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The Whole



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A monthly guide to natural dog care and training

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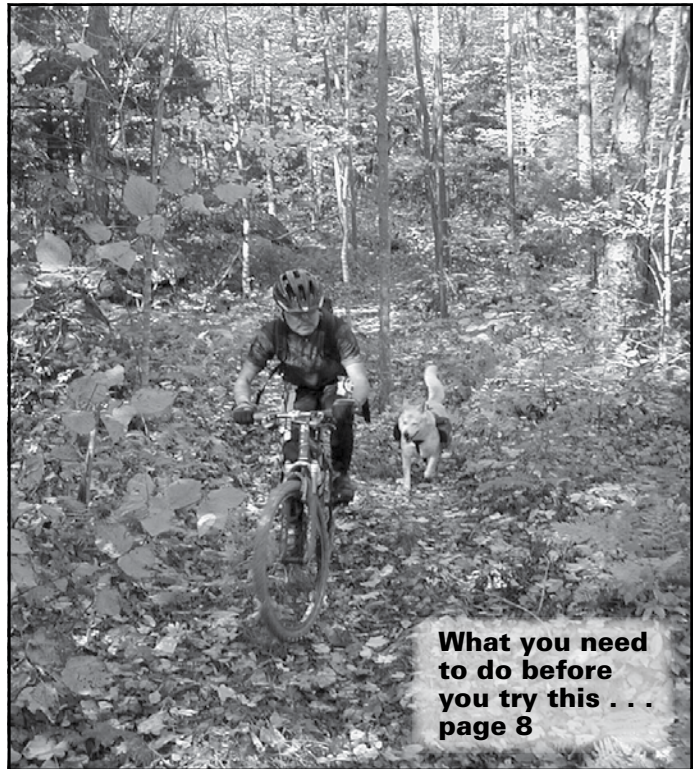
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Disaster Prevention

Knowledge may save your dog.

BY NANCY KERNS

Our resident training expert, Pat Miller, often sends me dog-related news articles; she's practically a one-woman canine news service!

A couple of months ago, she sent me a disturbing article about a dog who was euthanized after attacking his owner, who had been trying to clip his nails. We agreed that we should remind our readers why they should regularly trim their dogs' nails – and how to use positive training techniques to teach their dogs how to absolutely *love* the process. Her instructive article appears on page 3.

One important aspect of the sad story of the euthanized dog was that his owner had previously used intimidation to force the dog to go along with the practice. When he growled at her, expressing his discomfort and fear with the process, she told him "No!" Pat reminds us why a dog owners should *never* scold or punish a dog for growling. (It doesn't make the dog feel any better about what he's growling about, and if you succeed in suppressing his growl, you've just eliminated the only warning you might get before he bites you in the face of overwhelming stress.)

Last month, experienced triathlete Susan Sarubin described how to safely start a running program with your dog. This month, she discusses cycling with canines; we will present her article on swimming your dog in an upcoming issue. I should note that Sarubin largely disapproves of one practice that I indulge in regularly with my dog, Otto: mountain biking with him off-leash. I learned a lot from her

warnings about this activity, and while I plan to continue our bike rides, I *am* going to put some of her suggestions into practice.

Some readers have asked me about how my dog Otto is doing; I haven't said much about him in the past two issues. I appreciate your interest, and share an updated report on his continuing progress (and occasional setbacks) in "Social Matters," on page 14.

Also in this issue is a primer on what is sometimes a devastating disease: EPI, or Endocrine Pancreatic Insufficiency, written by a dog owner with first-hand experience with the disease. See "Starving, Not Starved," on page 17.

Corrections

In "Choosing Good Foods," in the February issue, we listed Taplow Feeds as the company that sells FirstMate Pet Foods. FirstMate is manufactured in the company's own plant, which is called Taplow Feeds, but the company name should have been listed as FirstMate Pet Foods. We apologize for the error.

We also failed to include one company on our "2009 Approved Dry Foods" list, whose information we had obtained and whose products we admire. Champion Petfoods Ltd., of Morinville, Alberta, makes its Orijen and Acana (high-protein, low-carb) dry dog foods in its own plant. See orijen.ca or call (780) 939-6888 for more information.

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.

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Do My Nails . . . Please!

How (and why) teach your dog to love having his nails trimmed.

BY PAT MILLER

Two months ago, I read a news story about a dog owner in Minnesota who had shared her home and her life with her 10-year-old Great Pyrenees for eight years. On December 30, 2008, the dog attacked his owner as she was trying to trim his nails, sending her to the hospital for multiple bite wounds to her arms. The news report on the incident stated, “[The dog owner] was able to reach another room and closed the door, keeping the dog out.”

The owner in this sad story was treated and released from the hospital the same day. The dog is now dead – euthanized at the veterinary hospital for safety reasons, at the owner’s request.

Nail-trimming should not be a matter of life and death. Nor should any other routine grooming procedure. If a dog objects strongly to any sort of physical contact or restraint that may occur in the process of



It often takes quite a bit of time and patience to teach your dog to actually enjoy having his nails trimmed, teeth brushed, and other uncomfortable but necessary grooming procedures. But the effort will pay a lifetime of benefits.

ordinary care, a smart, responsible owner needs to take immediate steps to overcome his objections in a positive, nonaversive manner. Fortunately, this process (described in detail below) is not difficult (or dangerous!) to do – but it does take a *serious* commitment of time.

Why not use force?

Most of us are pressed for time, and many dog owners may squirm at the thought of yet another dog-care duty that requires the investment of a lot of time (in addition to other training and exercise chores). So why not simply restrain the dog and firmly tell him “No!” if he growls or otherwise objects to the pedicure or other grooming?

The news story of the Minnesota woman and her Great Pyrenees is sadly instructive in this regard. The article I read quoted the dog’s owner as saying

that the dog had always been “very, very touchy” about his paws. She even said he had attacked “mildly” before, but she had been able to get him to stop. “He would growl, and generally I could say, ‘Stop it,’ and get him to stop,” she was quoted as saying. “This morning, it didn’t stop.” She then went on to say that for reasons that remained “unclear,” the dog attacked her.

Wait a second. This dog has been telling her for *eight years* that he didn’t want her to touch his paws. The owner lays out all the reasons the attack occurred, and then says the reasons for it are unclear? How much clearer could it be? This is a classic example of a human totally ignoring her dog’s attempts to communicate with her, this time with a very tragic ending.

Stress is the underlying factor behind almost all aggression – idiopathic aggression being the rare exception (see

What you can do . . .

- Commit to making nail care an enjoyable experience for you and your dog rather than a tedious (or dangerous) chore.
- **Never** punish or admonish your dog for growling; he’s giving you valuable information.
- Engage the services of a *positive* training/behavior professional if you think trying to work with your dog’s paws and nails is too risky.
- Practice a minimum of five times a week, 15 minutes per session, until you and your dog *love* nail trimming.



“Rage Without Reason,” WDJ June 2004). We know that suppressing aggressive behavior doesn’t change aggressive behavior; it just drives it underground where it simmers, likely to smash its way out when the stress becomes too great and pushes the dog over his bite threshold – like it did with this Great Pyrenees. In this dog’s case, at age 10 (advanced age for the giant breeds), there may also have been additional stressors such as arthritis, or other age-related conditions. If grasping his paws to clip nails caused him pain, that would have been an additional stressor that further exacerbated his reaction.

Don’t get me wrong. I’m not condemning the owner’s decision to euthanize a dog who caused her serious injury. It’s difficult,

if not impossible, to repair a dog-owner relationship that has been damaged this badly. Rehoming a 10-year-old dog with a history of aggressive behavior isn’t generally realistic, either. The real tragedy was the eight years that led up to the final act in this drama – eight years in which the dog tried as best he knew *without* hurting his owner, to tell her that nail trimming made him very uncomfortable. Eight years during which the owner *could* have modified his behavior, rather than suppressing it.

Suppressing behavior

Behavior suppression is a regrettably popular approach to behavior modification in some circles today. This is partly a carryover from old-fashioned training

methods. It has also experienced a large resurgence in popularity due to its regular use on a high-profile television show. But its popularity is also bolstered by the fact that, sometimes, it works.

There is something inherently satisfying to us humans when we tell someone to stop doing something and they stop. At least for the moment. What it *doesn’t* do is change the underlying motivation for the behavior.

Dogs do things that are reinforced – the behavior either makes a good thing happen (positive reinforcement), or makes a bad thing go away (negative reinforcement). A dog is motivated to *do* a behavior because it works to do one of those two things. They are also motivated to *stop* doing

Counter-Conditioning and Desensitization to Touch

We often use counter-conditioning and desensitization (CC&D) in behavior modification to change a dog’s association with an aversive stimulus from negative to positive. The easiest way to give most dogs a positive association is with very high-value, (really yummy) treats. I like to use chicken – canned, baked, or boiled, since most dogs love chicken breast meat and it’s a relatively low-fat, nutritious food.

Here’s how the CC&D process works for a dog who is sensitive to having his paws touched:

1. Determine the location where your dog can tolerate touching without reacting fearfully or aggressively. Perhaps it’s her shoulder, perhaps her elbow, or maybe her knee. She should be a little worried, but not growl or try to move away. This is called the *threshold*.
2. With your dog on leash, touch her briefly and gently at

threshold. The instant your dog notices the touch, start feeding bits of chicken, nonstop.

3. After a second or two, remove the touch, and stop feeding chicken.
4. Keep repeating steps 1 to 3 until touching at that location for 1 to 2 seconds consistently causes your dog to look at you with a happy smile and a “Yay! Where’s my chicken?” expression. This is a *conditioned emotional response* (CER): your dog’s association with the brief touch at that location is now positive instead of negative.
5. Now you need to increase the intensity of the stimulus by increasing the length of time you touch her at that same location, a few seconds at a time, obtaining a new CER at each new time period before increasing the time again. For example, several



Each dog is different, and will have issues about different aspects of a nail-clipping procedure. “Turtle” is very comfortable with having her paws touched and grasped, but is immediately uncomfortable when clippers are brought onto the scene. That’s where her CC&D program will start.



First, trainer Sandi Thompson, of Berkeley, California, gives Turtle treats for maintaining her proximity to the trimming tool (left). She does not go further until Turtle is displaying the desired “conditioned emotional response” (CER) – a bright, enthused look, without concern for the clippers.

behaviors that are punished – the behavior makes good things go away (negative punishment), or makes bad things happen (positive punishment).

Aggression, which is initially an emotional response to stress, can be influenced by reinforcement and punishment. Over the years, that Great Pyrenees's growling in response to having his paws touched was probably negatively reinforced at least some of the time, since wise humans back off when a dog growls. The dog learned that *sometimes* people stopped touching his paws if he growled. Intermittent reinforcement makes a behavior very durable. When a behavior is reinforced *sometimes*, it's hard to make that behavior go away.

However, sometimes the dog's growl-

ing *didn't* work. Not only did his owner continue to mess with his paws, when he got more forceful about trying to make the bad thing go away, his owner got violent in response. So the positive punishment stopped the aggressive behavior for the moment, but it didn't make it go away, and it didn't alter the dog's underlying emotional response to the procedure that stressed him. The violence suppressed the behavior, but it didn't change it.

Modifying behavior

If instead of suppressing his aggression in response to paw handling, his owner had taught the Great Pyrenees to *love* nail trimming, the pair wouldn't be mentioned in this article. But another dog and owner

well might be. I dare say there are thousands upon thousands of dogs who don't like having their nails trimmed, and whose discomfort signals in response to the procedure have been suppressed. Their lives – and their humans' lives – would be much happier if someone took the time to do a little behavior modification.

My own personal canine behavior science lab gives me plenty of nail-trimming material to work with. Three of our four dogs weren't too happy about pedicures when we first acquired them. Two of the three were unhappy about having their *paws* touched, much less having their nails trimmed. Dubhy, our Scottie, suffered from severe allergies when we found him. His paws were raw and bleeding. No won-

repetitions at 2 to 4 seconds, until you get consistent "Yay!" looks, then several repetitions at 4 to 8 seconds, then several at 8 to 12 seconds, etc., working for that consistent CER at each new duration of your touch.

