

# The Whole Dog Journal™



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*A monthly guide to natural dog care and training*

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# Develop Your Dog's Flexibility

*Ideally, your dog is comfortable in a range of circumstances and with different people.*

BY NANCY KERNS

I often dog-sit for friends and relatives. It's easy for me, because I have all sorts of dog gear, food, treats, and chews laying around. Also, my own home and the house down the block where I have my office are both securely fenced (and well-outfitted with crates and dog beds of various sizes). Plus, if the dogs are fidgety and in need of exercise and stimulation, I can grab my camera, load the dogs into my car, and head out to a nearby open space area to run them on trails or allow them to swim in the river – and any good pictures I get, or interesting experiences I have with the dogs, are helpful to my job!

But I realized this summer that my own dog is not nearly as comfortable being left with other people as their dogs are happy being left with me. (I'm aware that it's not *me* that the dogs enjoy; it's the doggie Disneyland setup, complete with nice, friendly dogs to play with and lots of enriching activities.) When left in the care of someone other than my husband, Otto frets and mopes, whines and paces. At the vet, he's the dog who has to be lifted and put into the cage (he won't go in on cue like he does at home, because he knows it's *not* home).

In contrast, our other dog, Tito (who was left by a relative with us more than three years ago), would go with *anyone* who was nice to him. He sees every outing as an opportunity to meet people who love him. And when we visit other people's homes, he immediately starts guarding their dogs' dishes, takes over the cushiest dog beds, steals any tennis balls or rawhide chews he finds, and climbs into and defends any nice person's lap from the dogs who live there. Hey! He might end up living there, too; it's happened to him before! Tito had been in the care of five or six different family members prior to coming to stay here, so maybe he can be forgiven for so assertively making himself at home anywhere he goes.

As opportunistic as he is, I think Tito is far healthier from an emotional standpoint than Otto is. As flattering as it might feel to have

your dog highly bonded to you, it's not a very good thing for him. I've fostered a number of shelter dogs who had lost their owners (whether the owners lost them, died, or were forced to surrender them due to financial or health reasons); the ones who are willing and able to approach and bond with new people find homes readily. It takes far longer to place the ones who remain distant and morose, seeming to wait for their special people.

Working dogs (including many herding, hunting, police, military, and service dogs) are often trained and handled by a number of different people in their lifetimes, and while they almost always bond tightly with the person who handles them the most, they are taught from an early age to trust and work with anyone who speaks their language – any people who know their work and their cues. These dogs also tend to be confident, accepting, and friendly with new people.

I don't plan to become separated from my dog for very long, but for his sake, I'm going to make an effort to teach him to be happier with other people, in other places than home. I think it's time we take some more classes – in agility, K9 Nose Work, whatever – and I allow other trustworthy people to handle him, too. I'd like to know that if anything ever happened to me, he'd have no problem adjusting to life without me.

NK

# Dried and True

*Meat-rich dehydrated and freeze-dried dog foods have a lot to offer, especially to health-challenged and performance dogs.*

BY NANCY KERNS

**O**ccasionally we are asked to rate the various options that owners have for feeding their dogs, based on the relative “healthiness” of each major type of food: home-prepared (raw or cooked); commercial raw, frozen diets and freeze-dried or dehydrated raw diets; canned food, and kibble. Actually, in our opinion, that list of food types is ranked accurately right there, from best to worst, in terms of their potential for improving or supporting a dog’s peak health.

On what do we base that ranking? While it’s difficult to get nutritionists to agree on just about anything, it’s likely that most would agree on the following general idea: that a diet that was formulated to be “complete and balanced” and comprised of fresh, lightly processed or unprocessed species-appropriate ingredients is healthier than a “complete and balanced” diet containing highly processed ingredients that are uncommonly consumed by a given species in nature. That general theory explains our high esteem for the dehydrated and freeze-dried diets that we’ve listed and described on pages 5-9.

We’ve lumped a lot of disparate diets into this category. Even though they vary widely in terms of ingredients, “rawness,” manufacturing process, finished form, and protein and fat levels, what all of these diets share is their high inclusion of high-quality animal protein and fats, and a method of preservation that only lightly alters or damages the nutrients in the food: drying. The idea is to remove moisture from the food; the less moisture that is contained in a food, the longer its nutrients will remain unspoiled and

available to the consumer (your dog).

Drying can be accomplished at low temperatures, but it takes longer and leaves meats and fats vulnerable to oxidation (spoilage); most dried foods are prepared with temperatures of 140°F to 180°F. (Food can rot when kept in temperatures between 140°F to 32°F; If it’s held in temperatures colder than 30°F, it freezes; if it’s exposed to temperatures higher than 180°F, it will start to cook.) Dehydrators actually lightly cook the food as it dries, altering the cellular structure of meats, fruits, and

vegetables. In contrast, proper freeze-drying doesn’t affect the appearance or taste of foods as much.

Freeze-dryers expose foods to low temperatures, freezing them relatively quickly, and then to high air pressure (freeze-drying machines resemble large pressurized gas tanks). When the pressure inside the chamber is high enough, small heating units are turned on, heating the trays that the food sits on, and causing the frozen water (a solid at that point) in the foods to transform into a gas (water vapor). Pumps pull the vapor out of the chamber while keeping the internal air pressure high. The term for freeze-drying is sublimation: the act of a solid shifting directly into a gas.

It sounds radical, but the process actually leaves most foods less damaged than dehydration. Freeze-drying doesn’t shrink or toughen most food ingredients, and it leaves most aromas and flavors in the food intact. There are some food compounds that don’t freeze-dry well; those that contain vinegar or alcohol don’t sublime nicely, but these are not common ingredients in canine diets!

Some owners seek out these diets specifically for their rawness; they believe feeding raw meat is natural and beneficial to their dogs. If a raw diet is your chief motivation for considering these diets, avoid the products that contain dehydrated ingredients in favor of the ones that contain freeze-dried ingredients.

## OTHER BENEFITS

In addition to being (mostly) raw and lightly processed, dehydrated diets offer a number of other benefits to dogs – *and* their owners.

- Very low-moisture foods can be stored longer at room temperature (in unopened packages) without spoiling or rancidity than conventional kibble. Most dehydrated diets contain less moisture than conventional kibble, which generally contains about 10 percent moisture. The less moisture there is in a food, the less biological activity can occur.

- Dehydrated foods weigh less and are more compact than foods containing more moisture. This makes them especially well suited for travel. It also means they cost less to ship.

- When rehydrated, these foods are



**This is a diverse product category – which means it has something terrific to offer just about every dog and owner.**

highly palatable to most dogs. It may be due to the concentration of flavor in dehydrated food ingredients or their light processing.

■ As a generalization, the makers of these products are targeting the top end of the market, and have an extraordinary commitment to sourcing top-quality ingredients. In many cases, “human-quality” (“edible”) ingredients are used, though only one company can legally make this claim (The Honest Kitchen, because every single ingredient in the product is human-quality (the legal term is “edible”) and the products are made at a human food manufacturing plant.

## VARIETY IN CATEGORY

As we mentioned earlier, the dried foods discussed here are diverse in content, appearance, and form. Some contain grains and some don't. Some include lots of vegetables, fruits, and herbs, and some are almost all meat. Some utilize organic ingredients, and some don't. And some manufacturers utilize pasteurization of some kind, and some don't. (For more on this, see “Safety Issues,” below.)

Most of these products are meant to be rehydrated with water, though most can be fed without rehydration.

Some of these products are presented in a dried “patty” or “medallion” form; others have been dried into nuggets or dried and then sliced into cubes. Others are very powdery, which makes them turn into a sort of mush or gruel, depending on how much water you add. Still others have relatively large chunks of identifiable dehydrated meats, fruit, and/or vegetables mixed into a powdery meat base. This can be either an advantage (if your dog enjoys the contrast in taste and mouth-feel) or a disadvantage (if your dog seeks out only the chunks or mush and eschews the other).

The most significant difference between these foods and more conventional commercial products, though, is the high fat and, to a slightly lesser extent, high protein levels that most contain. Some are very high in fat and protein; others compare in these respects to conventional kibble. Always check the guaranteed analysis when switching to a product in this category; they are so nutrient-dense that you may have to significantly reduce

the volume of food that you feed your dog in order to prevent him from gaining too much weight.

## A WORD ABOUT COST

The cost of feeding this sort of diet may be prohibitive for many dog owners. These products are *pricey*. In general, the freeze-dried products cost the most, because freeze-drying is an energy-intensive process. (For what it's worth, however, shipping costs of these lightweight foods are minimal!) My guess is that they are fed mostly under the following conditions:

- Cost is not a factor (wealthy owner).
- Owner has one dog, or very small dogs (and so won't need to buy large amounts).
- Products are used as “complete and balanced” training treats, rather than sole diet.
- Owner usually feeds a raw diet (home-prepared or otherwise) but is traveling, so one of these diets is used short-term replacement.
- Dog is extremely picky (and thin), but will eat these foods with relish. (We frequently hear about this with the freeze-dried foods, which seem to retain their palatability very well.)
- Dog's health is generally precipitous, but currently well-managed thanks to one of these diets, so it makes the most sense to “pay for the food, rather than the vet.”
- Dog's health is poor, and these highly palatable products are being used as a short-term tactic to keep him eating.

## SAFETY ISSUES

Raw diets aren't for every dog or owner. These foods will be especially attractive to owners who already feed a raw diet to their dogs, or who have researched raw diets and who are ready to take responsibility for feeding their dog a raw diet (and perhaps, have the support already of a veterinarian who is comfortable with and knowledgeable about raw diets).

If you are fearful about the potential for exposing your dog to pathogenic bacteria such as Salmonella or Listeria, or you have an immune-compromised dog, you may want to either skip these diets, or seek out the ones who pasteurize their products and utilize a vigorous “test before releasing” program, such as Stella & Chewys.

