on several occasions when Bonnie and I turned to leave. (This is a significantly different vocalization than Juni's "Go away!" bark,)

At the end of that second day, we were parallel-walking Bonnie and Juni around the training center, about four feet apart. Juni was relaxed, and even made several play-bounce moves toward Bonnie – a behavior he had never shown toward her at Reactive Rover Camp. We chose not to let them play, as there is a significant disparity in size and we felt Juni would be too rough for Bonnie, even if he maintained his friendly demeanor.

CAT, day 3

On the third day we changed our location, transporting all of our dogs to a local, dog-friendly outlet mall – the closest approximation to a city environment we could come up with in rural Fairplay, Maryland. We started with Willow again, positioning Juni about 50 feet from the corner around which Willow would appear.

There were *no* eruptions at all on day three. *None!* Not even when Pen invited Willow to leap in the air. (Historically, bouncy behavior was a guaranteed trigger for Juni to erupt.) We quickly progressed from 50 feet to about 10 feet, and then walked the two dogs together in the mall parking lot, sometimes as close as three to four feet apart. Juni was relaxed and unconcerned. We were not just pleasantly surprised; we were ecstatic.

We returned to the store front area, put Willow away and brought out Missy, my eight-year-old spayed Australian Shepherd. We were eager to see what would happen with a new dog. Juni had never seen Missy, and Missy is naturally bouncy – a potential double whammy. Again, no eruptions, rapid closure to about six feet, then walking together at close distance. We did get one small growl and a little tension when Missy was about 15 feet from Juni while we were doing the initial approaches, but he was immediately relaxed again on the next approach.

We brought Willow back, and worked with all three dogs together, then introduced Lucy, my Cardigan Corgi, and finally added Bonnie to the mix. We finished the morning after 90 minutes with all five dogs walking around one end of the mall, passing in close quarters, following Juni, approaching head-on, and appearing unexpectedly around corners. Juni was completely relaxed, as were the rest of the dogs. The humans, on the other hand, were all pretty excited.

After close to eight hours of successful CAT work, the true test was yet to come. We headed back to our respective homes, waiting to hear from Jolanta on how Juni would do back home in his own 'hood.

Dog in CAT city

The first report was promising. Jolanta called it in from her cell phone before she even got home. Juni saw a dog through the car window and did nothing! Prior to all the CAT work, this would have elicited a full-scale aroused eruption.

Jolanta continues to send glowing reports about Juni. He's not letter-perfect, but is behaving far better around other dogs than he ever did in his pre-CAT experience. According to Jolanta, they have encountered more than 100 dogs per week since their return to Brooklyn, and experienced only six full-scale "explosions." In 30 of the encounters, Juni growled or barked or exhibited some degree of tension. In almost every "tense" episode, Juni calmed himself quickly without intervention from Jolanta. Most happily, Jolanta says, "More than 60 encounters with approximately 70 dogs were characterized by responses ranging from complete indifference/nonchalance to active interest, to mild alertness that didn't shade into tension."

When asked how many of these incidents she estimates would have previously resulted in escalation to eruption, she answered, "Most of the 'tense' encounters would likely be explosions of one degree or another. I would not have seen *any* nonchalance though I would have had a lot of success distracting him with food."

I believe the CAT program has significant value for certain dogs; it could mean a much brighter future for a lot of dogs who are currently under house arrest and strict management programs. I'll be looking for additional appropriate applications for CAT. I have another client who wants to try CAT on her dog, and I fully intend to use it with Dubhy, our dog-reactive Scottie, the next time my husband and I want to introduce a new dog to our pack, if not sooner.

Pat Miller, CPDT, is WDJ's Training Editor. Miller lives in Hagerstown, Maryland, site of her Peaceable Paws training center. Pat is also author of The Power of Positive Dog Training; Positive Perspectives: Love Your Dog, Train Your Dog; *and* Positive Perspectives II: Know Your Dog, Train Your Dog. *See "Resources," page 24.*

Floored

Remember, when it comes to floors, vinyl is suspect; linoleum is safe.