6. When you can touch her at that spot for any length of time with her in "Yay" mode, begin to increase the intensity of stimulus again, this time by moving your hand to a new location, 1 to 2 inches lower than your initial threshold. I suggest starting at your initial touch location and sliding your hand to the new spot, rather than just touching the new spot. Continue with repetitions until you get consistent CERs at the new location.

7. Continue gradually working your way down to your dog's paw, an inch or two at a time, getting solid CERs at each spot before you move closer to the paw.



Sandi asks Turtle to "shake hands" while staying close to the clippers. Usually, Turtle loves to "shake," but her expression shows she's a bit worried about doing this while the clippers are close by. Sandi gives Turtle delicious treats for progressively longer and longer handshakes until Turtle seems to forget about the clippers.

8. When you get below the knee, also add a gentle grasp and a little pressure to the procedure – each is a separate step in the CC&D procedure. Continue working down the leg, all the way to the paw.

9. When you can touch, grasp, and put pressure on the paw, add *lifting* the paw.

10. If your goal is happy nail trimming, start the process over, this time with the nail clipper in your hand. Show the clippers to your dog and feed her a treat, until the appearance of the clippers elicits a "Yay!" response. Then do CC&D with the clipper action – squeezing the clippers to make the sound and motion it would make if you were actually clipping nails.

Go through the whole touch sequence again, this time with the clippers in your hand, also touching her with the clippers, then again while you squeeze the clippers. Remember that you still feed yummy treats and obtain CERs throughout the whole process. When you can hold her paw and squeeze the clipper action next to her nail with a happy response, clip one nail, feed lots of treats, and stop. Do a nail a day until she's happy with that, then advance to two nails at a time, then three, until you can clip all her nails in one setting.

The more complex the stimulus, the more successful the dog's avoidance or aggressive strategies have been, and the more intense the response, the more challenging the behavior is to modify. Take your time. As my good friend and excellent trainer Jolanta Benal once said to me, "In behavior modification, if you think you're going too slow . . . slow down!"



It's often worth the extra expense to try different types of clippers. Many dogs are more concerned about one type of tool than others.

der he was sensitive about them! Lucy the Corgi, on the other hand, is just generally touchy about being touched. Bonnie the Scorgidoodle is fine about touching, even her paws, but doesn't like the restraint and pressure on her nails that goes along with the clipping. Here's how we "fixed" each one:



When a dog's nails get too long, they become more difficult to trim without "quicking" him. They can also cause him considerable discomfort when he walks. Over-long nails make the dog's toes bend every which way – even when he is standing still!

◆ **Lucy (sensitive to all touch):** Since Lucy was touch sensitive in general, I used counter-conditioning and desensitization to help her overcome her dislike of being touched on her legs and body. (See "Counter-Conditioning and Desensitization to Touch," previous pages). This also included other grooming procedures – brushing, looking at her teeth, and cleaning her ears – as well as giving her a positive association with restraint and hugging. Our ultimate solution to nail trimming involved the use of her "Wait" behavior. After we had completed her paw/nail clipper-touch desensitization protocol, I did the following:

1. Told Lucy to "Down" and "Wait."
2. Placed a yummy treat 12 inches in front of her nose.
3. Clipped one nail.
4. Told her "Take it!" so she could jump up and eat the treat.
5. Repeated steps 1 through 4 for each subsequent next nail.

She now absolutely *adores* the nail clipping procedure, and I clip multiple nails in between "Take it!" cues, always keeping it random so she never knows which nail clip will result in the treat cue.

◆ **Dubhy and Bonnie (unhappy about having paws touched):** I also did a paw/clipper touch desensitization protocol with Dubhy, until he was comfortable having his paws touched and his nails trimmed. However, he and Bonnie both have those awful, dense, black toenails that require heavy pressure on the clippers, which they both found aversive despite counter-conditioning. Plus, it's devilishly hard to

know where the quick is on a solid black nail, and despite my most careful attention, from time to time I managed to "quick" them both. You can imagine how painful (and aversive) that must be – and how much of a setback that is even to the most careful modification program (see "A Quick Recovery," next page).

I had to overcome a negative association of my own to implement the ultimate solution to Dubhy and Bonnie's nail-trimming challenge. A decade ago while conducting a nail-trimmer product review for *Whole Dog Journal* ("You Nailed It!" February 1999), I tested a nail-grinder. One of my dogs, the wonderful Josie, was a terrier-mix with hairy feet, and I neglected to keep her fur pulled back from the grinder. It got tangled in the mechanism and yanked painfully on her paw. I've been reluctant to use a grinder ever since. Yet I knew it was the right answer to my current two dogs' nail trimming difficulties, so I bucked up and tried it, using a nylon stocking over their paws to hold back their fur. (The nails poked through a hole in the stocking toe for grinding.)

After some desensitization to the sound of the grinder, both Bonnie and Dubhy are much more comfortable with nail trimming (and still get lots of treats). Their nails look better than they ever have in their lives – and we're all much happier!

Note: The "as seen on TV" battery-powered nail grinders are inexpensive, and have a built-in guard that prevents hair from tangling in the grinder. However, they're not very powerful, so it takes a while to get the job done and you go through a lot of batteries. The more expensive models that you can find in pet supply stores, catalogs, and Web-based pet supply businesses are worth the extra cost.

Operant conditioning

I often hear dog owners say, "I don't need to trim my dog's nails; she runs on pavement (or rocks, or sand) and keeps them worn down herself. "Great," I think to myself – and sometimes say out loud. "When your dog becomes a less-active senior citizen and no longer wears her nails down, then you'll face the battle, when it will be even more challenging after all those years to convince her to let you hold her

paws and trim her nails."

If you prefer to let your dog file her own nails, there's an operant conditioning approach that will still work when your dog is in her golden years. Positive trainer Shirley Chong in Grinnell, Iowa, suggests taking a board 8 to 12 inches wide and 24 to 26 inches long, covering it with slip-proof tape or coarse sandpaper, and teaching your dog to paw at the board to file his own nails. She describes the procedure in detail at shirleychong.com/keepers/nailfile.html. I haven't tried this procedure yet myself, but I bet all my dogs would enjoy some shaping sessions learning how to do this; it sounds like great fun!

The bottom line is, there are a lot of things the owner of the Great Pyrenees could have done over the years to help her dog tolerate, accept, even *love* having his nails done. If she had, he'd be alive today. If *your* dog doesn't like having his nails done, don't wait; help him learn to love the procedure *now*. Don't let nail trimming kill *your* best friend. 🐾

Thanks to Sandi Thompson, of Bravo!Pup Puppy and Dog Training, in Berkeley, California, for demonstrating counter-conditioning and desensitization techniques. For contact information, see "Resources," page 24.

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; Positive Perspectives II: Know Your Dog, Train Your Dog; and Play with Your Dog. See page 24 for contact and/or book purchasing information.

A Quick Recovery: What to Do When You Accidentally Draw Blood

Few dog owners, even longtime animal care professionals, can truthfully testify that they've never "quicked" a dog's nail. If you never have, you're either extremely skilled or lucky, you've had someone else "do" your dog's nails, or you're relying on your dog to wear his own nails down on rough surfaces.

The "quick" is the live part inside the nail – with lots of sensitive nerve endings and a generous blood supply. If you've ever torn your own nail off below "ground level" you have an inkling of how awfully painful it is for your dog when you misjudge and cut the nail too short, causing it to bleed. Your dog's own reaction probably told you that you hurt him – a lot! It's no wonder that dogs often find nail trimming aversive.

Nail trimming is an important husbandry practice to teach your dog to love – or at least happily tolerate. It's even more important to do counter-conditioning and desensitization if he's already had a bad experience by being quicked. Your modification program will need to proceed even more slowly to help him overcome his fears.



Every time you cut his nails, keep styptic powder ready, to stop any bleeding that may occur.

grab the container of styptic powder that you should have on hand and dip the tip of the nail in it to stop the bleeding. Then do some calm touching – massage, TTouch, or some touch-and-treat counter-conditioning at the point closest to his paw that your dog will let you touch him. Don't feel compelled to do any more clipping. You don't even need to touch or handle his paws if that's too hard for him. Just do some gentle, slow touching and positive reinforcement until he's relaxed and calm, then release him to entertain himself. Careful! When he moves around (or if he licks it, which is okay for him to do) the nail may start bleeding again. Don't leave him to his own devices on your living room carpet.

Once the initial trauma is over, it's time to repair the damage to his association with nail trimming:

■ Make sure your clippers are *super* sharp (or use a nail grinder). I prefer guillotine-style clippers with replaceable blades. Sharp blades put less pressure on the nail, so you can gently cut off thin slices of nail.

■ Use counter-conditioning to teach your dog to love the sight of the clipper. Let him see the clipper in one hand, and feed him a *very* high-value treat from the other. Hide the clipper, stop feeding. Repeatedly present the clipper and feed a treat, until his eyes light up when he sees the tool, and he looks at your other hand for his goodie.

■ Set several pairs of clippers in various locations around the house. (You can use your old, dull ones for this.) Leave one on the kitchen counter. Show it to him when you pick up his dinner bowl, and set it on the floor next to his bowl when you feed him. Keep one in the entry by the hook where you hang his leash. Show it to him, then pick up his leash and take him out for a walk. Keep one on the end table next to the sofa where you watch television. When a commercial comes on, pick it up and feed him a treat.

■ When you can see proof that your dog thinks the nail clipper is a wonderful predictor of good stuff, work through the counter-conditioning and desensitization protocol on pages 4-5, until he's happy to have you hold his paw and touch his nails with the clipper.

■ When a dog's nails grow long, the quick grows out inside the nail, so if your dog's nails haven't been done for a while, be very conservative. When you start to actually trim his nails, shave just a *thin* slice – especially if the nails are black and you can't see the quick. Take a tiny bit off one nail, feed your dog some treats, and stop. Note: When you clip thin slices off each nail, watch the texture of the nail.

When you are far away from the quick the nail is hard and dry. As you get close to the quick it becomes softer.

■ Do another session two to four hours later, working up to cutting a thin slice off the next nail. You can do several sessions a day if you have the time, one nail at a time – as long as your dog is comfortable with the procedure. If he starts to get tense about it, back up to previous steps in the protocol and work back up to the actual trimming, even more slowly this time.

■ As you continue to shave off slices daily and your dog continues to accept the trimming, gradually increase the number of nails you do each session, until you can clip an entire paw, and ultimately all four paws at one sitting.



Don't try to clip super-long nails down to a nice short nail in one session; it's a sure recipe for "quicking" the dog, and making future sessions even more difficult.

Bike With Your Dog

Two tires and four paws add up to more cycling fun!

BY SUSAN SARUBIN

You walk your dog several times daily, but it never seems to be enough exercise for your energetic pup. It probably isn't. Healthy dogs need to run, and walking just isn't an aerobic enough exercise for them. Running with your dog is a great aerobic exercise, but many people can't run or simply don't like running.

So how about biking with your dog? If you love to ride your bike and have a dog who loves to run, you may have considered sharing your rides with your best friend. Fresh air, exercise, time spent together having fun and creating your own adventures – it doesn't get much better than that. And it seems so simple, right? Just you, your dog, a bike, a leash, and the open road, and you're on your way.

Well, not exactly. But riding a bike with a running dog as a companion *can* be done

safely. You just need to be willing to put in the time for training, invest in the proper equipment, and follow some safety rules to make the activity both fun and safe for you both.

Before you get started

If you and your dog are just beginning to exercise regularly or more strenuously, physical exams by your respective doctors are advisable. Safety precautions regarding age, breed, weight, and thickness of coat are the same as those for dogs who are beginning running programs with their running humans (see "Running With Your Dog," WDJ February 2009).

Check with your vet about when your young puppy's growth plates are expected to close so you won't risk injuring your puppy's development by beginning a structured exercise program too soon. Some

medium and large breed dogs are built for running endurance, but others, especially smaller breeds, can only run slowly for shorter distances. And as with all new forms of exercise, beginning slowly and building up duration and distance over time, no matter what condition you and your dog are in, is the safest way to go.