Understand that experienced raw feeders, as they are known, are not afraid of these bacteria. They frequently point out that there have been far more recalls of conventional kibble that is “contaminated” with Salmonella than raw food products, and very few dogs have gotten ill as a result of eating these foods. Dogs have much sturdier digestive tracts than humans, and only very rarely have a problem eating food that is contaminated with these bacteria. (Dogs with compromised immune systems, like humans with similar conditions, would be most at risk.)

Some companies use high pressure processing (HPP, also known as high pressure pasteurization or Pascalization) to kill any pathogenic bacteria that might be present in the food; others use HPP only on products that contain poultry (the most likely meat to be contaminated with bacteria); and still others rely entirely on buying the best possible meats, handling them with care, and using superior sanitation throughout the manufacturing process. Ask the maker of the food you are considering what they do (or don't do) to pasteurize their products.



## OUR LIST




The companies we've highlighted on the following pages make extremely good dog foods, but as always, only you can determine which ones are right for your dog and your budget. As a comparison tool, we selected one variety from each manufacturer and listed its ingredients and guaranteed analysis. To help directly compare the unique formulation approaches taken by each company, we selected the “beef” formula whenever that variety was available.

COMPANY	DESCRIPTION	HIGHLIGHTED PRODUCT
<p><b>Addiction Foods</b> Singapore (North American office) Kent, WA (425) 251-0330 addictionfoods.com</p>	<p>Addiction Foods manufactures its raw dehydrated diets in its own manufacturing facility in New Zealand (where it also makes its canned and dry foods). All of Addiction's products are formulated to meet AAFCO's "nutritional levels" standards, though some varieties meet the "all life stages" criteria and others are for "adult maintenance" only. Addiction offers eight varieties: four that are formulated with meats American consumers are familiar with (beef, chicken, and lamb, as well as the novel protein venison), and four that contain novel proteins sourced from Australia and New Zealand, including kangaroo and brushtail. The formulas range from 19% to 22% protein, and from 10% to 22% fat. (Most of them contain 10% to 13% fat; the chicken variety has 15%. It's the lamb variety that has 22% fat.) Addiction describes its dehydration process as "air drying." Available direct from the company, in select independent pet supply stores, and from some online retailers.</p>	<p><b>Addiction's Steakhouse Beef &amp; Zucchini</b> formula contains beef, potatoes, canola oil, carrots, papaya, tapioca, zucchini, spinach, and vitamin/mineral sources.</p> <p>19% protein, 10% fat, 6% fiber, 12% moisture</p>
<p><b>Bravo Pet Foods</b> Manchester, CT (866) 922-9222 bravopetfoods.com</p>	<p>Bravo has been best known as a maker of raw frozen pet foods, but has been branching out in recent years to make terrific treats and chews. Now they also offer a freeze-dried diet: Bravo Homestyle Complete. It's available in three varieties: beef (38% protein, 13% fat); pork (38% protein, 8% fat); and turkey (38% protein, 9% fat). All of Bravo's diets (including its raw frozen products) are "single species" diets, making them especially well-suited for dogs with allergies to certain animal proteins (the "beef" diets contain only beef; the turkey diets contain only turkey, etc.). All three freeze-dried diets are formulated to meet AAFCO's "nutritional levels" standards for dogs of all life stages, and a complete nutrient analysis for each diet appears on the company's website, as does a complete "country of origin" disclosure for every ingredient. Available in select independent pet supply stores and from some online retailers.</p>	<p><b>Bravo Homestyle Complete Beef Formula</b> contains beef, beef liver, sweet potatoes, chickpeas, beef hearts, beef kidney, beef spleen, green beans, cranberries, dried eggs, vitamin/mineral supplements, herbs.</p> <p>38% protein, 13% fat, 5% fiber, 20% moisture</p>
<p><b>Champion Petfoods</b> Edmonton, Alberta (780) 784-0300 orijen.ca</p>	<p>This is a tad confusing, but stay with us: Champion is the maker of a line of conventional dry dog foods (kibble) called Orijen, but now also offers a line of freeze-dried dog foods called Orijen Freeze Dried. Three varieties are available: "Adult" (containing protein from four different animal species, 36% protein and 35% fat); "Regional Red" (containing protein from seven different animal species, 36% protein, and 35% fat); and "Tundra" (containing proteins from seven different animal species, 37% protein, and 34% fat). Champion says that all of the Orijen Freeze Dried foods are comprised of 90% animal ingredients and all of them are formulated to meet AAFCO's "nutritional levels" standards for dogs of all life stages. A complete nutrient analysis for each food appears on the company's website. Available in select independent pet supply stores and from some online retailers.</p>	<p><b>Orijen Freeze Dried Regional Red</b> Formula contains beef, boar, lamb, herring, bison, beef liver, spinach greens, pea fiber, lamb liver, pork, pork liver, beef heart, lamb heart, beef tripe, salmon, sunflower seeds, pumpkin, butternut squash, carrots, cranberries, blackberries, blueberries, apples, pears, plums, apricots, kelp, mixed tocopherols, chicory root, dandelion root, summer savory, peppermint leaf, ginger root, and three mineral supplements.</p> <p>36% protein, 35% fat, 5% fiber, 4% moisture</p>



COMPANY	DESCRIPTION	HIGHLIGHTED PRODUCT
<p><b>DNA Pet Food, Inc</b> Canyon, TX (888) 367-6636 dnapetfood.com</p> 	<p>DNA is mixed like canned food in a pet-food cannery, but then is dried in low-temperature ovens (the company says the ovens are set to 180°F). The resulting dried and diced food can be fed like a kibble or may be rehydrated. DNA says its products contain 78% animal ingredients. All of DNA's dehydrated products are formulated to meet AAFCO's "nutritional levels" standards for dogs of all life stages. A complete nutrient analysis is available for each product on the company's website; that's great! But do check those "actual" amounts of protein on the nutrient analyses, rather than going by the minimums listed in the guaranteed analysis. The labels indicate that all four varieties for dogs (beef, chicken, lamb, and venison) contain a minimum of 30% protein and 20% fat. The actual amounts of protein are much higher – as much as 45% in the chicken variety. Available in select independent pet supply stores and from some online retailers.</p>	<p><b>DNA's Beef Formula</b> contains beef, pork liver, pork kidney, dried eggs, pea flour, coconut oil, pollock oil, dried citrus pulp, alfalfa meal, cranberries, blueberries, pumpkin, spinach, carrots, thyme, oregano, and vitamin/mineral sources.</p> <p>30% protein, 20% fat, 4% fiber, 8% moisture</p>
<p><b>Dr. Harvey's</b> Atlantic Highlands, NJ (866) 362-4123 drharveys.com</p>	<p>Dr. Harvey's uses freeze-dried meats in its Oracle line of dehydrated dog foods, all of which are formulated to meet AAFCO's "nutritional levels" standards for dogs of all life stages. Oracle is available in six varieties, with similar nutrient levels in the beef and chicken varieties: beef (31% protein, 10% fat) and grain-free beef (42% protein, 13% fat); chicken (32% protein, 10% fat) and grain-free chicken (41% protein, 12% fat). Two new formulas are made with tripe, and contain lower protein levels and higher fat levels than the other foods; the tripe variety contains 22% protein and 14% fat and the grain-free tripe formula contains 26% protein and 19% fat. Available direct from the company, in select independent pet supply stores, and from some online retailers.</p>	<p><b>Dr. Harvey's Oracle Beef Formula</b> contains beef, whole egg, rolled oats, sweet potatoes, carrots, chicken, calcium citrate, flaxseed meal, barley, spelt, green beans, zucchini, broccoli, peas, beets, parsley, yeast, lecithin, alfalfa, kelp, flaxseed, fenugreek, fennel, ginger, peppermint, and vitamin/mineral sources.</p> <p>31% protein, 10% fat, 10% fiber, 8% moisture</p>
<p><b>Fresh Is Best</b> Milwaukee, WI (866) 617-7735 freshisbest.com</p> 	<p>Fresh Is Best uses only fresh, locally sourced ingredients. The company uses only fresh raw produce, rather than dried/processed fruit or vegetable powders. Each variety contains one species of animal protein and includes raw muscle and organ meats. The company's raw frozen diets and freeze-dried diets are nearly the same; the only difference (besides whether they are frozen or freeze-dried) is that a bone meal supplement rather than fresh-ground bone is used as a calcium source in the freeze-dried food. All three varieties (beef, chicken, turkey) are formulated to meet AAFCO's "nutritional levels" standards for dogs of all life stages, and contain similar amounts of protein and fat (about 40% protein and 35% fat). A complete nutrient analysis is available for each product on the company's website. Available directly from the company and in select independent pet supply stores.</p>	<p><b>Fresh Is Best's Freeze Dried Beef Dog Food</b> contains beef, beef hearts, beef kidneys, beef livers, cabbage, turnip greens, collard greens, kale, cantaloupe, kelp, bone meal, apple cider vinegar, dried whey, and a vitamin/mineral supplement.</p> <p>41% protein, 36% fat, 1% fiber, 6% moisture</p>
<p><b>Grandma Lucy's</b> Rancho Santa Margarita, CA (800) 906-5829 grandmalucys.com</p> 	<p>Grandma Lucy's released <b>Artisan</b>, its first "complete and balanced," freeze-dried, grain-free canine diets in 2007. Artisan is available in five varieties: bison, chicken, lamb, pork, and venison (ranging from 26% to 39% protein, and 9% to 16% fat); each contains potato as a carb source. The <b>PureFormance</b> line of grain-free, freeze-dried dog foods, utilizing chickpeas as a carb source, was launched in 2011. PureFormance is offered in four varieties: chicken, goat, lamb, and rabbit, ranging from 34% to 37% protein and 9% to 16% fat. Grandma Lucy's newest line of grain-free, freeze-dried foods is <b>Valor</b>, which uses quinoa as a carb source. Valor varieties offered are chicken, fish, and turkey, ranging from 27% to 32% protein and 16% to 17% fat. All of Grandma Lucy's freeze-dried diets for dogs are formulated to meet AAFCO's "nutritional levels" standards for dogs of all life stages. Available direct from the company and in select independent pet supply stores.</p>	<p><b>Grandma Lucy's Valor Turkey Formula</b> contains turkey, quinoa, flax, lentils, carrots, celery, apples, bananas, blueberries, cranberries, pumpkin, spinach, garlic, rosemary, and vitamins and minerals.</p> <p>32% protein, 17% fat, 5% fiber, 8% moisture</p>