I just finished reading "Why Vinyl Stinks" (WDJ April 2007). While I think the article is wonderful, there is a problem with the reference to "vinyl linoleum flooring." The descriptions "vinyl" and "linoleum" are frequently and incorrectly interchanged or combined.

Linoleum is a natural material, made from linseed oil (flax oil) and wood pulp or cork dust and backed by burlap or canvas. It is considered a "green" or "sustainable" building material. If there is anything synthetic added, it is no longer considered linoleum flooring.

This may seem silly to point out, but since the idea of "green building" and "sustainable design" are still in the infancy stages among most people, this case of mistaken identity could really turn people off to a great material. Armstrong, maker of arguably the best-known linoleum flooring, in fact has a partnership and is certified with Leadership in Energy and Environmental Design (LEED), an organization created by the U.S. Green Building Council, which sets the benchmark for "green" design. I hope that you may clear this up to the readers so those who may have linoleum flooring can rest easier and those who don't might be introduced to this safe alternative to vinyl flooring.

Julie Gianesini
Via e-mail

Thanks for pointing out my editing error. I know that linoleum and vinyl flooring are different, and that linoleum is considered safe and vinyl is questionable. Still, somehow, I let the phrase "vinyl linoleum flooring" get past me. Maybe it was the fumes from all the vinyl products I had in my office for research for the article!

Your article about vinyl may have solved a mystery for me, but one regarding my finches, rather than my dog. I have enjoyed keeping caged finches in my home for many years. Until recently, I had seven Society Finches and two Star Finches in one very large cage. One morning, I awoke to find five of the finches had died; no explanation presented itself that I could determine. After reading your article, I realized that one thing was new: About five days prior, I had placed a flexible "plastic" mat over the cage bottom. The material has a distinctive, strong odor. I am now wondering if this material released a volatile toxic gas, resulting in the death of my finches.

Letitia Annis
Green Pond, NJ

The material you enclosed obviously contains plastic softening agents, which can release toxic compounds. I can't say that this is what killed your finches, but I share your concern and suspicion, and avoid buying products like these for my home.

Thanks for the articles on EFT, directed energy, and acupressure in your series on energy medicine (October 2007-February 2008). A combination of these therapies has helped a chronic problem my dog has had for about six years. She was evaluated for intermittent vomiting and/or loose stools by five conventional veterinarians. Until early March, I was giving her Metronidazole two times a week, but it was only a temporary fix. In a short time after she received healing energy and acupressure, the problem was remedied. I went for two EFT sessions to help with my own shoulder condition and found relief.

Antoinette, Rochester, NY

The Whole Dog Journal™

RESOURCES

BOOKS

WDJ Training Editor Pat Miller is author of three books: ***The Power of Positive Dog Training; Positive Perspectives: Love Your Dog, Train Your Dog,*** and ***Positive Perspectives: Know Your Dog, Train Your Dog.*** All of these books are available from DogWise, (800) 776-2665 or dogwise.com

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

TRAINING AND INSTRUCTION

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

Association of Pet Dog Trainers (APDT)
(800) 738-3647; apdt.com

Certified Pet Dog Trainers (CPDT)
Sorry, no phone number available; ccpdt.org

Truly Dog Friendly Trainers
Sorry, no phone number available;
trulydogfriendly.com

BEHAVIOR PROFESSIONALS

Certified Dog Behavior Consultants
Sorry, no phone number available; iaabc.org

Certified Applied Animal Behaviorists
Sorry, no phone number available;
certifiedanimalbehaviorist.com

WHAT'S AHEAD

Frozen Food Review
A meaty story about this burgeoning segment of the pet food market.

Puzzling Pups
Toys designed to occupy and stimulate your dog.

High-Tech Teeth
What veterinary dentists can do for your dog's smile (and, more important, his ability to chew properly).

Calming Touch
How to use acupressure to calm and relax hyper dogs.

How to Keep Training Fun
Does the thought of "dog training" bore you to tears? If so, it probably bores your dog, too. Here is how (and why) you should keep training fun – and continue it throughout your dog's lifetime.

More About Melamine
A human nutrition expert discusses the pet food crises of 2007.