Equipment for the cyclist

If you don't already have a bike, your local bike shop is a good place to start to figure out what type of bike will suit your needs for the terrain you plan to ride on. If you will ride on mainly paved roads, dirt roads, well-mowed fields, and smooth bike trails, then a hybrid bike may be your best choice. If you want the option of riding more rugged bike trails on which you must negotiate rocks, branches, streams, and tree roots, then a mountain bike is in order. You can still ride on more gentle terrain with a mountain bike, however you may want to replace the knobby tires with more slick ones if you plan to spend more time on the road. The bike shop staff can fit you for the proper size bike and make any adjustments necessary for a comfortable fit.

A helmet is the single most important piece of safety equipment for any cyclist at any level, from beginner to elite. Riding without a helmet is an invitation for a head injury, or worse, from a slow-speed tumble to a more serious crash or collision. Feeling the wind in your hair as you ride is not worth the risk of brain injury or death should you hit your head in a fall. And think of your dog's safety. What exactly will happen to your dog while you lie unconscious after a crash?

Bright colored cycling clothing, a water bottle or two, spare tube, tire pump, tire repair kit, identification, money, and a cell phone are all safety items that you should have with you when you and your partner head out. Further equipment for the human half of the cycling duo has more to do with comfort than safety. Unless your



There are three different products available that fasten to your bike's frame and allow you to safely lead your dog on a ride. See "Resources," page 24, for contact information for the makers of these products, including this one, the K9 Bike Jogger (formerly known as WalkyDog).

bike comes with a big, cushy saddle, you will appreciate the extra cushioning that padded bicycle shorts will afford. You can also put a more comfortable saddle on your bike, or add a gel-filled seat cover.

Beginners commonly use running shoes or light hiking boots, but cycling shoes designed specifically for the sport are recommended. They are rigid and allow minimal flexion of the foot. If you continue to use a more flexible shoe on your bike, over time you may experience foot problems. Your bike shop staff can recommend the best shoe for your needs.

Equipment for the dog

For your dog's safety, a colorful, reflective collar with ID tags and a reflective vest for high visibility are recommended. But there is one critical piece of equipment you need to invest in to assure that cycling with your dog is as safe as possible.

You may have seen someone riding his bike while holding his dog's leash in his hand on the handlebars. Or perhaps with the leash tied to the seat post of the bike. Both of these practices are unsafe for you and your dog and may result in tragic consequences.

When you ride while holding a dog's leash in your hand, the dog can easily pull you off balance causing a crash, or you could collide with your dog if he runs in front of your front tire. If he lags behind, you may be pulled backward, possibly falling and sustaining an injury. Then there's the possibility of the leash becoming entangled in the wheel spokes, perhaps resulting in serious injury to you both.

Attaching your dog's leash to the seat post, your center of gravity when you ride, makes pulling a little less of an issue, and is therefore considered safer by some cyclists. While never testing this theory, I know that I wouldn't have a chance of staying upright if Aero, my 98-pound Rhodesian Ridgeback, were to suddenly lunge for a squirrel while attached by leash to my seat post. And other dangers, like your dog getting too close to your bike and become entangled, are still present.

So how then, can you ride safely together? Fortunately, there are some devices on the market designed to facilitate a safer, more comfortable ride with your canine companion. Bike attachments such as the Springer, WalkyDog, and BikerDog allow you to keep both hands on your handlebars while keeping your dog at a safe distance from your bike.

The Springer attaches to the frame of your bike and the WalkyDog attaches to the seat post. Both use coil spring shock absorbing mechanisms to reduce the effect of a dog pulling. The BikerDog attaches to the frame of your bike near your rear wheel and uses a flexible, hard plastic post to control pulling.

Each device attaches by a cord or leash to the dog's collar or harness. For greater safety, use a harness to put less stress on the dog's neck. The BikerDog comes with a harness, but the WalkyDog and Springer do not (the Springer used to come with a harness, but no longer does). It's best to use your dog's own well-fitting harness with all of these. And you can attach two of these devices to your bike if you are interested in biking with two dogs at once (one on each side of the bike).

Many users of these bike attachments are not only happy with the increased safety they provide, but also claim that their dogs stay focused on running beside the bike and attempt to pull less than when walking on leash.

Bike attachments for cycling with your dog install on either side of your bike. Which side your dog runs on is a matter of preference. If your dog is accustomed to walking or running on your left side, this may be the most natural position for training for bicycling. However, there are other considerations, especially if you ride on roads. As a pedestrian, you should walk or run *against* (facing) traffic. Having your dog on your left side when on foot keeps your dog safely away from passing cars. But moving vehicles, including bikes, are required by law to travel *with* traffic, on the right side of the road. Your dog is in a more vulnerable position running on the left side of your bike next to traffic.

Initial training

Try to remember your first experiences riding a bike. You may have graduated from a tricycle to a two-wheeler, and just the sight of the two-wheeler may have caused a little anxiety. Getting on it was even scarier. Mom or Dad probably held the bike while you tentatively pedaled for the first time, and it took most of us a couple of sessions before we were ready for Mom or Dad to let go of us. Even when finally pedaling on our own, we had to learn to negotiate turns, slow down, stop, and many more skills and safety rules. At first we could only go for short distances on our bikes, but soon felt we could fly around the world!

To become a good cycling companion, a dog needs to go through a learning curve similar to the one you experienced as a child learning to ride your bike. Your dog should be comfortable around your bike, when you are both stationary and moving. He needs to be familiar with any equipment you use, and learn how to slow down, turn, and stop. And just as you started slowly on your first bike, the time and distance your dog accompanies you on bike rides should increase gradually.

Even if your dog is accustomed to seeing your bike leaning against the wall in your home or garage, it's probably viewed as just another piece of furniture (that you curiously remove from the house on occasion!). Some dogs are fearful of moving bicycles, so you may need to help your dog become comfortable around your bike.

In your house or garage, start by holding your bike, calling your dog to you, and allowing him to sniff it. Praise him, pet him, and give him a yummy treat to reward his bravery. Lay your bike down, sit on the floor next to your bike, and repeat the exercise. You can even place treats on the tires, the frame, and the pedals, playing a game with your dog while he begins to

What you can do . . .

- Start out slow. Get your dog comfortable with a parked bike before walking him alongside a bike you are pushing. Only when he's comfortable with these things should you actually mount up and ride – slowly!
- Always wear a helmet when cycling. If you need one more reason to convince you, consider this: If you fell and were knocked out, what would happen to your dog?
- Ride at a conservative pace, for short distances, until your dog builds fitness.
- If your dog's enthusiasm or speed lags, stop and investigate. Offer him some water, and slow your pace on the way home.



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associate this strange machine with having fun. Next, walk a few steps with your bike and encourage your dog to follow, using praise and treats. Continue to practice indoors, eventually adding your dog's harness and leash, and moving outdoors only when your dog is comfortable walking alongside you and your bike.

Outdoors, repeat the same walking exercise on-leash. Gradually add in some distractions: walk over a curb, over the lawn, on top of a utility hole cover, over a speed bump, through a puddle. Move the bike so it wobbles, make some turns, walk faster then slower, even jog a little. If your dog shows any signs of apprehension, you have progressed too quickly. You may need to practice over several days before your dog will happily walk alongside you and your bike with distractions. When your dog handles these challenges with ease, teach him some cues for behaviors that you will use to guide him when you ride, such as "Slow," "Stop," "Easy," "Turn," and "Leave It."

Starting to ride

Now that your dog walks happily next to you and your bike on-leash, it should be no problem to switch to the cord or leash of a bike attachment such as the Springer, WalkyDog, or BikerDog. Continue to practice walking with your dog attached to your bike, and if he shows no signs of uneasiness, get on your bike and pedal slowly. If you have gradually accustomed your dog to moving with your bike, he will likely be happy to trot alongside you. Take him for a slow, short excursion, using lots of encouragement, praise, and treats.

Future rides should increase slowly in time and distance, working up to a steady trot. After several rides together, you will begin to develop a feeling for your dog's natural pace. Your dog may try to keep up until he drops, never showing signs of discomfort, no matter what speed you ride. It is important for you to let him set the pace. After your dog is in good running shape, you can add some brief accelerations, bringing your dog to a gallop. But use a comfortable trotting pace for the bulk of your rides.

The frequency, distance, and duration of your rides with your dog depend on many factors. Age, breed, size, fitness level, coat, running surface, and weather should be considered. Keep your dog well-hydrated, familiarize yourself with the symptoms of heatstroke (see "Running

With Your Dog," WDJ February 2009), inspect his paw pads often, check for harness chafing, and watch for signs of lameness or waning enthusiasm. Increasing distance and duration slowly will help prevent soreness and injury, allowing your dog's respiratory and musculoskeletal systems to adapt to increasing workloads.

Where to ride

Riding with your dog on roads with traffic is dangerous. While the shoulder of a road may safely accommodate you when riding alone, your width triples when you attach a dog to your bike. You are a much larger target around road curves and for careless drivers. Being honked at constantly by impatient motorists may also scare your dog, and it definitely takes some of the fun out of your ride!

If you live in a rural area with lightly traveled paved or dirt roads, you are in luck, as long as you are still cautious of passing vehicles. But even if you live in a densely populated area, there are safe options for biking with your dog, some closer than you may think. You may need to load your dog and bike into your car for a short drive, but for a safe, fun ride with your best buddy, it's worth it.

If you live close to a linear park (former railroad beds converted for recreation), you have access to perhaps the best place of all to bike with your dog. Trail surfaces may be dirt, wood chips, soft cinder, or paved, but most continue for miles of flat, scenic riding. Quiet neighborhoods with little traffic, especially on certain days or times,

are another good choice.

Taking your dog with you when biking on rugged terrain presents more challenges. It's difficult and dangerous to negotiate obstacles with your dog attached to your mountain bike, especially on single-track trails. And even the most experienced mountain bikers have occasional falls or crashes. Injury to both rider and dog could result from one of these mishaps.

Allowing your dog to run off-leash, if allowed, on remote mountain bike trails presents its own set of problems. Mountain biking is more physically demanding and it is difficult to keep track of your dog with the increased concentration necessary when riding on rugged trails. Your dog may take off after a bird or animal and get lost or injured in the chase. There's the danger of snakebites. Being free to drink in streams and puddles can lead to an infection of giardia, an intestinal parasite that can cause serious illness. And it is more difficult for you to determine your dog's comfortable pace, possibly leading him to exceed his running limits.

The *idea* of allowing your dog to run freely in the woods with you is better than the *reality* of biking with your dog off-leash. If you love to mountain bike, consider leaving your biking partner at home on those rides and schedule other rides together in safer locations.

Bicycling for non-athletes

You don't have to deprive yourself of your buddy's company on your rides if your dog is a toy breed, has special needs, or is an

Beware the "Bike Monster"

If you use a bike attachment to connect your dog to your bicycle, *never* walk away from your parked bike with your dog still attached to it. If your dog decides to follow you, or lunges after a passing squirrel, the bike will come crashing down. If you're lucky, it won't fall on your dog, but at the very least the crash will frighten him. Still attached, your dog will try to run away from the scary machine that crashed next to him. The bike then becomes a mechanical monster, chasing him as he tries to escape.

This could end your dog's career as your riding partner, unless you are able to desensitize him once again to something that he is now terrified of. So to keep the "bike monster" at bay, always detach your dog from the bike when you step away.



PHOTO BY LACY FOOS

Don't leave a dog tied to a bike; it can fall on him. (These well-equipped dogs are just posing; they haven't been left alone like this!)



older dog and no longer able to run.

There are all sorts of products available to help your dog enjoy accompanying you on your bike trips, including pet bike baskets, trailers, and sidecars; look on the Internet or ask the folks at your local independent pet supply store or bike shop. Accessories available include seat belts, dog helmets, and even goggles.

Assess the safety of any of these products before using them with your beloved companion – and be realistic about your dog's temperament, too. I've seen dogs who are electric with delight in joining their owners for a ride in a pet trailer, and I've seen others who have the same look of terror on their faces that I must have when riding on a roller coaster!

That said, most dogs can learn to enjoy your rides with training. Gradual exposure to your bike and trailer, creating a positive association with being in the trailer using lots of treats and praise, and slowly exposing your dog to movement in the trailer increase your chances of a successful outcome.