COMPANY	DESCRIPTION	HIGHLIGHTED PRODUCT
<p><b>Nature's Menu</b> East Troy, WI (866) 333-3729 naturesmenu.com</p>	<p>Nature's Menu makes frozen raw diets for local distribution but can ship the same diets in freeze-dried form economically. All of Nature's Menu's freeze-dried diets are formulated to meet AAFCO's "nutritional levels" standards for dogs of all life stages. Four varieties are offered: beef, organic chicken, turkey, and lamb. Each contains muscle and organ meat. Available directly from the company and in select independent pet supply stores.</p>	<p><b>Nature's Menu's Beef Formula</b> contains beef, beef liver, beef heart, beef kidney, and a vitamin/mineral supplement.</p> <p>50% protein, 40% fat, 1% fiber, 3% moisture</p>
<p><b>Nature's Variety</b> Lincoln, NE (888) 519-7387 naturesvariety.com</p>	<p>Nature's Variety makes kibble, canned, raw frozen, and freeze-dried diets, and recommends that owners rotate between them. Its freeze-dried food, Instinct Freeze Dried, is available in three grain-free varieties (beef, chicken, and lamb). Each contains 32% protein, though the fat level ranges from 22% to 28%. All of the diets are formulated to meet AAFCO's "nutritional levels" standards for dogs of all life stages. The food is freeze-dried into small pellets, easy for feeding to any sized dog. Available in select independent pet supply stores and from some online retailers.</p> 	<p><b>Nature's Variety Instinct Freeze Dried Beef Formula</b> contains beef, beef liver, beef heart, pumpkin seeds, ground beef bone, salt, potassium chloride, minerals, carrots, butternut squash, apples, flaxseed, montmorillonite clay, choline chloride, kelp, broccoli, vitamins, mixed tocopherols, apple cider vinegar, salmon oil, rosemary extract, blueberries, dried chicory root.</p> <p>32% protein, 28% fat, 15% fiber, 6% moisture</p>
<p><b>NRG USA</b> Coupeville, WA (877) 355-9231 nrgdogproducts.com</p>	<p>NRG offers three lines of dehydrated dog foods: Original; Optimum Large/Active Breed; and Maxim Grain-Free. Four varieties are offered in each line – beef, buffalo, chicken, or salmon – and each variety contains only that one species of animal protein. Some of NRG's products contain cooked meats. The company says the products are "complete and balanced" as per the AAFCO nutrient guidelines for dogs of all life stages, even though no vitamin/mineral pre-mixes have been added, and that all the ingredients in all the formulas are sourced from Canada or the United States. Available direct from the company, in select independent pet supply stores, and from some online retailers.</p>	<p><b>NRG's Original Diet Beef Formula</b> contains cooked dehydrated beef muscle meat, oats, carrots, wheat germ, eggs, beef liver, grapefruit, winter squash, kelp, broccoli, cranberries, limes, papaya, apples, parsley, garlic, goat-milk yogurt, flaxseed, cider vinegar, eggshell, and olive oil.</p> <p>24% protein, 16% fat, 3.5% fiber, 6% moisture</p>
<p><b>Only Natural Pet</b> Boulder, CO (888) 937-6677 onlynaturalpet.com</p> 	<p>Only Natural Pet is an Internet-based "catalog" company that sells many other companies' products (including many of the foods featured in this review), but it also offers its own private-label products. Its "EasyRaw" foods all contain raw, dehydrated meats, and each is formulated to meet AAFCO's "nutritional levels" standards for dogs of all life stages. There are three varieties: Beef &amp; Sweet Potato (a grain-free food containing 22% protein and 8% fat); Chicken &amp; Oats (22% protein, 10.4% fat); and Turkey &amp; Sweet Potato (23% protein, 8% fat). A company representative told us that the formulas are undergoing some improvements and will be rolled out in October 2014; the major change is that the amount of animal protein in each product will increase, rising to the top of the ingredients list of each product. A complete nutrient analysis is available for each product on the company's website. Only Natural Pet does not use a vitamin/mineral premix, but adds only those vitamins or minerals that are not provided in adequate amounts from the food ingredients. These products are available only from Only Natural Pet.</p>	<p><b>Only Natural Pet EasyRaw Beef &amp; Sweet Potato Formula</b> contains sweet potatoes, beef, celery, carrots, cabbage, whole egg, flax meal, tricalcium phosphate, cranberries, papaya, pumpkin, rosemary, parsley, ginger root, dried alfalfa, dried kelp, zinc sulfate, vitamin E acetate, vitamin D3, vitamin A palmitate.</p> <p>22% protein, 8% fat, 8% fiber, 9.6% moisture 333 kcal/cup</p>

COMPANY	DESCRIPTION	HIGHLIGHTED PRODUCT
<p><b>Primal Pet Foods</b> San Francisco, CA (866) 566-4652 primalpetfoods.com</p> 	<p>According to Primal Pet Products, all of the ingredients used in its products are USDA-inspected and -passed “human quality,” and the products are mixed and freeze-dried in a facility that makes human foods. All Primal varieties are formulated to meet AAFCO’s “nutritional levels” standards for dogs of all life stages. Primal does not use a conventional vitamin/mineral premix, but uses as many food sources of nutrients as possible and adds only those vitamins or minerals that can’t be readily sourced from food. Five varieties are currently available: beef, chicken, duck, lamb, and turkey &amp; sardine; the company plans to add rabbit and venison varieties to the line soon. These are all relatively high-protein, high-fat foods, ranging from 37% to 61% protein and 26% to 38% fat. A complete nutrient analysis is available for each product on the company’s website. The approximate ratio of animal protein to other ingredients in the foods is also listed for each product. For example, the beef variety is comprised of 77% beef and 23% produce and supplements. Available in select independent pet supply stores and from some online retailers.</p>	<p><b>Primal’s Freeze Dried Beef Formula</b> contains beef heart; beef liver; ground beef bone; organic kale, carrots, yams, broccoli, and apples; cranberries; blueberries; organic pumpkin seeds and sunflower seeds; minerals (zinc sulfate, copper carbonate, selenium); organic parsley and apple cider vinegar; salmon oil; organic coconut oil; organic quinoa sprout powder; organic kelp; alfalfa; natural vitamin e; and mixed tocopherols (natural preservative).</p> <p>42% protein, 30% fat, 5% fiber, 3% moisture</p>
<p><b>Stella &amp; Chewy’s</b> Milwaukee, WI (888) 477-8977 stellaandchewys.com</p> 	<p>Stella &amp; Chewy’s offers eight varieties of freeze-dried diets for dogs; each has a raw frozen counterpart. All are formulated to meet AAFCO’s “nutritional levels” standards for dogs of all life stages. Six contain a single animal protein (beef, chicken, lamb, pheasant, rabbit, or venison) and two contain multiple sources of animal protein (duck/turkey; and “Surf &amp; Turf” containing beef, salmon, and turkey). The protein levels in the food range from 37% to 46%; the fat levels range from 25% to 35%. Stella &amp; Chewy’s tests every batch for bacterial contamination (and the results are posted online) before shipping. The products come in the form of dry patties. Available in select independent pet supply stores and from some online retailers.</p>	<p><b>Stella &amp; Chewy’s Freeze Dried Beef Formula</b> contains beef; beef liver; beef kidney; beef heart; beef tripe; beef bone; calcium carbonate; pumpkin seed; potassium chloride; organic cranberries, spinach, broccoli, and beets; sodium phosphate monobasic; organic carrots, squash, apples, and blueberries; choline chloride; a number of probiotic supplements; taurine; tocopherols; and vitamin/mineral sources.</p> <p>38% protein, 30% fat, 4% fiber, 5% moisture</p>
<p><b>Sojo’s Pet Food Co.</b> Minneapolis, MN (888) 867-6567 sojos.com</p> 	<p>If you haven’t looked at the products offered by Sojo’s lately, you should. The company’s first product, decades ago, was a “just add meat” pre-mix that enabled owners to prepare their dogs’ food but ensure that the diet was “complete and balanced.” The company still sells that product, but some years ago, began offering “complete and balanced” canine diets containing raw, freeze-dried meat. Sojo’s Complete Dog Food is available in three grain-free and gluten-free varieties: beef and lamb formulas (with 22% protein and 12% fat) and turkey (with 26% protein and 12% fat); all are formulated to meet AAFCO’s “nutritional levels” standards for dogs of all life stages. Sojo’s does not use a conventional vitamin/mineral premix, but uses as many food sources of nutrients as possible and adds only those vitamins or minerals that can’t be readily sourced from food. Available direct from the company, in select independent pet supply stores, and from some online retailers.</p>	<p><b>Sojo’s Complete Beef Formula</b> contains beef, sweet potato, carrots, whole egg, celery, cabbage, flax meal, cranberries, tricalcium phosphate, papaya, pumpkin, rosemary, parsley, dried alfalfa, ginger root, dried kelp, zinc sulfate, vitamin E acetate, and vitamin D3.</p> <p>22% protein, 12% fat, 9.2% fiber, 10% moisture</p>



COMPANY	DESCRIPTION	HIGHLIGHTED PRODUCT
<p><b>The Honest Kitchen</b> San Diego, CA (866) 437-9729 thehonestkitchen.com</p>	<p>The Honest Kitchen is still the only company we are aware of that has met all of the FDA's regulatory requirements to enable the company to legally state on its labels that its products are 100% "human grade." The Honest Kitchen can do this because it's made in a human food manufacturing location and every ingredient in the formula is "human food." The Honest Kitchen offers eight "complete and balanced" dehydrated canine diets (as per the AAFCO nutrient guidelines) for dogs of all life stages. Five of the complete diets are grain-free and/or gluten-free: beef, chicken, fish, and turkey; these range from 24% to 36% protein and 9% to 19% fat. Three other varieties (beef, duck, turkey) contain grain and are less expensive; these range from 21% to 24% protein and 9% to 16% fat. The newest variety, Halcyon, is made with duck and "ancient grains" (buckwheat and chia). A complete nutrient profile for each product is posted on the company's website. According to the company founder, "We continue to use NO ingredients at all from China; this even includes the individual components of our vitamin-mineral pre-mix. We use no GMO produce, and organic when possible. Our chicken is free range, (GAP level 4 for animal welfare), turkey and duck are cage free, beef is ranch-raised, and fish is wild, line-caught." Available direct from the company, in select independent pet supply stores, and from some online retailers.</p>	<p><b>The Honest Kitchen's "Love" Gluten-Free Formula</b> contains beef, sweet potatoes, potatoes, organic flaxseed, organic coconut, parsley, chard, papaya, cranberries, pumpkin, honey, and vitamin/mineral sources.</p> <p>31% protein, 16% fat, 7% fiber, 7.8% moisture</p> 
<p><b>Vital Essentials</b> Green Bay, WI (800) 743-0322 vitalessentialsraw.com</p>	<p>Vital Essentials formulates its diets to be "complete and balanced" (as per the AAFCO nutrient guidelines for dogs of all life stages) without the use of a vitamin/mineral premix, adding only two vitamin sources (herring oil for vitamin D and d-alpha tocopherol for vitamin E). All the formulas are made with locally sourced ingredients and all products are manufactured, start to finish, at Vital Essentials' own facility. Four raw, freeze-dried canine diets are available: beef, chicken, fish, and turkey. The beef formula is offered in the most forms: patties, mini patties, nibblets, and a powdery "topper" that can be fed on top of other foods or fed alone as a complete diet; other varieties are offered in fewer forms. Protein levels range from 41% to 42%; fat levels range from 32% to 34%. Available in select independent pet supply stores, natural food stores, and veterinary clinics.</p>	<p><b>Vital Essentials Beef Formula</b> contains beef, beef tripe, beef lung, ground beef bone, beef liver, beef heart, beef kidney, beef blood; beef fat, herring oil, mixed tocopherol, d-alpha tocopherol.</p> <p>42% protein, 32% fat, 1.9% fiber, 7.5% moisture</p>
<p><b>ZiwiPeak</b> Carmel, CA (877) 464-9494 ziwipeak.com</p> 	<p>ZiwiPeak's products don't resemble any of the other products on this list. The company describes its manufacturing process as "air-drying" and the finished product resembles jerky. The diets contain as much as 90 percent animal protein, including raw muscle meat and organs. Note that because the moisture content of ZiwiPeak's dried diets is higher than the other foods discussed here, it does not require rehydration before feeding.</p> <p>ZiwiPeak is available in four varieties: beef, lamb, venison, and venison/fish; all have similar amounts of protein and fat, about 34% protein and 26% to 28% fat. ALL of the venison, lamb, beef, shellfish, and seafood in ZiwiPeak's foods are sourced and manufactured in New Zealand.</p> <p>ZiwiPeak's products are formulated to meet AAFCO's "nutritional levels" standards for dogs of all life stages. A complete nutrient profile for each product is available on the company's website. Available direct from the company and in select pet supply stores.</p>	<p><b>ZiwiPeak's Beef Formula</b> contains 58% beef (including up to 3% finely ground bone); 32% beef liver, lung, and tripe; 3% New Zealand green-lipped mussel; lecithin; chicory inulin; dried kelp; parsley; and vitamin/mineral sources.</p> <p>34% protein, 28% fat, 1.5% fiber, 15% moisture</p>

# “Come” Have Fun!

## Games for building a reliable recall.

BY MARDI RICHMOND, MA, CPDT-KA

I love incorporating play and training, especially when training recalls. The recall is a really important behavior – one that can mean the difference between your dog having to stay on leash or having leash-free romp time. It is also a life-saving skill – like when a dog is running toward a busy road, and you need him to respond to your cue to return to you, quickly! But teaching the recall behavior to your dog can be challenging – and sometimes a little overwhelming.

Take some pressure off by turning your recall practice into fun and games. This can help you and your dog enjoy the training and take it to the next level. Some of these games focus on a specific element of “Come,” while others help build enthusiasm for the recall.

### KEEP AWAY

One of the most important elements of coming when called is what your dog does when he gets to you. Dog trainers call this the “finish” or end behavior. To play the “Keep Away” game, first think

about what you want your dog’s end behavior to look like. Get a really clear picture in your head. Here is my picture: My dog runs up to me, flies into a sit, and makes eye contact. Some people want their dogs to run up and stand, touch a hand target, or run to their side into the heel position. All are great choices.

Now that you have a picture in your head, help your dog understand what you would like her to do. For a sit-in-front finish, back one step away from your dog, say “Come!” (or whatever your recall cue is) and encourage her to follow. As she

comes up to you, ask for a sit, and when she does it, click – or use another marker, such as the word “Yes!” – and reward your dog with a tasty high-value treat. Practice your finish behavior in a low-distraction environment until your dog understands what to do when he hears “Come.” (Dogs usually get it in a few short sessions.) This is where the real fun begins!

Now that your dog knows that “Come” means move toward you and sit in front of you, you can make it more exciting and interesting by adding in the “keep away” piece. Complete the exercise as described above, and then, immediately after rewarding your dog, turn 90 degrees, and say “Come!” while moving a few steps away.

Click (or “Yes!”) and treat when your dog catches up and does the finish behavior. Repeat with the excited attitude of “You can’t catch me!” and then celebrate when your dog does! Gradually make this more fun and more difficult. For example, once your dog is finding your front easily, say “Come” and then turn and run in the other direction for a few steps before you stop. Your dog will enjoy the chase and have fun practicing the finish.

**TIPS:** Be exciting. Use high-value rewards, such as great food treats, tug games, or chase games to build



In a single session of demonstrating the exercises described here for these photos, our model dog went from looking like this first photo (compliant, obedient, but not particularly enthused) . . .

. . . to looking like this! When recalls are fun, your dog will look forward to opportunities to perform them with you. Our model, Bronco, increased his recall speed twofold in this session – and it wasn’t due to better treats (we used the same high-value rewards throughout the shoot)!



**You can make the basic recall exercise exciting and interesting by adding in the “keep away” piece. Ask your dog to come to you, reward her, and then, immediately after rewarding her, turn away and say “Come!” while moving a few steps away. Reward her for each recall, keeping your praise enthusiastic.**

enthusiasm. If you can’t move quickly or run, try tossing your treat rewards a short distance away so that your dog has to run back to you to play again.

### WHIPLASH HEAD TURN

Where the “keep away” game trains the *end* behavior of a recall, the “whiplash head turn” exercise trains the *beginning* – when your dog turns his head quickly away from something interesting and re-orient to you. There are tons of versions of this game. Here is one of my favorites.

Start with tossing a treat a few feet away from you so that your dog moves away to get the treat. I like to say, “Get it!” as I toss so she knows she has permission to eat it. As your dog is finishing the treat (but before she looks back at you), say her name. As her head turns in your direction, click or “Yes!” and give him a really awesome reward – something *super* special. Then repeat, gradually tossing the treats a little farther away as your dog’s confidence in the game grows.

A fun variation on this game is to toss a treat in one direction, tell your dog to “Get it,” and then, as he grabs that treat, say his name and toss another treat in another direction. Repeat until your dog is racing back and forth. For

**Set your dog up for success; don’t hide in a hard-to-find place until she’s really good and interested in this recall game.**

energetic dogs this is a great way to build excitement for the head turn.

**TIPS:** Timing is important with this game. Be sure to click or “Yes!” when your dog’s head is turning back to you to encourage the speedy whiplash turn. If your dog loves to run, gradually toss the treats farther away so she gets to run more.

### HIDE AND SEEK

Hide and seek is a fun game to play in the house, in your garden, or on off-leash walks. It can be

played with your dog knowing the game is afoot or as a surprise game, played at unexpected times throughout the day. It helps your dog learn to look for you when she hears your recall word and, when played randomly, it also helps your dog learn to come when she is otherwise engaged.

To get started with the basic game, have your dog wait in one place or one room. If your dog doesn’t know how to wait, you can also have someone restrain or distract her. Go into another room, behind a tree or around a corner and hide. Ask your dog to “COME find me” (emphasize your cue for the recall). When your dog finds you, give a great big happy reward: a game, happy petting,

or a special treat. Repeat few times (stop while your dog is really engaged).

Once your dog understands the basics of this game, you can play the surprise version at various points during your day. For example:

- When walking at the beach, when your dog is sniffing something, hide behind a nearby rock. Call her “Come find me” and when she finds you, get crazy happy and play one of your favorite beach games such as tossing the ball or running into the water together. Note: If your dog doesn’t head in your direction pretty quickly, pop up from behind the rock and wave your arms so she can get to you.