Sometimes, the safety precautions that we take to protect both humans and our companion animals may seem so cumbersome that they take all the fun out of some of our activities. But when it comes to the health and welfare of your dog when accompanying you on bike rides, taking the appropriate safety measures can potentially save your dog's life, as well as your own. Training, using proper equipment, and adhering to sensible exercise practices actually increase your enjoyment of the sport. "Fun" is knowing that you are keeping your dog as safe as possible while sharing your rides together. Enjoy! 🐾

For information about products mentioned in this article, see "Resources," page 24.

Susan Sarubin lives, bikes, runs, and trains dogs in Baltimore, Maryland. Her training business is Pawsitive Fit, LLC. Susan is also the Maryland State Coordinator for Rhodesian Ridgeback Rescue, Inc. See pawsitivefit.com for more information.

Riding Into the Woods Together?

There are serious risks in running your dog off-leash in the woods while you mountain bike on remote trails. If you feel the benefits outweigh the risks for your particular dog, please consider the following additional safety precautions:

- **Train your dog to respond to cues** that will help keep him safe when running loose in the woods while you are supervising from your bike. "Come," "Over Here," "Easy," "Leave It," and "Drop It" are behaviors that you can teach your dog at home and then practice on-leash while walking in the woods until he performs these behaviors reliably. If your dog ventures off on his own on the trails, he may endanger other cyclists as well as himself.

- **Bike with another cyclist.** If your dog is lost or injured, you will have someone to help find him, to go get help, or to help transport your injured dog out of the woods. And if you get injured, there will be someone to help you and your dog.

- **When entering a trail, walk your bike with your dog on leash for a safe distance** from the road before releasing him and beginning to ride. Always have your dog's leash available. You never know when you'll need it.

- **Outfit your dog with a bright neon reflective vest, or flashing light** that attaches to your dog's collar. Not only is it easier for you to spot your dog while riding, it distinguishes your dog as a pet to other cyclists, trail runners, or hikers, as opposed to a wild animal they may fear. And if your dog is lost and the sun sets, a flashing light may save his life.

- **Use a breakaway collar**, which could prevent serious injury (or even death) if your dog's collar snags on something when running. If this is a collar that you only use for your mountain biking excursions, make sure it has your dog's ID attached. All dogs should carry an implanted microchip ID or tattooed ID as a backup.

- **Attach a bell to your dog's collar** – that is, one that's loud enough to be heard at a reasonable distance. This will give you an auditory indicator of his whereabouts as you ride – as well as warn wild animals that your dog is in the area.

- **Or try one of the GPS pet tracking devices available**, so you can track your dog for a far greater distance.

- **Hydrate your dog regularly on your ride**, and train him not to drink from puddles and streams to avoid an infection of giardia, an intestinal parasite that may cause serious illness.

- **Take a pet first aid/CPR course.** It's a great idea for all dog owners, but even more so for owners of dogs engaging in higher risk activities.

- **Carry a small first aid kit**, with your other safety items, in your saddle pack (which attaches to your seat post under the rear of your saddle), in case your dog is injured and you are far from the trailhead. Stock your kit with antiseptic wipes, antibiotic ointment, cotton pads, vet wrap (to bandage a laceration, for a tourniquet, or to splint a broken bone), and some Rescue Remedy for calming your stressed dog. Your dog's leash can be used to muzzle your injured dog if needed.

- **Inspect your dog for cuts, scrapes, and ticks** after any outing in the woods. Cuts and scrapes may become infected if not treated. Even if you use a tick preventative and your dog is vaccinated for Lyme's disease, there are no guarantees when it comes to these nasty critters feasting on your dog and possibly causing disease.

Truly Healing Touch

Use the “Surrounding the Dragon” technique to help your dog heal.

BY AMY SNOW AND NANCY ZIDONIS

Maintaining a well-rounded training regime and providing incremental warm-up exercise before strenuous exercise are an important part of preventing injuries. But with any sport, the dog's enthusiasm and natural drive can lead to incidental and repetitive injuries, despite our best prevention efforts. That's why it's best to formulate an approach to dealing with our dog's injuries, *before* they happen.

With an injury that is severe and/or debilitating, a holistic veterinarian should be consulted immediately to diagnose the extent of the damage and prescribe treatment. Soft tissue injuries in particular can be deceiving, so have a veterinarian check your dog to be sure that no other issues or further tissue damage occurs.

After the holistic vet has seen your dog and made the necessary recommendations



Dogs who compete in fast-paced sports like agility may suffer injuries a few times in their careers. But ordinary active dogs may, too! Enforcing a slow warm-up period before strenuous exercise can help, but not entirely prevent injuries.

What you can do . . .

- Have a holistic veterinarian examine your dog after any injury debilitates your dog. More damage than meets the eye could have occurred, requiring surgery or other immediate treatment.
- Watch your dog during your acupressure session. If he grows uncomfortable, stop holding that point and move on to the next point, or offer another session another day.
- Concentrate on your “healing intention” for your dog while you work. Empty your mind of other distractions.



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or if the injury is a simple bruise or superficial abrasion, you can help expedite the healing process. Only the animal's body can heal itself – but you can play a role in helping to create the physical “environment” in which healing can take place in a balanced, healthy manner.

Healing with acupressure

Acupressure, like acupuncture, is based on traditional Chinese medicine (TCM) concepts that have helped heal animals and humans alike for more than 3,000 years. The basic principle underlying the healing process is that vital substances of the body nourish the body while moving harmoniously throughout the body. Two of the vital substances are *chi* (or *qi*), which is life-promoting energy, and *blood*, a nutrient-rich body fluid. In TCM, *blood* includes both the blood as identified in conventional medicine and other body fluids, such as synovial fluids in the joints or the nutrient-

rich fluid within the spinal column.

Any injury can cause disruption in the flow of *chi* and *blood*. Using acupressure points, also called “acupoints,” you can help re-establish the flow of *chi* and *blood* through an injured area thus creating the healing environment. The movement of *chi* and *blood* through the damaged tissue helps distribute the nutrients the body needs to heal quickly and well.

Surrounding the Dragon

“Surrounding the Dragon” is an acupoint selection technique that is specifically for enhancing the flow of *chi* and *blood* to and through a particular location on the body. This technique is used often as an effective tool for tendon and ligament joint injuries as well as for chronic issues such as arthritis and tendonitis.

The “Dragon” is the painful, raging injury, arthritic joint, or site of scar tissue formation, which blocks the flow of *chi* and

blood. Applying gentle pressure to specific acupoints surrounding the “offended” area stimulates the flow of the healing *chi* and *blood* while removing toxins and nourishing the tissues.

When Surrounding the Dragon, we stimulate acupoints located near – but not too close to – the insulted area because you do not want to “spank the crying baby.” This phrase is used in Chinese medicine to mean that you do not want to cause any further hurt when the area is already painful.

Acupoints and technique

The photos below provide acupressure point combinations that address injuries or issues related to the shoulder and hip. All of the acupoints identified are considered “local” points and directly address bringing *chi* and *blood* to the identified joint.

Surrounding the Dragon can bring more *chi* and *blood* to the afflicted area

whether it is an injury, scarring, or a chronic problem. These acupoint combinations can support the healing process, help reduce pain, and bring more flexibility to the limb. It’s an additional healing tool you can use when your dog suffers from a knock, repetitive injury, or twist, and you have followed your veterinarian’s recommendations.

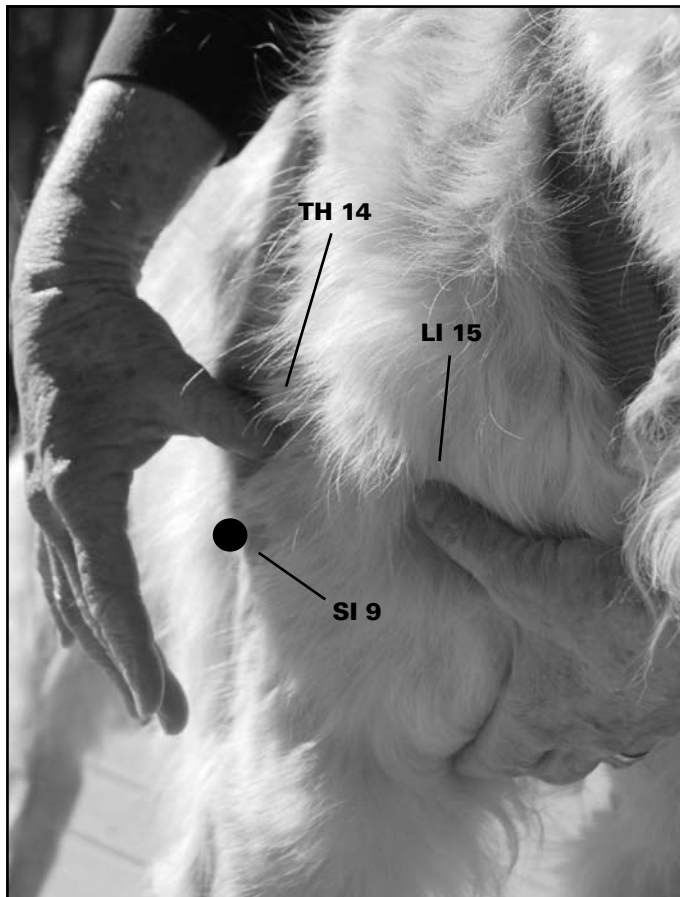
Points that surround the injured area can be stimulated simultaneously or in succession, one acupoint at a time. By stimulating a point, we simply mean applying gentle pressure to the point with the soft, fleshy portion of the tip of your finger and thumb.

Gently place your fingers on the acupoints shown in the photos below, while holding your intentions to relieve the dog’s discomfort in the forefront of your mind. You do not have to apply much pressure since this is energetic work, not manipulation of tissue.

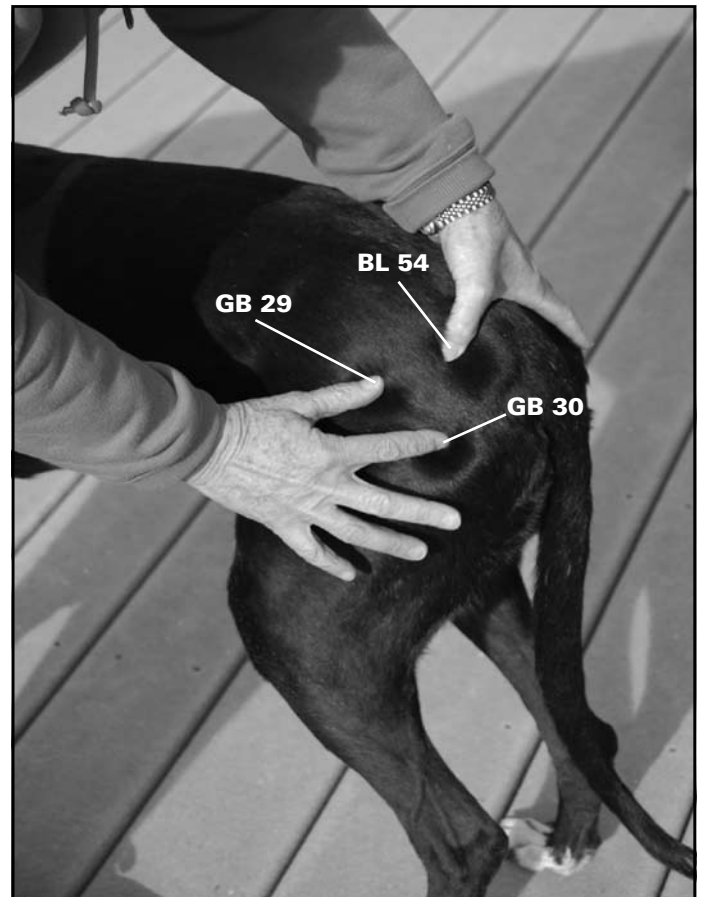
Continue your contact with the point while counting slowly to 30, or until the dog moves away or demonstrates some form of release. Energetic releases can include yawning, licking his lips, stretching, passing gas, demonstrating the need to move, or even falling asleep.

Remember to repeat this procedure on both sides of the dog. If the dog gives any indication of pain, stop immediately and work the points on the other side of the dog. If the dog continues to be uncomfortable, try again at a later date when the dog is not as sensitive. 🐾

Amy Snow and Nancy Zidonis are the authors of animal acupressure texts, including The Well-Connected Dog: A Guide To Canine Acupressure; and Acu-Cat: A Guide to Feline Acupressure. For more information about them or the numerous acupressure information resources they offer, see “Resources,” page 24.