- In the woods, duck behind a tree when your dog is just a little way in front. Call her enthusiastically and when she gets to you, reward her with a small handful of great treats.

- When your dog is hanging out at home or cruising the backyard, hide and call, “Come find me!” Reward her with a great game of tug when she finds you.

**TIPS:** When you are away from home, do not make the hiding place too difficult. This may cause too much stress for your dog, which will not be fun. In addition, time your calls so that you know your dog will disengage from his exploring easily. I do *not* recommend hide and seek as a way to frighten your dog into thinking you’ve abandoned him because he was not paying attention. Make this game fun, upbeat, and full of happy reconnections.





When you have a chance, practice “round robin” recalls with a partner or several friends. At first, have whomever is not calling the dog ignore him when the other person calls him.



Encourage all participants to use happy, audible, clear cues and enthusiastic praise. As soon as one person gives him a treat and praise, have the other person say his name and the recall cue.

## ROUND ROBIN RECALLS

This is a great recall game that involves two or more people. It is also a great game to play after you’ve played “keep away” and “whiplash head turn.” “Round robin recalls” build on your dog’s ability to turn away from something she likes (a person who has just given her a treat) and run to the person calling her.

To get started, you and your game partners will stand about 10 to 12 feet away from each other. If you have two people, you will face each other. With three or more people, create a circle with all of you facing the center. Your dog is with one of the people or in the center of the circle.

One person calls the dog by saying the dog’s name and then “Come!” For example: “Jessie, come!” As the dog looks for the caller, the caller can encourage the dog to come by clapping, opening his or her arms, getting low, cheering, or running a few steps away; encourage your dog in any way *except* by saying her name or giving the recall cue again.

Once your dog gets to the caller, the caller will click or “Yes!” and reward the dog generously. Each person calls the dog randomly and in no particular order. At first, make it super easy for the dog by keeping the distance close, providing encouragement, and rewarding generously and with enthusiasm. As your dog gets the hang of the game, encourage her to do the “finish” behavior when she gets to the caller.

To make this game more exciting, increase the size of the circle so your dog really gets running. After a few play sessions, try having people move

randomly in the area to new spots. This helps your dog start to look for and find the caller. (After dozens of play sessions, my dog will now run across the park to get to us when we play this game. We also move from place to place in the park so that she has to figure out where we are; it’s tons of fun and great exercise for us all.) Do remember that your dog runs a lot in this game; stop while she is enjoying it and before she gets too tired.

**TIPS:** At first, have everyone who is calling the dog use the same treats. But after the dog learns the game, you can vary the types of treats between each person. Just make sure they are all things the dog really loves (silly play, great food treats, or a game of tug).

## A FEW MORE

Here are three more quick games:

■ **DINNERTIME RECALLS.** Have your dog sit or down and stay while you prepare his dinner. When his meal is ready, move a few feet away and say, “Come!” When your dog gets to you, put his dinner bowl down. Once your dog is really good at this game, continue to have your dog stay while you take the food bowl into another room. Call your dog to you; getting to eat his yummy meal is the reward.

■ **“YOU’RE THE MOST WONDERFUL DOG” RECALL.** Call your dog to you. When your dog comes, get down on the ground and play, play, play for at least three solid minutes. (I love this game because my dog’s reward is also my reward!)

■ **GET THE BALL RECALL.** Have *two* balls ready. Call your dog to you, and as she comes to you, click or “Yes!” for the sit or finish, and then instantly throw the ball. When your dog gets the ball and has turned back toward you, say, “Come!” – yes, even though your dog is already running your way! Click or “Yes!” when your dog gets to you, and throw a second ball in the other direction as the reward. This game can be fast and furious; it’s great fun for ball-crazed dogs.

Be careful to wait and call your dog back to you *after* she has the ball (so she doesn’t learn that getting the ball is part of the coming when called).

## PRACTICE MAKES PERFECT

Remember, just as when we play any new game with our dogs, it will take a few play sessions for your dog to learn the rules and goals of these “coming when called” games. But once your dog understands and enjoys them, you can get creative, adding challenges to the games, switching rewards, and building up by incorporating more distractions. In addition, make up new games to play and incorporate the things your dog loves into your recall practice. Practicing with games can motivate both you and your dog to train and play your way to a fantastic, impressive recall. 🐾

*Author/trainer Mardi Richmond, MA, CPDT-KA, lives and works in Santa Cruz, California. She shares her life with her wife and a wonderful heeler-mix. She is the owner of Good Dog Santa Cruz, where one of her specialties is helping people work through recall issues.*

# Placebo Power

*Can you avoid bias when evaluating a new medical treatment, diet, or training technique on your dog?*

BY LINDA P. CASE, MS

**M**ost people are familiar with the concept of a “placebo effect,” the perception that a subject’s health improved after the subject unknowingly received an inert treatment that should have had no effect on the subject whatsoever. The assumption is that because we believe that we have received an actual treatment, our mind tells us that we should feel a bit better. Then, amazingly, we *do* feel better. We notice a reduction in symptoms and ultimately conclude that the “medicine” must be working. The irony is that placebos actually can be powerful medicine (or something), at least for some people, for some diseases, some of the time.

The effects of placebos in human medicine are well documented. The highest level of placebo effect is seen with diseases that have subjective symptoms that are patient-reported, difficult to measure directly, tend to fluctuate in severity, and occur over long periods (i.e., are chronic). Examples include depression, anxiety-related disorders, gastric ulcer, asthma, and chronic pain. In medical research, an average placebo response rate of 35 percent is reported, with rates as high as 90 percent for some health conditions. By any standard, that is a powerful effect!

Although the reasons that we respond to placebos are not completely understood, medical researchers universally accept the importance of considering them when studying new treatments. Studies of new drugs or medical interventions include placebos as control groups to allow unbiased comparisons with the treatment or intervention under

evaluation. Any effect that the placebo group shows is subtracted from the effect measured in subjects who receive the actual medication. The difference between the two is considered to be the degree of response attributable to the treatment. If a placebo control group was not includ-

ed, it would be impossible to differentiate between a perceived response (placebo) and a real response to the treatment.

Today, double-blind, placebo-controlled clinical trials are considered to be the gold standard of study designs by medical researchers. (The “double-blind” part refers to the fact that in addition to having both a placebo group and a treatment group, neither the researchers nor the subjects know which subjects receive the treatment and which receive the placebo until the trial is concluded.)

## PLACEBOS AND OUR DOGS

So, what about dogs? Can a placebo effect occur with dogs? Possibly, but things work a bit differently where our dogs are concerned.

The first major difference is that dogs are basically *always* blinded to treatments. Although they may understand that something different is being done to them (or that there is a strange pill buried in that piece of cheese), most people will agree that dogs do not understand that they are being medicated for a particular health problem or are on the receiving end of a new behavior modification approach. As a result, unlike human patients, dogs will lack the specific expectations and beliefs about health interventions that

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**Can most owners be counted on to accurately report their dogs’ response to a new treatment for a painful or chronic condition, such as osteoarthritis or epilepsy? According to several studies, the answer is no!**



are necessary for a placebo effect to occur directly.

However, in cases where owners or caregivers are required to observe and report symptoms and changes in health regarding the dog's response to a given treatment, a different type of placebo effect may occur – a “caregiver placebo effect.” As with human maladies, the conditions for which this type of placebo effect has been described in dogs are those that involve subjective measures of health (pain, activity level, appetite) and that have a tendency to fluctuate in severity.

When evaluating a drug for its effect on something that can be measured with objective tools, such as blood pressure, blood sugar, or hormone levels, our subjective opinion of the dog's response is not relevant. But when the treatment is aimed at something like pain – something that can't be easily measured with medical tests – our vulnerability to the placebo effect arises again, as recorders and reporters of our dogs' health and symptoms. While highly communicative in many ways, dogs cannot specifically tell us what part of their body hurts, how intense the pain is, whether it is abating, or by how much. We use our knowledge of a dog's behavior and body language for clues about how he feels – but how we feel about his situation, symptoms, and treatment may color what we “see.”

Let's look at two situations where the caregiver placebo effect in dogs has been well observed: osteoarthritis and epilepsy.

## CAREGIVER PLACEBO EFFECT STUDIED

The most common form of arthritis, osteoarthritis occurs when the protective cartilage on the ends of bones wears down over time. It's a painful and progressive health problem that can seriously impact a dog's quality of life. Fortunately, a variety of medical and nutritional treatments are available for afflicted dogs, including nonsteroidal anti-inflammatory drugs (NSAIDs, such as deracoxib and meloxicam), nutrient supplements (e.g., glucosamine and chondroitin sulfate), and complementary or alternative medicine approaches (such as acupuncture or cold laser therapy).

Researchers who have studied these treatments often use subjective measures of lameness in which dogs' owners and veterinarians numerically rate their dog's

degree of pain, mobility, and interest in daily activities in response to treatment.

Some studies *also* include *objective* measurements of arthritis symptoms – such as recordings of the weight distribution of each leg while standing or the amount of force that is exerted by each limb during movement. In a “static weight bearing” test, the dog is positioned with each limb on a separate scale; dogs with joint pain usually distribute their weight in such a way as to reduce weight bearing on the limbs that are most painful and increase it on the other limbs. In a “force plate” or “force platform” gait analysis, instruments measure the force of the strike of each limb as the dog moves.

In virtually all placebo-controlled studies of osteoarthritis treatments, a substantial proportion of owners (and veterinarians!) have reported improvement in the placebo-treated dogs. However, when measured using weight-bearing techniques, far fewer dogs show actual improvement.

### ■ THE STUDY: CAREGIVER PLACEBO EFFECT AND OSTEOARTHRITIS<sup>1</sup> –

Two researchers, Michael Conzemius and Richard Evans at the University of Minnesota's College of Veterinary Medicine, analyzed data from the placebo control group of another study – a large clinical trial that was testing the effectiveness of a new NSAID.

All of the enrolled dogs in the NSAID study had been diagnosed with osteoarthritis and had clinical signs of pain and changes in gait and mobility. This was a multi-centered design, which means that each dog's own veterinarian conducted the biweekly evaluations of gait and lameness. Both owners and veterinarians completed questionnaires that asked whether the dog showed improvement, no change, or worsening signs of arthritis over a six-week period. Neither the owners nor the veterinarians knew if their dog/patient was receiving the placebo or the new drug.

Keep in mind that Conzemius and Evans had nothing to do with the NSAID study; they simply examined data from the study's placebo control group.

● **Results:** The ground reaction force (GRF) tests remained largely unchanged for the dogs who were given placebos during “treatment.” Of 58 dogs, five (8.6%) had GRFs that worsened over the

course of treatment; seven (12%) had GRFs that improved; and 46 (79.3%) had GRFs that remained unchanged.

However, half (50 percent) of the owners whose dogs received placebos stated that their dog's lameness was improved during the study. Forty percent reported no change, and 10 percent said that their dog's pain had worsened.

When these owner reports were compared with actual change as measured by the force platform, the caregiver placebo effect occurred in 39.7 percent of owners.

The dogs' own veterinarians performed no better. A placebo effect occurred 40 to 45 percent of the time when veterinarians evaluated the dogs for changes in gait or pain.

This means that not only were the owners strongly invested in seeing a positive outcome, so too were their veterinarians. This effect occurred despite the fact that all of the human participants were aware of the 50 percent chance that their dog was in the placebo group not the drug group, and that there was no way to be certain which group their dog was in.

### ■ THE STUDY: CAREGIVER PLACEBO EFFECT AND CANINE EPILEPSY<sup>2</sup> –

Veterinarians from North Carolina State University College of Veterinary Medicine and the University of Minnesota used an approach called a “meta-analysis,” which means that the researchers pooled and then reexamined data collected from several previous clinical trials. They reviewed three placebo-controlled clinical trials that examined the use of novel, adjunct treatments for canine epilepsy.

During the treatment periods in each of the epilepsy studies, owners were asked to record all seizure activity, including the length of the dogs' seizures, the intensity of the seizures, and the dogs' behavior before and immediately following seizures.

● **Results:** The majority of owners (79%) of dogs who were (unbeknownst to the owners) receiving a placebo reported a reduction in seizure frequency in their dogs over the six-week study period. What's more, almost a third of the owners (29%) said that the seizure activity decreased more than 50 percent, the level that was classified in the study protocols as indicative of a positive response to treatment.

## WHY DO PLACEBOS WORK SO WELL?

What's going on? Well, several things, it appears. The most obvious explanation of the caregiver placebo effect in dogs is that owners expect a positive response when they assume an actual treatment is being administered to the dog.

Whenever we introduce a new medication, diet, or training method and anticipate seeing an improvement in our dog's health or behavior, we naturally tilt toward seeing positive results and away from seeing no change (or worse, a negative effect). This is a form of "confirmation bias" – seeing what we expect to see and that confirms our preexisting beliefs.

In fact, an early study<sup>3</sup> of the caregiver placebo effect in dogs found that when owners were asked to guess which group their dog was in, the owners whose dogs were actually in the placebo group but said that they were *certain* that their dogs were in the treatment group demonstrated the strongest positive (placebo) response.

Such expectations may be an especially strong motivator when we are dealing with maladies that have affected our dogs for a long time, conditions that infringe upon our dogs' ability to enjoy life, and for which we feel that we are running out of options.

Osteoarthritis and seizure disorders were the conditions studied in these papers, but I can think of several other common canine health problems for which we caregivers may easily succumb to the power of the placebo effect. These include chronic allergies, adverse reactions to food ingredients, anxiety-related behavior problems, and even cancer.

Another factor that may contribute to the caregiver placebo effect is finding oneself in a state of contradiction. When

we invest time and money (and hope) into a new treatment for our dogs, it follows that we will naturally have high expectations that the treatment will work. If it does not, we may experience cognitive dissonance, the uncomfortable feeling caused by holding two contradicting beliefs in one's mind at the same time. For example, "I was told that giving my dog dried gooseberry rinds would cure his chronic itching; these rinds are expensive and hard to find. He doesn't seem any better . . . This isn't a good feeling."

Psychologists tell us that our brain reduces this discomfort for us – *without our conscious awareness* – by simply changing our perceptions. In this case, convincing oneself that the dog does seem a bit less itchy, her coat is a bit healthier, and overall, she does really seem to be feeling better, immediately solves this problem for the brain and for our comfort level.

Finally, a related phenomenon that is common enough to have earned its own name is the Hawthorne Effect, also called observation bias. This is the tendency to change one's behavior (or in our case, how we might report our dog's behavior) simply as a result of being observed. The Hawthorne Effect suggests that people whose dogs are enrolled in an experimental trial may behave differently with their dogs because they know they are enrolled in a trial that is measuring many aspects of the dog's life.

In the case of the arthritis studies, owners may have altered how regularly they exercised their dogs, began to avoid behaviors that worsened the dog's arthritic pain, or began to pay more attention to the dog's diet and weight.

The point is that when people are enrolled in a research trial or are starting a new medical treatment, or diet, or training program and are being



monitored, they will be inclined to change other aspects of how they live with and care for the dog as well. These changes could be as important (or more important) than the actual treatment (or placebo). This is not necessarily a bad thing, mind you, but is another reason why we always need control groups. It's important to be aware that the thing that we think is working for our dog may not actually be what's doing the trick.

## TAKE AWAY POINTS FOR DOG OWNERS

When trying something new with our dogs, might we, at least some of the time, in some situations, be inclined to see improvement when it does not truly exist? When interpreting our dog's response to a novel therapy or supplement or training technique, are we susceptible to falling for the sugar pill?

It seems probable, given the science. It is reasonable to at least consider the possibility that a placebo effect may influence our perceptions of our dog's response to a new or novel food, supplement, training technique, or treatment. This is especially true if the approach being tried has not been thoroughly vetted by research through double-blind, placebo-controlled trials.

While the development of new medications, foods, supplements, and training methods is exciting and important, we must avoid the tendency to see improvement from something that is novel simply because we expect and desire it to be so. 🐾

Linda P. Case, MS, is the owner of AutumnGold Consulting and Dog Training Center in Mahomet, Illinois, where she lives with her four dogs and husband Mike. She is the author of a new book, *Dog Food Logic*, and many other books and numerous publications on nutrition for dogs and cats. Her blog can be read at [thesciencedog.wordpress.com](http://thesciencedog.wordpress.com). See "Resources," page 24 for contact and book purchasing information.

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# The Latest Flap

*Ear hematomas are common, and tricky to cure. There are a variety of treatment options – including choosing no option at all.*

BY DENISE FLAIM

If eyes are the windows to the soul, then the ears are its curtains: Whether they are minimalist Roman shades or fringed swags that would make Scarlett O’Hara blush, a dog’s ears frame her face and set off her expression. In other words, while they have a utilitarian function (and an important one at that) they have a cosmetic one, too. So imagine my dismay when I noticed that my handsome old Rhodesian Ridgeback, Blitz – he of the two gorgeously symmetrical triangles held crisply and smartly against his graying face – had what appeared to be a frankfurter growing on the edge of his right ear.

The purplish, sausage-like lump turned out to be an aural hematoma. An accumulation of blood in the ear flap resulting from a broken blood vessel, hematomas are common in drop-eared breeds like mine, though they occur in dogs of all ear types. They are believed to be caused by trauma to the relatively thin tissue of the ear flap, or pinna, often as a result of head-shaking.

The good news about hematomas is that, if left untreated, they are eventually reabsorbed. They will not burst – even though by all appearance they look ready to pop – and the dog is left no worse for wear, except for having to endure the

discomfort of a large blood blister weighing down her ear. (There is a great diversity of opinion about just how painful ear hematomas are for dogs, and the only ones who know for sure aren’t talking.)

The bad news is that allowing nature to take its course can have aesthetic implications: As the blood-filled ear flap heals and contracts, scar tissue often develops, causing thickening and wrinkling that make it often noticeably different from its non-clotted counterpart. It’s sort of the doggie version of “cauliflower ear” in boxers (the pugilists, not the canines), whose battered outer ears can become swollen and misshapen, resembling the texture of the vegetable that lent its name to the condition.

In Blitz’s case, I took him to a veterinarian whose expertise in traditional Chinese medicine I greatly admire. But acupuncture and herbs were not options in this case. “Chinese medicine is good for a lot of things,” the vet said with a smile. “But not everything.” His preferred treatment for aural hematomas

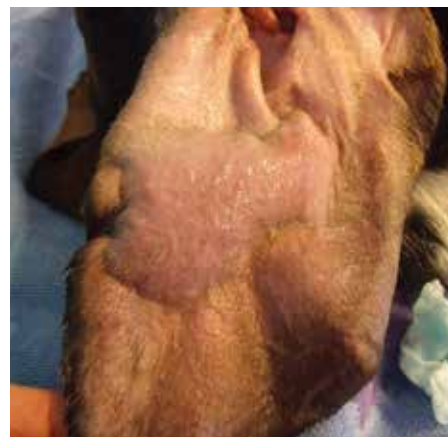


PHOTO BY AND COURTESY OF THE VETERINARY TRAUMA AND MEDICAL CENTER: FLORIDAPETSURGERY.WEBB.COM

**This is a close-up of an aural (ear) hematoma. The ear flap has been clipped and readied for surgery, to drain the swelling and prevent the fluid from the broken blood vessels in the ear flap from accumulating like this again.**

was to insert a small drain into the ear, which we did. Blitz’s hematoma eventually resolved, and his ear was slightly smaller and a little thicker than it had been before. Not an ideal outcome, but not a terrible one, either.