It’s helpful to stimulate the following acupoints when your dog has any problem with his shoulder: TH 14, which is found at the shoulder, on the back edge of the deltoid muscle. Just below that, SI 9 is found in the large depression at the back edge of the deltoid muscle. LI 15 is in front of and above the acromion (the summit of the shoulderblade) and on the forward edge of the deltoid muscle.



These points, used when the dog has an acute injury or chronically sore hips, have been described as the “three bowling ball points” around the head of the femur: GB 29, located in a depression just in front of the greater trochanter (large bony protuberance) of the femur; BL 54, found just above that bony protuberance; and GB 30, found in a depression below and behind the greater trochanter.

Social Matters

A dog's friends and acquaintances are important to his development.

BY NANCY KERNS

Otto has gotten short shrift lately, poor guy. My husband and I had the brilliant idea of undertaking a minor home remodeling project over the holidays – just the bathroom! As is often the case with all-consuming home improvement projects, the dog was left to his own devices more than he should have been for a number of weeks.

Months ago, that would have been a recipe for disaster; Otto would have excavated half the yard and chewed up everything he could have gotten his mouth on. But he must be growing up; even after a few weeks of minor neglect, the only thing he chewed up was *one* of my husband's high-top leather work boots. Amazing, considering the number of tools and wood and paintbrushes left lying around.

He amused himself largely with a new obsession: running along our back fence with our neighbor's two-year-old German Shepherd Dog, Schotzie. Our lot is about 80 feet wide, and both dogs share a mostly unimpeded path along that entire boundary, with just an ivy-covered five-foot-high chain-link fence between them. They are both young, active, and bored (the neighbors have a new baby). So, up and down they go, thundering through the

mud, whining with frustration and excitement. It could be worse; they could be fence-fighting and barking (and maybe, if we remodeled the *entire* house, it would advance to this). But they seem to enjoy each other. And at least they are both getting exercise!

I've tried to talk Schotzie's owners into letting her come over to play with Otto – and I was successful exactly twice – but they are worried about her “hurting” him. Apparently, on the few occasions when they have taken her someplace where there were other dogs, she “attacked” another dog. She played wonderfully with Otto. But I believe their stories; from what I can observe as a work-at-home neighbor, they hardly ever take her anywhere and she is getting less and less socialized.

It's frustrating, because I've seen this phenomenon several times; in fact, it seems like every time I've seen a busy family get a young, big, active dog who hardly ever gets out, the dog's behavior with other dogs gets worse and worse until they feel they can't safely take the dog anywhere.

I've tried to tactfully describe this syndrome and its possible solutions to Schotzie's people. They are a young educated couple, and very nice. The mom listens, but the dad appears to have his own

strong ideas about dogs and dog training, and I can tell he has to put some effort into politely not-hearing what I have offered.

I get it. Few of us enjoy being subjected to unsolicited advice about our dogs – it's like having some stranger tell you how you should deal with your toddler when he's acting out in the supermarket. How likely is it that you could say something like, “Oh, okay! Thanks! I never thought of that!” On the other hand, I can clearly see the impending train wreck that often – *usually* – results from the social isolation of a large, high-drive dog. So, I'm trying to strike just the right note – respectful, friendly – while casually giving them information to consider.

Could be the start of a beautiful friendship

A few months ago, Otto and I were just coming in from a bike ride when we saw the neighbors walking Schotzie. The mom had the baby in a front pack; the dad had his hands full with Schotzie, who had recognized her friend (Otto) and was pulling hard to get to him, despite her prong collar. I raced to put Otto and my bike through my front gate, and called to them. “Oh! Hi! Hi Schotzie! Can she come and play? Please?” As the dad looked sort of unconvinced



Schotzie stands tall, leaning forward slightly in an assertive posture. But her tail and ears are at half-mast, and her gaze is indirect. All in all, she's sending a neutral mix of signals. In contrast, Otto is unabashedly playful. His tail is up, but not stiff. His posture is low and inviting, and his facial expression is only cartoonishly aggressive.



Both dogs are signaling a playful intent. Both keep their posture low and loose, with a curved body shape (as opposed to straight and stiff). The tails are waggy. Schotzie lifts a front paw (a classic “soft” gesture) and Otto is about to lower himself into a play bow. They are playing around the toys, but not guarding them.



This sort of face-biting can't be mistaken for aggression. Schotzie is not hurting or intimidating Otto; though her grip on the side of his face looks firm, he's relaxed and having fun. Otto's tail is up, which can signal tension, but it's loose, not stiff. He's also lifting a front paw. They look like wonderful (and regular) play partners.

(and Schotzie was going crazy), I pressed on, exaggerating, “Gosh, Otto has been so full of beans, and I’ve *tried* getting him tired with a bike ride, but he’s just such a handful!” He relented, though he worried out loud, as he was leading Schotzie in the gate as I held Otto back, “I just hope she’s okay. She can be pretty rough!”

“I’m not worried about Otto at all,” I reassured him. And I wasn’t. Otto has really terrific canine language and play skills; I’ve *never* seen him lose his cool with other dogs. If he gets overwhelmed or bullied, he’ll defend himself with a momentary growl and a snap, but immediately shakes it off and looks for someone else to play with. I’m not taking credit for this; he came equipped with a strong play drive! (Although I *do* work actively to preserve and protect this trait, by giving him lots of social time with other nice dogs.)

The second the dogs were turned loose, they took off across the yard like meteors. Otto *loves* being chased, and he had the home field advantage, knowing his yard intimately. Schotzie’s owners and I laughed and thoroughly enjoyed watching the two big dogs joyfully race and leap and wrestle. “Oh, we’ve got to do this again!” I enthused. “This is so great! Look at how happy they are! And they will both really sleep tonight! Thanks so much!”

A few days later, I heard the mom calling to Schotzie, as our two dogs once again ran the fenceline. “Hi there!” I called over the fence. “Hey! Can Schotzie come over and play again?”

“Sure!” she called back. “That would be great! I’ll bring her over.”

The two dogs had even more fun playing this time. I opened my side gates, so they could race from the front yard to the back, and run loops around the house, which they did with delight. I took dozens



Schotzie is getting tired, and she lies down to take a break. She’s not entirely comfortable with Otto, though. She does not flop down and ignore him, but stays focused on him as she pants for air. He’s struck an assertive pose, standing tall over her and sort of in her face, with his ears forward.

of pictures of them as they played. They spent about an hour running and wrestling and playing with Otto’s toys.

I was just putting Schotzie’s leash on to take her home when the mom walked up to the front gate to get her. “They had so much fun!” I told her. “Any time you want to tire her out, give me a call; they are really great together! And, oh! Here is an article about why dog play is so good for them.” And I gave her a copy of an issue of WDJ that contains Pat Miller’s brilliant article on the importance of purposeful socialization (“Plays Well With Others,” March 2000).

Was that too pushy? I didn’t *think* so, but they haven’t taken me up on any further “play date” invitations. Once, while talking to the mom about neighborhood stuff, I asked again if Schotzie could come over and play, and she said, “I’ll have to ask my husband first. We took Schotzie to a picnic recently, and she bit this other dog really badly, and now he’s really concerned about taking her places.”

Argh! I don’t know why it’s so hard to understand that dogs will only get worse without opportunities to socialize, whether they are truly aggressive or, more likely, fear-aggressive. Looking through all the pictures of our two dogs playing, Schotzie’s body language looks anything but aggressive. I suspect she’s had so little experience socializing that she gets scared and overwhelmed and “attacks” out of fear. She didn’t “attack” Otto, perhaps, because she was familiar with him (albeit through the fence) and because he puts out such clearly playful signals; he seems to lack any tendency to bully other dogs.

Well, at least they have the fenceline. Which, as I said, does actually help tire Otto out, especially when he’s not getting enough walks and hikes.



She’s too tired to respond playfully, and she directs her gaze past him, so as not to engage him. But she sits up tall so he doesn’t charge into her face again. He gets the message, as he approaches her again, looser, lower, curved. He licks her lips and lifts a front paw in submissive gestures.

What you can do . . .

- If your dog has social difficulties, seek out a professional, positive trainer to help guide you in some remedial socialization. Dogs who “can’t be taken anywhere” often lead sad (or short) lives.

- *Frequently* practice those skills that you want your dog to maintain (like loose-leash-walking). Remember to help your dog “generalize” these skills by practicing in different environments.

- Carefully observe your dog at the dog park. Leave before he gets overwhelmed, or when he’s getting bullied by other dogs.



A trip to town

At the height of the holiday season, we took a few days off from our remodeling project and spent some time with relatives back in the Bay Area. Brian really wanted to leave Otto in Oroville, and have a pet sitter watch over him. But I couldn’t wait for the opportunity to bring Otto to some of my favorite Bay Area doggie hot spots, like the trails in the East Bay Regional Parks, and the dog parks in Alameda and at Point Isabel in Albany. And I really wanted some of my Bay Area friends to get to meet him!

We had a blast! Otto and I took one or two long walks every day, and he got to enjoy some of the best the Bay Area offers a dog, including visits to pet supply stores that offer cookies to canine visitors.

The only part of his “Christmas vacation” that he didn’t really enjoy was the very first part – where I took our often-outdoors dog to a do-it-yourself dog wash, to get him ready for a week of apartment living. He forgave me when I let him pick out a new stuffed squeaky toy to carry out of the store. I also bought him some rawhide chews; I found a place that sells the nicest rawhide chews I’ve ever seen: a roll made from a single “sheet” of extremely thick hide, made by Wholesome Hide. (I’ll be reviewing rawhide chews in the next issue; look for more on what makes a

chew “the best rawhide I’ve ever seen” in April.) I didn’t want him chewing up my friends’ and relatives’ stuff while a guest in their homes.

As it turned out, he behaved himself like a prince. He was probably too tired to get into too much trouble! He did rearrange many of the shoes in the house where we were staying, when we left him for the longest time. It was Christmas day, and we had dinner at the home of my pet-allergic brother-in-law and his pet-allergic wife. When we came home, we found 12 or 13 shoes, belonging to every member of the household, piled neatly by the front door along with a rawhide.

It was so neat, in fact, that I actually didn’t notice it at first; lots of people leave shoes by their front doors. But when I found one of my sneakers on the pillow of the bed that I had been sleeping in, I investigated further. That’s when I found the other sneaker by the front door, along with lots of other shoes, in pairs and singles. Fortunately, he didn’t chew a single one of them, just carried them about. Given the lack of damage, it was sort of fun, returning everyone’s shoes to their proper places.

The only thing about having Otto “in town” that disappointed me was discovering that we really need to practice walking on-leash more. In Oroville, I only have his leash on for the few blocks that it takes to get to the trailhead where I can walk him off-leash. We work on his leash-walking manners on the way to the trail. On the way home, tired, he’s always perfect on the leash, and though I reward him for this, it’s hardly necessary!

During our stay in the Bay Area, with the exception of his time in a dog park or on our two East Bay Regional Park hikes, he had to be on leash. Whether it was due to anxiety over a new setting, a lack of daily free time in a backyard, or just the sheer number of miles we walked on-leash, he pulled a lot more than he does at home. I carried treats with me, and tried to pay attention and reinforce him when he *was* walking quietly by my side. But I was walking with friends I hadn’t seen for a while, and talking, and not focusing exclusively on Otto. It’s time to go back to class, I guess.

Socializing with city dogs

At least once a week, I take Otto to a dog-park-like setting in the nearby town of Chico, California. It’s actually a genetic resource and conservation center for the

Mendocino National Forest; it’s where they grow trees that produce the seeds used to replant forests. The best part is that it’s 200 fenced acres where people are allowed to walk their dogs off-leash. There is even a creek that runs through the middle of it, and dogs are welcome to splash through and swim in it. It’s awesome.