That seems to be the general theme when it comes to aural hematomas: There are many different methods for treating them, and none is perfect. The overriding challenge is that the hematoma separates the skin from the ear cartilage – sort of like a calzone, to use another food comparison. The inability to get those layers to reattach is what causes the ear to shrivel and become misshapen.

Below are some methods for treating hematomas. Some are mainstays that most veterinarians will recognize; others are relatively new approaches that try to maximize the effort to get the skin and cartilage to start talking to each other again, and one has been used as far back as the time of the Pharaohs – on humans, at least. Remember, though, that taking action is a choice, not a necessity: If you’re okay with that frankfurter shriveling up into a cauliflower, then you can do nothing. Your dog probably couldn’t care less.

## EARLY INTERVENTION

For those who like to incorporate alternative modalities into their dog’s health care, holistic medicine offers maddeningly few options for quickly



**This is the first thing many owners notice if their dogs develop an ear hematoma: the dog’s normal floppy ear may suddenly stand up, and he may tip his head and show other signs of discomfort.**





**This “street dog” (who has other problems, to be sure), exhibits a “cauliflower ear” – probably the result of an untreated aural hematoma. These can begin with a bad case of ear mites or an ear infection (which makes the dog shake his head to the point of bursting a blood vessel in the ear flap) or injury to the ear flap.**

clearing up hematomas to avoid scarring. Shawn Messonnier, DVM, of Paws & Claws Animal Hospital in Plano, Texas, says he has had “pretty good success” using the homeopathic remedies hypernicum and arnica on smaller hematomas – those that take up one-fourth or less of the ear. “Very often those remedies will help resolve hematomas when they are really small,” he says. But as time progresses, and the hematoma begins to clot and harden, homeopathy can be less effective.

Because eosinophils (a type of white blood cell), and mast cell infiltrations have been found in hematomas, some experts speculate that the blood blister may be a component of an allergic reaction. Veterinarians who use only conventional medicine sometimes prescribe steroids such as prednisone to reduce inflammation, though a 2011 review of treatments for aural hematomas in dogs for the Evidence-Based Veterinary Medical Association found the effectiveness of steroids in resolving hematomas and preventing their recurrence to be inconclusive. Some practitioners use cold-laser treatments to help shrink the hematoma and destroy inflammatory cells.

**Stitches through the ear flap, sometimes made through buttons (which prevent damage apply wider pressure to the ear flap and prevent the thread from cutting into the skin), help hold the layers of skin and cartilage together, so fluid in the ear flap has no place to pool and swell.**

## TOTALLY TUBULAR

Dr. Leni Kaplan, a faculty member in the Community Practice Service of Cornell University College of Veterinary Medicine in Ithaca, New York, says if she does decide to treat a hematoma, she will insert a small sterile tube to help the ear drain. (Some vets use a specific draining tube called a cannula; Dr. Kaplan prefers a bovine teat cannula, used to treat mastitis in cows, or just sterile IV tubing sewn inside the ear.)

More important than the kind of drain used is the follow-up care that the dog receives. “The main thing is that the owners have to gently massage the ear” to keep the hematoma draining, Dr. Kaplan explains. “If the owner the doesn’t do any home care, it’s a bloody mess.”

The purpose of a drain or cannula is to keep fluid moving out of the hematoma so that it reduces in size, but a downside is that this method doesn’t do much to compress the skin and cartilage together.

A new surgical approach by Rachel Seibert, DVM, and Karen M. Tobias, DVM, DACVS, at the University of Tennessee, takes the idea of having an active drain a step further by creating negative pressure to constantly suck out liquid even as it brings the separated layers together. With their technique, a large needle is inserted into the hematoma to empty it, then a vacutainer (a sterile tube that creates a vacuum so blood can be

drawn out easily) is attached to the ear using a butterfly catheter.

“We started using this technique because it is less invasive than surgery, does not require general anesthesia, and has a similar success rate to surgery without the risks,” Dr. Seibert explains. “The reason this technique works is that it is successful at maintaining contact between the skin and cartilage with constant negative suction.”

Dr. Seibert says the success rate with the negative-pressure drain is similar to treatment with drainage followed by steroid injections, with a recurrence rate of 22 percent. “The pinna is typically minimally distorted or wrinkled using this technique,” she says, “and most cases should resolve within seven to 10 days.”

Though the technique is fairly straightforward, challenges include successfully bandaging the whole affair so that it stays on but doesn’t restrict the dog’s breathing; and making sure the owner replaces the tube at regular intervals, because once it fills to a certain point, suction is impaired.

## QUILTER’S CORNER

In the quest to get the skin and cartilage of the ear to reattach, many (if not most) veterinarians opt for surgery. The drawback to any kind of surgery is that the dog must undergo anesthesia, and post-operative recovery is relatively more painful.





**Left: A series of holes have been surgically “punched” in the ear flap to drain the excess fluid and prevent it from puffing up the flap, causing separation of the tissues. Stitches through the flap will help hold the layers of skin and cartilage together. Above: After surgery, the ear flap will usually be tightly bandaged to maintain pressure and prevent further swelling.**

The procedure involves opening the hematoma surgically with an incision on the inner flap of the ear running in a wavy line; the incision drains the hematoma. Then the incision is stitched up, and more stitches are used in what looks just like a “quilting” technique, with knots on both sides of the ear flap, preventing any part of the ear flap from puffing up with fluid again. Many small stitches are used so there are no large unstitched areas where the blood can accumulate again. (Some vets actually stitch shirt buttons to both sides of the ear to exert more and wider pressure on the flap, literally pressing it together!)

Tina Wolfe, DVM, of Poland Veterinary Centre in Poland, Ohio, prefers the incisional method for a hematoma that is chronic – when it has become firm as a result of clotting and is beginning to be reabsorbed.

“The incisional technique allows for a more complete evacuation of the hematoma once a significant clot has formed, which can help decrease the rate of recurrence,” she explains, noting that the sutures help to promote scar tissue and decrease the space for an additional hematoma to form.

For acute hematomas, where a significant clot hasn’t yet developed, Dr. Wolfe opts for a different surgical technique. With a small skin-biopsy punch – which is traditionally used to extract small circles of tissue to be sent

to a laboratory for analysis – she makes a series of small staggered holes along the hematoma on the inner surface of the ear flap. After the hematoma has drained, she places a single stitch through each of the small hole punches, tacking the exposed cartilage to the skin without closing the hole.

Newly formed acute hematomas “are more soft and fluid in nature and will drain readily though the biopsy sites, which allows for continued drainage of the hematoma,” she explains. “The punch-biopsy method also tends to have a high success rate, is quickly and easily performed, and has a good cosmetic result.”

As with the quilting technique, no bandages are necessary, though an Elizabethan collar or other protective device is recommended to make sure the dog does not scratch or shake the ear.

“I prefer either of these techniques to drainage alone or cannulas due to higher rates of success and cosmetic outcomes,” Dr. Wolfe concludes. “Both the incisional and punch-biopsy methods have a lower rate of recurrence than cannulas and needle drainage because the sutures help to promote scar tissue and decrease the space for an additional hematoma to form.”

In a paper published in July, Drs. András Gyórfry and Attila Szijártó of Semmelweis University in Budapest, Hungary, outlined still another operative

technique for aural hematomas. With this approach, the hematoma is opened with an incision on the inner flap of the ear running perpendicular to the ear tip. Absorbable sutures that run parallel to the wound are then placed inside the ear tissue, binding together the cartilage and subcutaneous tissue, but not penetrating the skin. After all the stitching is done, the two edges of the incision do not meet, but rather are left a millimeter or two apart, permitting fluid to continue to drain as the ear heals from the inside out.

In a retrospective study of 23 dogs with aural hematomas that were treated with this technique between 2006 and 2012, the authors reported that all but two – or more than 90 percent – healed without any deformity to the ear, and none required additional surgery or had a recurrence. The two cases of misshapen ears were due to a bacterial infection in one and misaligned stitches that permitted wrinkling in the other.

“The new method offers a minor risk of postoperative complications while accomplishing high healing rates,” the authors concluded in their paper.

## THAT LITERALLY SUCKS

We’ve saved the best – or at least, the most unconventional – for last. In a word: leeches.

These slithery, blood-sucking worms have been used for centuries, dating back to ancient Egypt. Even today in

human medicine, leeches are used to drain pooled blood after a digit has been surgically reattached, to treat varicose veins and blocked arteries, and to lessen pain from osteoarthritis. And in dogs, they are most commonly used to treat ear hematomas.

Shelley R. Epstein, VMD, CVH, of Wilmington Animal Hospital in Delaware, has blogged about her experience with leech therapy, formally called hirudotherapy. “No anesthesia is needed; the leeches inject a numbing chemical into the site,” she writes. “It may take a month for the hematoma to fully heal, but the ear is usually normal in appearance afterward.”

According to Biopharm in Hendy, South Wales (“suppliers of leeches since 1812”), ear hematomas in dogs usually call for two to three leeches, and the sooner they are applied, the better. “Leeches can still be used on hematomas that are slightly older and firmer, but in these cases two leech treatments may be required in order to best decongest the blood,” the company explains on its web site. After the leeches are removed, the wound can continue to bleed steadily for as many as 10 hours – ideal in the case of hematomas, where active drainage is needed.

Biopharm describes leeches as “perfectly designed” sucking machines. Leeches have three sets of jaws containing approximately 100 teeth each, and leave a bite mark that resembles the Mercedes-Benz emblem. Along with the natural anesthetic that helps dull the pain of their initial chomp, leeches release several compounds when feeding, including hirudin, an anti-coagulant that maintains blood flow during feeding; and calin, which inhibits clotting for a period afterward. Biopharm acknowledges that as with any treatment, there is a risk of allergic reaction or infection, but notes that it is rare.