Many area dog owners take their dogs there for exercise and socialization, but it lacks the insular, intense feel that some crowded, urban dog parks can have. Mostly, dog owners walk a trail on the perimeter of the property. When you encounter dogs and people going the other way, or you pass somebody, it’s customary to allow the dogs to greet and play for a few minutes, and then walk on. Every so often, you meet another dog with the exact same play style and interest in playing that your dog does, and you might linger with them a good bit longer, or even walk the perimeter with them. It’s very relaxed and spacious – and I’ve noticed that the environment really promotes relaxed and happy dogs. I’ve never seen a dog fight there, or heard a dog owner screaming at another dog owner.

I wish I could say the same for urban dog parks. I’ve been there and seen that before; Otto hadn’t, and he was a bit overwhelmed. On his first day at a two-acre park, a huge black dog (a Puli-mix, maybe?) repeatedly rushed him in a fairly intense manner, barking loudly, and he wouldn’t stop even when Otto dodged and bowed playfully. He only stopped when Otto ran 30 yards away or so.

Otto looked a bit mystified, but shook it off to find other playmates. In five trips to that park, though, he only found one dog that he really got into playing with, a young Husky female who was just as into chasing and bouncing games as he was. Many of the dogs were obsessed with fetching and couldn’t be bothered, or were older and grumpy. And a few were bullies! Like the big black dog, they seemed intent on rushing over to new dogs and inflicting their stamp of dominance on them. Otto would kind of hold his ground, neither rolling over submissively nor giving back any resistance,

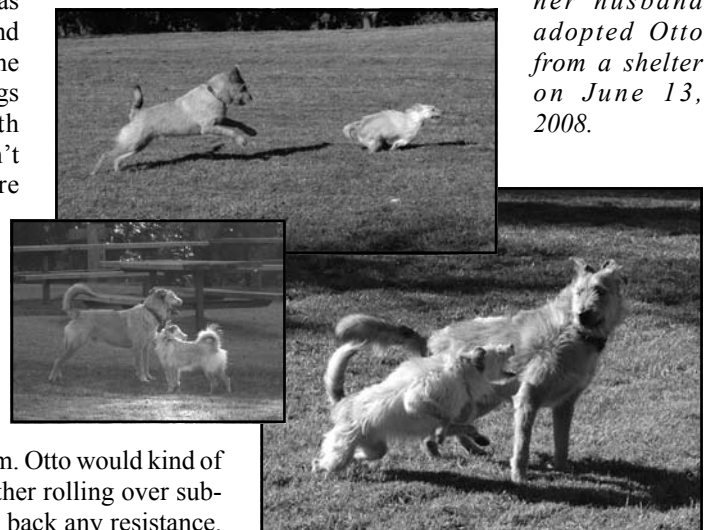
but as soon as he was “released,” or another dog approached to distract the bully, he’d hightail it for someplace else.

He had the same reaction at another, larger (but if anything, even more densely populated) dog park, when he heard a dog owner screaming at another dog owner after a bit of a scuffle involving half a dozen dogs. He had rushed toward the scuffle, getting there just as it broke up, and then looked plain astonished when the people started yelling at each other. Whoa! He gave them the same look he had given the big black dog and ran back toward me. I probably had the same expression on my face! Yikes! Let’s get out of here!

Seriously, I kept these urban dog park trips short; I could see they were a bit overstimulating after 20 minutes or so. Otto’s eyes would get a glazed look, and his tongue would look pasty and dry, even after drinking. He’d still be running around, but not in a joyous, bouncy way; he looked kind of hunted and distracted, even if no dog was chasing him. That was my signal to call him back and leave the park.

The most fun Otto had “on vacation” was during the two off-leash hikes we took with my friend Sandi Thompson (a Berkeley-based trainer who often models for our training articles) and her dog, Turtle (that’s them on pages 3-5). Turtle looks like a Mini-Me of Otto, a smaller, blonder, nimbler terrier-mix with an oversized ego *and* sense of humor. Otto found her fascinating, if a bit challenging. I’ll leave you with photos of their playtime together. His dismayed expression in the last one makes me laugh out loud every time I see it! 🐾

Nancy Kerns is Editor of WDJ. She and her husband adopted Otto from a shelter on June 13, 2008.



Starving, Not Starved

Exocrine Pancreatic Insufficiency (EPI) prevents absorption of food.

BY OLESIA C. KENNEDY

Janis Fitzhugh, a member of the Almost Home organization, knew she had to rescue Pandy, an extremely thin and seemingly vicious four-year-old Dachshund. Pandy had been relinquished to a shelter in Orange County (California), who turned her over to Southern California Dachshund Rescue. Deemed people- and animal-aggressive, Pandy appeared to have been starved, and weighed just 13 pounds. Fitzhugh thought the dog deserved a break, and brought Pandy home in May 2007.

During the first couple of weeks in her new home, Pandy managed to pull a chicken down from the counter and proceeded to eat the entire bird, including bones, plastic tray, and grocery bag, in less than the 10 minutes that Fitzhugh was out of the room. Pandy was rushed to the vet and emergency surgery was performed, as the bones had ruptured her stomach lining in three places. Luckily, she survived.

Pandy's voracious appetite, large voluminous stools, and aggressive disposition were all caused by a medical condition called exocrine pancreatic insufficiency (EPI). With Fitzhugh's loving care, including enzyme supplements and a change of diet, Pandy stabilized. Within a year, Pandy had transformed into a beautiful, funny, 26-pound Dachshund who gets along great with all the human and animal members in the Fitzhugh household.

What is EPI?

Exocrine Pancreatic Insufficiency, or EPI, also referred to as Pancreatic Hypoplasia or Pancreatic Acinar Atrophy (PAA), is a disease of maldigestion and malabsorption, which when left untreated eventually leads to starvation. One of the major difficulties with this disease is in the prompt and accurate diagnosis. Astonishingly, **visible symptoms may not appear until 80 to 95 percent of the pancreas has atrophied.**

What you can do . . .

- When you see or hear about an apparently starved (or extremely thin) dog, please let the owner know about EPI. Few people know that it can affect any breed.
- If your dog's digestion is poor, with frequent diarrhea, consider having him tested for EPI. Visible symptoms of the disease may not appear until 80 to 95 percent of the pancreas has atrophied. Early diagnosis and treatment improve his prospects.



There are two primary functions of the pancreas:

- (1) Endocrine cells produce and secrete hormones, insulin, and glucagons.
- (2) Exocrine cells produce and secrete digestive enzymes.

EPI is the inability of the pancreas to secrete digestive enzymes: amylase to digest starches, lipases to digest fats, and proteases to digest protein. Without a steady supply of these enzymes to help break down and absorb nutrients, the body starves. When EPI is undiagnosed and left untreated, the entire body is deprived of the nutrients needed for growth, renewal, and maintenance. In time, the body becomes so compromised that the dog either starves to death or dies of inevitable organ failure.

Incomplete digestion causes the continual presence of copious amounts of fermenting food in the small intestine. This can lead to a secondary condition that is common in many EPI dogs, called SIBO



Pandy was found in a shelter, aggressive and seemingly starved. A year later, with a new owner, an EPI diagnosis, and treatment, she looks and feels great.

(small intestinal bacterial overgrowth). If an EPI dog has a lot of belly grumbling/ noises, gas, diarrhea, and sometimes vomiting, she most likely has SIBO.

The condition occurs when the “bad” bacteria that is feeding on the fermenting food overpopulates the tissue lining the small intestine, further impairing the proper absorption of vital nutrients and depleting the body’s store of vitamin B12. Treatment of SIBO includes a course of antibiotics, to eliminate the bad bacteria. **Treatment may also include supplemental cobalamin (B12) injections that help reestablish friendly bacteria colonies, which in turn helps inhibit the malabsorption.**

Severity of the disease may vary, making it even more difficult to diagnose. EPI can be subclinical (no recognizable symptoms) for many months, sometimes even years, before it worsens and becomes noticeable. The symptoms can be exacerbated by physical or emotional stress, change of food or routine, and/or environmental factors. The most common symptoms include:

- Gradual wasting away despite a voracious appetite.
- Eliminating more frequently with voluminous yellowish or grayish soft “cow patty” stools.
- Coprophagia (dog eats his own stools) and/or pica (dog eats other inappropriate substances).
- Increased rumbling sounds from the abdomen, and passing increased amounts of gas.
- Intermittent watery diarrhea or vomiting.

Due to the lack of absorbed nutrients, the body starves: muscle mass wastes away, and bones may also be affected. An EPI dog’s teeth may be slightly smaller, and older EPI dogs appear to have a higher incidence of hip dysplasia. Every part of the body is at risk, even the nervous system (including the brain), which in turn wreaks havoc with the dog’s temperament. Some EPI dogs exhibit increased anxiety, becoming fearful of other dogs, people, and strange objects.

With hunger as an overwhelming force, many dogs act almost feral. Desperately seeking vital nutrition, many ingest inap-

Many EPI Dogs Flourish

Kara surfaced as a stray in a shelter and was subsequently turned over to the Long Island Shetland Sheepdog Rescue group. When they received her, they did not expect her to survive the night, she was so sick and emaciated. They guessed that she was probably one to two years old, but she weighed barely seven pounds, half her ideal weight.

Kara was lucky; she was diagnosed promptly with EPI. While in foster care for four months, Audrey Blake met Kara twice during training classes and the frail little dog with the outgoing personality captured her heart. Although she understood that Kara would need pancreatic enzymes for every meal and a special diet, Blake took Kara home. Today, Kara is known as “U-CD Twenty Four Karat Gold, UD, TDI, CGC (Kara), Rescue Sheltie,” and happily resides with Blake on Long Island, New York.



propriate items, but nothing gets absorbed. As the disease progresses, the deterioration becomes quite rapid. Some dogs lose interest in any activities, preferring to just lie down or hide somewhere. Many owners of EPI dogs become increasingly frustrated, as they feed more than normal amounts and yet their dogs continue to waste away before their eyes.

Since chronic loose stools are usually the first visible symptom in an EPI dog, most vets will prescribe an antibiotic to destroy what they suspect to be harmful intestinal bacteria. Owners are happy because the problem appears to go away, at least for a while. No one has any reason to investigate further, until the loose stools return or the dog starts losing weight, and then the merry-go-round cycle begins. Vet visits become numerous and costly, and one possible diagnosis after another is suggested. Expenses may include testing (and retesting) for giardia, coccidiosis, and other parasitic diseases; x-rays; ultrasound; MRI; antibiotics; and even surgery.

EPI testing

Until recently, EPI was most prevalent in German Shepherd Dogs. For this reason, a vet may fail to consider EPI as a possible diagnosis in other breeds and not pursue EPI testing: a trypsin-like immunoreactivity (TLI) blood test. TLI measures the dog’s ability to produce digestive enzymes. The test is done following a fast of 12 to 15 hours, and costs about \$100.

Although other laboratories can run the TLI test, most blood samples are analyzed

at Texas A&M University. The lab recently revised its reference ranges: values below 2.5 are now considered diagnostic for EPI. Results between 3.5 and 5.7 may reflect subclinical pancreatic disease that may ultimately lead to EPI. When values are between 2.5 and 3.5 $\mu\text{g/L}$, Texas A&M recommends repeating the TLI test after one month, paying particular attention to the fast before the blood sample is collected.

Even when a dog tests positive for EPI, it is important to retest TLI after the dog stabilizes following treatment. For example, chronic inflammation can put such a strain on the pancreas that the production of digestive enzymes ceases or is greatly reduced. Consequently, when the TLI blood test is analyzed, it accurately depicts lack of enzyme production, even though the dog may not actually have EPI. In this case, it is important for the dog to be treated with pancreatic enzymes until his condition is stable. Enzyme treatment breaks down the food, allowing the stressed albeit non-EPI pancreas to recuperate and, in time, start producing the enzymes needed to digest foods.

Dorsie Kovacs, DVM, of Monson Small Animal Clinic in Monson, Massachusetts, has seen some young dogs with false-positive EPI readings. Even when they display the lighter-colored “cow patty” stools, something other than EPI may be the cause. Sometimes a food allergy or an overabundance of bad bacteria has irritated or inflamed the pancreas, temporarily inhibiting enzyme production. In these situations, says Dr. Kovacs, it’s important to put the

dog on a pancreatic enzyme supplement for two months, allowing the stressed pancreas to heal. The dog should then be retested to either confirm or rule out EPI.

In addition, Dr. Kovacs says, “It is also important to introduce good gut flora (bacteria) by adding yogurt, green tripe, or supplements such as Digest-All Plus (a blend of plant enzymes and probiotics). Good gut flora should continue to be maintained with supplements even after the inflamed or irritated pancreas has healed.” Dr. Kovacs has also noticed that some dogs with food allergies (especially dogs who are fed kibble) show rapid improvement when their diets are switched to raw or canned food. Raw meats contain natural enzymes, and fresh vegetables support the growth of good bacteria in the dog’s gut.

Managing EPI

Most dogs with EPI can be successfully treated and regulated, although customizing the dog’s diet and supplements may involve much trial and error.

Enzyme supplementation is the first step in managing EPI. The dog will need pancreatic enzymes incubated on every piece of food ingested for the remainder of his or her life. The best results are usually obtained with freeze-dried, powdered porcine enzymes rather than plant enzymes or enzyme pills. Plant enzymes and enzymes in a pill form do work for some, though with enzyme supplements, as with diet, much is dependent on the individual EPI dog. Some of the most widely used prescription enzyme supplements are Viokase, Epizyme, Panakare Plus, Pancrease-V, and Pancrezyme. Bio Case V is a non-prescription generic equivalent.

Enzyme potency is measured in USP units. Prescription enzyme powders range from 56,800 to 71,400 units of lipase; 280,000 to 434,000 units of protease; and 280,000 to 495,000 units of amylase per teaspoon.

Pancreatic enzymes are also available as generic pancreatin. Strengths of 6x10, 8x10, etc., indicate that the dosage is concentrated. Thus, a level teaspoon of pancreatin 6x10 contains 33,600 units of lipase and 420,000 units of protease and amylase, comparable to prescription enzyme products.

Some EPI dogs have allergies and cannot tolerate the

ingredients in the most common enzyme supplements. Those owners learn to develop alternative methods such as using plant enzymes, or a different source of pancreatic enzymes such as beef-based (rather than porcine-based). Raw beef, pork, or lamb pancreas can also be used. One to three ounces of raw chopped pancreas can replace one teaspoon of pancreatic extract.

The starting dosage of prescription enzymes is usually one level teaspoon of powdered enzymes per cup of food. As time goes on and a dog stabilizes, many owners find that they can reduce the amount of enzymes administered with each meal, sometimes to just ½ teaspoon, although some EPI dogs require an increased dosage of enzymes in their senior years.

Enzymes need to be incubated, meaning that you add them to moistened food prior to feeding, letting them sit on the food at room temperature for at least 20 minutes. Some owners find that incubation up to an hour or more works even better. Too often, EPI owners are instructed that enzyme incubation is not necessary; however, some dogs will develop blisters or sores in their mouths from the enzymes when they are not first incubated on the food.

How do you judge what works best for your dog? When dealing with EPI, everything is gauged by the dog’s stool quality. EPI dog owners are always on “poop-patrol.” The goal is to obtain normal looking, chocolate brown, well-formed stools. When your dog produces something other than normal poop, it indicates she is not properly digesting her food. Sometimes longer enzyme incubation helps. Other times using more or less enzymes (since too little or too much enzymes can both

cause diarrhea), changing the diet, treating a flare-up of SIBO, or starting a regimen of B12 shots solves the problem. Make only one change at a time. It is advisable to keep a daily journal as it may help you to identify the cause of a flare up or setback.

Prescription enzyme supplements can be very expensive. A \$5,000 per year price tag for enzymes is not uncommon for a large dog – but don’t panic! There are several ways to reduce this cost. My 40-pound Spanish Water Dog has the dubious honor of being the first of her breed ever to be positively diagnosed with EPI. When the TLI results came in, I felt like my world came crashing down. Izzy is my once-in-a-lifetime companion, and was very sick. Using information my vet gave me, I estimated that the enzymes she needed were going to cost me \$1,200 a year. She was just over a year old at the time, with an expected life span of 13 to 15 years. Eeek!

Today those enzymes cost me a mere \$200 a year. How? I joined an EPI support group and learned what others do to better manage the ongoing care of their EPI dogs. I buy enzymes from an EPI enzyme co-op that purchases enzymes in bulk and passes the savings on to owners who have a veterinarian-confirmed EPI dog. The savings from these bulk purchases can be quite substantial. (For both groups, see “Resources for Products Mentioned in this Article,” page 22.) Today, Izzy is a plump, active, happy dog who gives me more joy than any dog I’ve had in my 55 years. I would have paid whatever it cost to help her, but not everyone has this option.

Another solution that can dramatically save money is to obtain raw beef, pork, or lamb pancreas. Ask your butcher if he can get fresh pancreas, or check with meat inspectors in your state to find out if and where you can obtain fresh pancreas. A letter from your vet explaining why you need fresh pancreas may allow you to purchase it from a slaughterhouse. Fresh beef pancreas can also be ordered from suppliers such as Hare Today and Greentripe.com.

The suggested dosage of raw pancreas is 3 to 4 ounces per 44 pounds of the dog’s weight daily. The pancreas can be blended or finely chopped, then frozen into either cubes in an ice tray or “calculated by



The author’s Spanish Water Dog, Izzy, has the dubious distinction of being the first of her breed to be confirmed with EPI. However, with diligent management and adjustments to her diet and supplements, she’s doing very well.

the dog's weight" single meal amounts in Ziploc bags. Raw pancreas can be frozen for several months without losing potency. When ready to use, thaw and serve the raw pancreas with the dog's food.

A very important factor about enzymes – whether using raw pancreas, powdered pancreatic enzymes, or pills – is that all digestive enzymes work best at body temperature. Cold inhibits the enzymatic action while heat destroys it. Never cook, mix with very hot water, or microwave raw pancreas or supplemental enzymes.

Antibiotics are the next line of defense, in order to combat SIBO (bad bacteria growth that overtakes the growth of good bacteria), the secondary condition that frequently accompanies EPI. Tylosin (Tylan) or metronidazole (Flagyl) are the most commonly prescribed antibiotics, and they are usually given for 30 days. Some dogs have trouble with metronidazole due to possible side effects; in that case, Tylan is given. Be warned: Tylan is bitter-tasting, and many dogs refuse to eat their meals when it's added. There are tricks to deal with this. Some put the Tylan powder in gelatin capsules; I camouflage it for my dog by inserting the required dose in a small chunk of cream cheese. Not all EPI dogs can tolerate dairy, so the camouflage method should depend on the individual dog's tolerance.

B12 (cobalamin) injections are needed if the dog has very low serum cobalamin. A blood test is required to determine this, costs about \$31, and is best done simultaneously with the TLI test. Many EPI dogs cannot replenish B12 levels on their own, so B12 injections are used. B12-complex formulas are not recommended since they contain much lower concentrations of cobalamin and appear to cause pain at the injection sites. Generic formulations of cobalamin (B12) are acceptable.

The recommended cobalamin dosage is calculated according to the dog's weight and may be found on Texas A&M University website (see page 22). Your vet can show you how to give your dog subcutaneous (beneath the skin) B12 injections. What seems to work best are weekly injections for the first six weeks, then bi-weekly (every other week) injections for the next six weeks, and finally monthly B12 injections.

Feeding dogs with EPI

A common saying among those whose dogs have EPI is, "If you've met one EPI

dog, then you have met just one EPI dog." Even with pancreatic enzyme supplements, much of the health and well-being of each EPI dog depends on his diet. Sometimes all that's needed are supplemental enzymes and the standard recommended dietary modifications: no more than 4 percent fiber and no more than 12 percent fat (on a dry matter basis).

Sometimes it's much more complicated! Some dogs can tolerate much more fat. My dog, Izzy, for example, does extremely well on grain-free kibble with 22 percent fat content, well above the 12 percent range. Other dogs cannot tolerate even as little as 12 percent fat. The same applies to the fiber content. Some EPI dogs have unrelated food allergies, further limiting their diet.

Many dogs with EPI thrive on raw diets and some owners find that a raw diet is the only one that works for their dogs. Conversely, other EPI dogs cannot tolerate raw diets. Some owners successfully feed grain-free kibble, some make home-cooked meals for their dog, while others feed a combination of commercial and homemade.

When adding to or adjusting a diet, feed the dog tiny chunks of raw carrot with the diet. These carrot pieces will present themselves in the stools (for better or worse) of that meal's elimination. This helps you understand which foods/vitamins, etc., work well together and which don't.

Recommendations keep evolving and changing with new research, as well as the feedback from networks of owners of EPI dogs. A recent change in feeding recommendations concerns dietary fat. Multiple studies from the past decade indicated that a fat-restricted diet is of no benefit whatsoever to the EPI dog. A 2003 paper by Edward J. Hall, of the University of Bristol in England, states that there is experimental evidence to show that the percentage fat absorption increases with the percentage of fat that is fed. This may explain why some EPI dogs can tolerate higher concentrations of fat. For those dogs who cannot tolerate more than 12 percent fat, this may mean that the fat content needs to be increased very gradually, or perhaps that certain types of fat may be tolerated better than others. Much more research is needed to answer these questions.

Veterinarians usually recommend an initial diet of a prescription or veterinary food, such as Hill's Prescription Diet w/d, i/d, or z/d Ultra Allergen-Free; Royal

Canin's Veterinary Diet Canine Hypoallergenic Diet or Digestive Low Fat Diet.

Prescription diets that are made with hydrolyzed ingredients (carbohydrates and proteins that have been chemically broken down into minute particles for better absorption in the small intestine, leading to more complete digestion, better/faster weight gain, and firmer stools) appear to work for many EPI dogs.

However, these diets are usually starch-based (often almost 60 percent carbohydrates on a dry matter basis); the digestive system of a dog is designed more for fats and protein than for starches, which may be why many EPI dog owners achieve better results by reserving prescription diets for short-term use and feeding other diets over the long haul.

The best results for managing EPI requires combining veterinarian advice with the experience of actual EPI dog owners. Too many times, managing EPI can be a real roller coaster ride! For example, initial research studies showed that supplemental enzyme powders needed to incubate on the food. Additional research studies then suggested that food incubation with enzymes was no longer necessary. Consequently, some EPI dogs developed mouth sores, so owners are again being advised to let the enzymes incubate to prevent this side effect. Until the causes and effects of this disease are better understood, it will continue to be managed via trial and error.

General feeding guidelines

Enzymes should be mixed with about one to two ounces of room-temperature water per teaspoon of enzymes, then added to the food and allowed to incubate for 20 minutes or more. A couple of tablespoons of room temperature kefir or yogurt (or some other "sauce") may be used instead of water to mix the enzymes.

Once an EPI dog is stable, some owners find that they can "cheat" and give their dog a smidgeon of a treat without any enzymes on it. Others find the least little crumb ingested without enzymes will cause a flare-up.

If possible, feed two to four meals a day, taking into consideration whether the dog's condition has stabilized and whether the family's schedule can accommodate multiple feedings. Feeding smaller, more frequent meals puts less stress on the EPI dog's digestive system.

At first calculation, many owners of EPI dogs wonder if they can sustain the added

expense of all these “special foods” in addition to the enzymes. It may take many attempts to find just the right diet for a dog with EPI that is also affordable by the owner, but it can be done. Following are some suggestions and techniques that EPI dog owners have successfully used.

■ **Kibble or canned:** Many EPI owners who feed commercial kibble or canned dog food have found more success when feeding a grain-free product. Much depends on the individual dog.

When feeding kibble, many owners let the food and enzymes incubate until the food has an oatmeal-like consistency. Some even grind the kibble to allow for more surface contact with the enzymes. Some also add a teaspoon of pumpkin or sweet potato, which may help firm stools and reduce coprophagia; plus, both ingredients are packed with vitamins C and D. Sweet potato is also an excellent source of vitamin B6.

■ **Combination kibble and homemade:** Many owners feed a combination of commercial food and raw or home-cooked. EPI owners generally mix foods at a ratio of 20 to 80 percent. As always with an EPI dog, enzyme supplements should be mixed in with the wet portion of the food at room temperature and allowed to incubate.

Depending on each individual dog’s tolerance, any variety of meats and fish may be used. Sources of proteins can include beef, chicken, turkey, pork, venison,

rabbit, lamb, canned or cooked salmon, and jack mackerel, as well as eggs, yogurt, and cottage cheese. Organ meats, such as liver, kidney, and heart should also be included in the diet. Green tripe is another good option. Variety is key! Again, incubate the food with the enzymes and feed two to four times daily, depending on your individual dog’s needs and your own schedule.

■ **Raw and home-cooked:** Over the past few years, many owners have been able to stabilize their EPI dogs by feeding a raw diet. Raw food has the innate advantage of maintaining natural food enzyme activity that aids digestion. Many vets disapprove of feeding a raw food diet, especially to compromised dogs (possibly exposing them to further complications), while other vets suggest that raw is best for an EPI dog. There have been many anecdotal cases of dramatic improvement when the owners feed their EPI dog a raw diet, especially when all else fails.

Most EPI dogs cannot handle the 20 to 25 percent raw bone content in the diet that is commonly fed to normal dogs. With EPI dogs, it’s smart to start with only 10 to 12 percent of bone. Some dogs still have difficulty digesting this amount of the bone and the ratio will need to be reduced even further, to 3 to 5 percent bone. Note we are talking about the amount of actual bone, not the amount of raw meaty bones, which are usually at least half meat.

Vegetables may be a large or small portion of the diet, or not included at all,

depending on the individual dog’s tolerance. If included, they should always be mashed. Organ meats are usually recommended at 10 to 15 percent of the EPI diet, but again, not all dogs can tolerate this.

Supplements for an EPI diet

Whether you feed dry, canned, home-cooked, raw, or any combination, there are many other ingredients that may be added to provide additional benefits for EPI dogs.

Most EPI dog owners add coconut oil and/or wild salmon oil to their dogs’ diet. Many EPI dogs cannot digest other fats and develop dry, itchy skin or dry, brittle coats. Coconut oil contains medium-chain triglycerides (MCTs). Most vegetable oils have longer chain triglycerides, called LCTs. MCTs are utilized faster and burned more quickly for energy, raising the body’s metabolism, while LCTs are utilized more slowly. Also, coconut oil is one of the richest sources of lauric acid. Its benefits have recently been touted to aid in destroying various bacteria and viruses such as listeria, giardia, herpes simplex virus-1, and maybe even yeast infections such as candida.

Wild Alaskan salmon oil is an excellent source of omega-3 fatty acids, which help reduce inflammation.

Probiotics are another important addition to the EPI diet, especially since most EPI dogs are or have been treated with antibiotics because of SIBO. Antibiotics wipe out not only bad bacteria, but also good bacteria. Probiotics help maintain good gut flora. One popular brand of probiotics that has been successfully used by EPI owners is **Primal Defense**, but there are many quality probiotics available.

Zinc deficiency is another consideration with EPI dogs. It is difficult to accurately measure zinc absorption. Human EPI patients often develop a zinc deficiency, and though no studies have confirmed this to be true of dogs with EPI, many vets suggest a zinc supplement for EPI dogs.

Vitamin E (tocopherol) levels may also be low in an EPI dog due to malabsorption. Vitamin E is a fat-soluble vitamin that is an antioxidant and helps in the formation of cell membranes, cell respiration, and with the metabolism of fats. Vitamin E deficiency may cause cell damage in the skeletal muscle, heart, testes, liver, and nerves; supplementation with vitamin E can help prevent these problems.

Other natural nutrient sources that are

Sadly, Some Dogs Perish

At five years old, Wayde was taken in by German Shepherd Rescue of New England. Wayde was found to have EPI, an all-too-common problem with GSDs. He also had the secondary bacterial infection SIBO. Even with enzymes added to his diet, Wayde continued to drop weight until he was only 54 pounds and seemed sad and listless all the time.

Wayde was in the kennel for many months. Finally, a couple who was familiar with EPI, Pamela and Peter Burghardt from Wilmot, New Hampshire, decided to foster Wayde. In their home, his whole demeanor changed; he became happy and gained more than two pounds the first week. Wayde soon settled in with his foster family and became a sweet “Velcro” dog. He became best friends with his foster sister, another white GSD.

Sadly, Wayde was diagnosed with cancer a few weeks after going into foster care and passed away four months later. Despite the cancer, he had gained 14 pounds and was active and happy to the end.



often included in an EPI diet are kelp, green tripe, slippery elm, and alfalfa.

Controlling EPI

Texas A&M and Clemson University are currently embarking on Phase II of an EPI research project to try to identify the genetic markers for the disease. "This disease is characterized by a complex pattern of inheritance," says Dr. Keith E. Murphy, Professor and Chair of Genetics and Biochemistry at Clemson University in South Carolina. "Thus, we have been limited in how we can attack this in order to identify the gene or genes, that contribute to this horrible disease. However, we are encouraged by the success that we and others have had using SNP technology [unique DNA tests] to identify genetic markers associated with various traits and we will be employing this approach to EPI."

If you own a purebred GSD, with or without EPI, and would like to contribute a blood sample, please contact Dr. Leigh Anne Clark at Texas A&M (see below).

It is important that this research continues. EPI is rapidly spreading across all breeds. It is no longer just a GSD disease, or a working dog disease. Dogs of all breeds, including crossbreeds, are being diagnosed

Please Support Research for EPI

Hope, a Boxer, was adopted by Jodi Riddle, of NorCal Boxer Rescue in Texas. She was lovingly cared for and given enzyme replacements and a special diet. Hope completely recovered, becoming Jodi's constant, gentle shadow. Hope has since passed on; Jodi wishes her photo inspires others to support finding EPI's cause.



with EPI. It is happening in family lines too often to be coincidence without a genetic component. Yet, not every family member or generation in affected lines has EPI. For now, until we can actually test for the genetic markers, the best possible control is to remove positively confirmed EPI dogs from breeding programs. Once genetic markers are identified in GSDs, the markers in other breeds will be more easily detected.

Although there are many success stories, there are also heart-wrenching tales of dogs who cannot thrive, families who can-

not afford the treatment, and throughout it all, the painful suffering the dog endures unless successfully treated. EPI can no longer be a "hush-hush" disease. My hope is that this article will make a difference by helping raise awareness of EPI to the level of other major canine diseases. 🐾

Olesia Kennedy, a retired research analyst, and previously involved in Canine Search & Rescue, currently devotes her skills and time to EPI research. She resides with her husband and three Spanish Water Dogs in Georgetown, Indiana.

Resources Mentioned in This Article

INFORMATION RESOURCES

Texas A&M University website for recommended cobalamin dosage: cvm.tamu.edu/gilab/research/cobalamin.shtml

To participate in the EPI genetic research studies Texas A&M University visit its website (cvm.tamu.edu/cgr/EPI%20Research.htm) and contact Dr. Leigh Anne Clark: lclark@cvm.tamu.edu

To support EPI research, send donations to Keith E. Murphy, PhD., Professor and Chair, Department of Genetics and Biochemistry, 100 Jordan Hall, Clemson University, Clemson, SC. 29634-0318

FRESH PANCREAS

Hare Today: (800) 640-3582; hare-today.com
GreenTripe.com: (877) 635-0724; greentripe.com

DIGESTIVE SUPPORT

Digest-All Plus, made by The Wholistic Pet (888) 452-7263; thewholisticpet.com

Primal Defense HSO Probiotic Formula (866) 465-0051; gardenoflife.com

ENZYME SUPPLEMENT PRODUCTS

Viokase-V (available by prescription only), made by Axcan Pharma (800) 950-808; axcan.com

Bio Case V (non-prescription), made by Thomas Labs (800) 359-8387; thomaslabs.com

Epizyme (prescription only), made by V.E.T. Pharmaceuticals (800) 766-7543; vet-pharmaceutical.com

Panakare Plus (prescription only), made by Neogen Corp (800) 477-8201; neogen.com

Pancrease-V (prescription only), made by Bioniche Animal Health (800) 256-5464 (Canada only) or (613) 966-8058; bionicheanimalhealth.com

Pancrezyme (prescription only), made by Virbac Animal Health (800) 338-3659; virbacvet.com

Bulk generic pancreatin 6x10 and 8x10 enzymes, available through a co-op, only for veterinarian-diagnosed EPI dogs. Sorry, no phone number; enzymediane.com

EPI INFORMATION AND SUPPORT

K9-EPIGLOBAL support group
groups.yahoo.com/group/k9-EPIGLOBAL
or K9-EPIglobal@yahoo.com

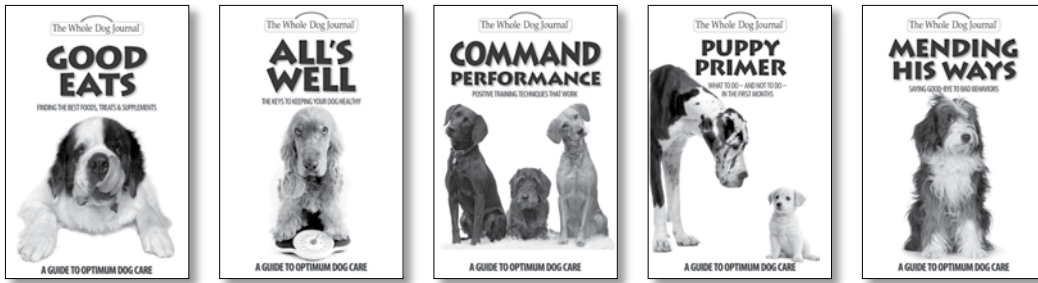
Managing EPI: epi4dogs.com

EPI research: epi-research-fund.com

Wayde's story: gsrne.org/wayde.htm

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All's Well: The Keys to Keeping Your Dog Healthy

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- Dental Health • Creating a Healthy Home • Vaccinations • NSAIDs • First Aid
- Preventing Heat Stroke

Command Performance: Positive Training Techniques that Work

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- The "Come" Command • Greeting • Tricks and Games • Park Behavior
- Teaching Wait and Stay

Puppy Primer: What To Do—And Not To Do—In The First Months

- Pre-Puppy Prep • Housetraining • Crate Training • Vaccinations • Grooming
- Bite Inhibition • New Dog Do's and Don'ts • Socialization • Building Good Manners

Mending His Ways: Saying Good-Bye To Bad Behaviors

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WDJ Training Editor Pat Miller is author of *The Power of Positive Dog Training*; *Positive Perspectives: Love Your Dog, Train Your Dog*; *Positive Perspectives: Know Your Dog, Train Your Dog*; and *Play with 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

Sandi Thompson, CPDT, BRAVO!PUP Puppy and Dog Training, Berkeley, CA. Private lessons and group classes. (510) 704-8656; bravopup.com

BIKING WITH YOUR DOG

Three devices that fasten to your bike to safely lead your dog:

BikerDog. \$70, available from its maker. (720) 839-9088; bikerdog.com



The Springer. (801) 532-7941; springerusa.com The Springer is available from its maker and also through some online pet supply stores; google “Springer, bike, dog,” and you can find several outlets. Prices vary widely, from about \$45 to \$100.

WalkyDog. \$40. Product’s name was recently changed to the K9 Bike-Jogger, and the product was redesigned and improved. Available only from its maker, WalkyDog USA Inc. (310) 372-7777; k-9bikejogger.com



Bike trailers for dogs:

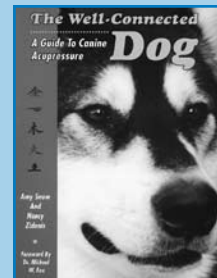
DoggyRide, Burley Tail Wagon, and Croozer Dog Trailer are available from BicycleTrailers.com. (800) 742-0948; bicycletrailers.com/New-Trailers/Dog-Bike-Trailers/index.cat

Pet Bike Trailer available from Hunter K9 Gear. hunterk9.com/site/870877/product/DOGGYTRAIL; (866) 994-4747

WagAlong Pet Bike Trailer available from Wike Bicycle Trailers. (866) 584-9452; wicycle.com/pet_trailers.php

ACUPRESSURE

Amy Snow and Nancy Zidonis are the owners of Tallgrass Publishers, which offers meridian charts for dogs, cats, and horses; equine and canine landmark anatomy and acupoint energetics manuals and DVDs; plus a new DVD: Introduction to Canine Acupressure Training. Snow and Zidonis are also the founders of Tallgrass Animal Acupressure Institute, which offers hands-on and online training courses, including a practitioner certification program. (888) 841-7211; animalacupressure.com.



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