In the United States, medicinally farmed leeches are considered a “medical device” by the Food and Drug Administration (FDA), and their use is regulated by federal law. “Vets have ordered from us,” a terse-sounding



Biopharm's logo features the mark of a leech bite!

## DON'T SHAKE YOUR HEAD!

Though the cause of hematomas hasn't been definitely identified, most veterinarians point to head shaking as the likely culprit. Vigorous or repeated head-shaking can cause a blood vessel in the ear flap to burst and cause acute swelling – but we've also seen dogs whose own ID tags have injured their ear flaps during head shaking, initiating the hematoma spiral. So, to keep hematomas from recurring – and to avert their formation in the first place – it's important to get to the root cause of head shaking and resolve it.

Ear infections are a prime cause of head shaking, and can be persistent and difficult to treat. But once the infection has been brought under control, your work is not done: You need to find out of the source of the imbalance that produced the infection to begin with. Pay attention to whether there has been a change in the dog's food, supplements, or probiotics; I noticed that even changing my dogs' diet from raw to home-cooked resulted in an uptick in occasional ear infections.

Another, less obvious cause of head shaking – and the likely cause in Blitz's case – is a lack of household humidity. Especially in wintertime, household air tends to dry out, and with it the dogs' skin. An increase in dander makes them itchier, which in turn makes them shake more.

Running a humidifier, boiling a kettle of water, or simply leaving a bowl of the wet stuff out atop a radiator and regularly refilling it can restore much-needed moisture to the household – and stop Fido from flapping.

spokesperson from Leeches U.S.A. in Westbury, New York, told us; she did not know for what purpose the leeches had been ordered.

Leeches are used for only one treatment, and most meet their demise thereafter. In Dr. Epstein's practice, they are “retired, and kept in a bowl to swim around.”

### THE BOTTOM LINE

In the end, it can seem there are as many ways to treat hematomas as there are dogs who develop them. And, depending on whom you talk to, the end results can vary dramatically.

Even though surgery is said to be the best method to avoid scarring and malformation, “I've seen the ones that have gone to surgery and half of those are as scarred down as those that haven't,” Dr. Kaplan observes. “And I've seen ones where the owners did nothing and their ears look great.”

Still, there are a few constants when it comes to caring for a dog with a hematoma:

■ If you opt for veterinary intervention, seek it out sooner rather than later, before the hematoma hardens and becomes more difficult to treat.

■ After the insertion of a device or procedure to drain the hematoma, be meticulous about after care, following your vet's instructions to keep the hematoma draining and stop fluid build-up.

■ Avoiding further concussion to the ear is vitally important if it is to stabilize and heal. As annoying or awkward as it is, be sure your dog wears some type of Elizabethan collar to deter scratching and minimize the effects of shaking.

■ Treat the underlying cause of the head-shaking that produced the hematoma. Otherwise, you are only addressing the symptom and not the cause.

If Blitz were around today, and I had another shot at treating his hematoma, I'd likely pursue some of the newer treatments outlined in this article. Heck, I might even give leeches a try. I'd like nothing better than to find an approach that actually works for this infuriating ear condition – and to keep that head “drapery” as handsome as ever. 🐾

*Denise Flaim of Revodana Ridgebacks in Long Island, New York, shares her home with three Ridgebacks, 10-year-old triplets, and a very patient husband.*

# On Your Mark

***Are you dealing with a dog who “urine-marks” in the house? Don’t despair! There are many things you can do to stop this vexing habit.***

BY PAT MILLER, CBCC-KA, CPDT-KA

I can still remember the day, more than a decade ago, when I first realized with horror that our Scottish Terrier, Dubhy (pronounced “Duffy”), was marking in the house. We were trying to sell our Tennessee home at the time, which made the indoor leg-lifting behavior doubly disturbing. Homes with urine stains and odors don’t show particularly well. Dubhy was young, just over a year old. I wrote off the amber-colored stains I found on the heater vent to not-quite-finished housetraining, redoubled my management efforts, and stepped up the “potty outside” routine. It didn’t help. I began to question my professional dog-trainer credentials. Personally faced with persistent indoor marking, one of the more frustrating challenges dog owners encounter, I was not succeeding at resolving it.

Leg-lifting is a natural, normal behavior for dogs, especially (although not exclusively) for males. Of course, like lots of other natural, normal dog behaviors, it’s unacceptable to most owners. Fortunately, most male dogs learn pretty quickly that humans, for some unfathomable reason, don’t appreciate their efforts to tell the world that the house, and all items within in it, are the property of the dog and his family. “Keep your paws off!” he is saying to the world.

Indoor marking is also often a function of stress. Dogs who are anxious about their environment are more likely to mark indoors than those who are relaxed and calm. Stress-related marking is harder to modify than the simple “This is my stuff” leg-lifting. Dubhy was a calm, easygoing, laid-back dude. The idea of stress-induced marking didn’t even enter my mind.

Only after several years had passed did I realize that Dubhy’s indoor marking coincided precisely with the start of

his dog-reactive behavior. The dog reactivity emerged as the result of a pair of roaming Labradors Retrievers (who lived a mile away) who repeatedly breached their underground shock fence, visited our yard, and fought through our fence with our indomitable Scottie. I eventually realized well after the fact that the two behaviors were connected. Duh. The stress of the two intruding Labradors set off Dubhy’s marking.

## **MODIFYING MARKING: THE SURGICAL SOLUTION**

In Dubhy’s case, my initial analysis of incomplete housetraining, although incorrect, was not *entirely* off base. Indoor marking often begins in adolescent males because it is a natural behavior. Those “easy” cases often respond well to standard housetraining protocols: increasing the dog’s management to reduce his opportunity to mark, taking him outdoors to potty far more frequently, reinforcing appropriate elimination outside, and interrupting any leg lifts you happen to see with a reminder: “Oops! Outside!”

Of course, housetraining and/or behavior-modification efforts need to be accompanied by a good clean-up program using an enzymatic cleaner, to eliminate any lingering odor of urine (which invites the dog to mark again). It’s also important to rule out or treat any urinary-tract infections as possible contributors to inappropriate elimination. And don’t forget neutering!

According to Dr. Nicholas Dodman, veterinary behaviorist at Cummings School of Veterinary Medicine at Tufts University, about 60 percent of intact male dogs will stop urine-marking within weeks or months if they are neutered. Other sources claim as high as a 90 percent success rate post-neutering.

Suffice it to say that neutering is a good first step if you are faced with a house-marking challenge. This is at least in part because intact male dogs will mark everything in response to the scent of a female in season somewhere in the area, and in part because testosterone in general contributes to the motivation to make a “this is mine” statement.



Marking by female dogs will also usually resolve with spaying. Of course, the older the dog and the longer your dog has been practicing the marking behavior, the less likely it is that sterilization alone will fix the problem.

Dubhy, however, was neutered some five months before he started marking. That clearly wasn't the answer to our dilemma. Nor did our return to a basic housetraining protocol stop his behavior.

## MODIFYING MARKING: STRESS REDUCTION

The 10 to 40 percent of dogs who don't stop their marking after neutering and remedial housetraining efforts are probably, like Dubhy, marking because of stress. In some cases, identifying stressors and removing them can eliminate marking. There are a variety of different strategies for removing stressors (see sidebar, right). The more stress you can remove, the more likely it is the marking will cease. Other than his reactive aggression toward other dogs, however, Dubhy was a pretty laid-back, mellow guy. We had talked to the neighbors on several occasions about keeping their wandering Labrador Retrievers at home, but Dubhy really didn't seem to have a whole lot of additional stress in his life.

Exercise is an excellent stress reducer that can help your indoor-marker feel less compelled to lift his leg in your living room. Vigorous off-leash aerobic outings can work wonders with a variety of behavioral issues, as can force-free training routines that require a dog to think, and that tire him mentally. Products such as Adaptil (plug-in pheromone diffuser) can also be effective in decreasing stress levels for some dogs, as can calming massage, aromatherapy, and musical products from Through a Dog's Ear (see "Rest Easy," WDJ August 2014).

## MODIFYING MARKING: MEDICATE OR MANAGE

Dr. Dodman suggests that dogs who persistently mark indoors and don't respond to neutering and housetraining protocols almost always need anti-anxiety medication to resolve the problem. Indeed, pharmaceutical intervention can be quite successful, especially when combined with an ongoing behavior modification program.

Many dog owners prefer to avoid medication if possible, and choose, instead, to use a belly band for their indoor

## STRATEGIES FOR STRESSORS

Utilize five strategies for dealing with stressors. When I'm working with a client whose dog has stress-related behavior issues such as marking, aggression, or generalized anxiety, we list as many stressors as we can think of, assign one or more strategies to each stressor, and agree on which ones we will actively work on. Removing stressors doesn't necessarily make the unwanted behavior go away, but it does make your behavior-modification efforts much more likely to be successful.

Here are the strategies:

**1 GET RID OF IT:** Get rid of anything aversive that causes unnecessary pain or stress, including shock collars, choke chains, and prong collars, and penny cans or throw chains. Even head halters, considered by some trainers to be positive training tools, are aversive to many dogs.

**2 MANAGE YOUR DOG'S EXPOSURE TO THE STRESSORS:** If your dog isn't fond of small children and there are none in your life (and he doesn't encounter them regularly in your neighborhood), you can manage him (as I did) the one time each year your sister comes to visit with your young niece and nephew, by keeping him in another part of the house when the kids are awake and about.

**3 CHANGE HIS ASSOCIATION TO THE STRESSORS:** Convince him that something that stresses him is actually very wonderful by pairing it consistently with something else wonderful. If your dog is stressed by men with beards, you can convince him that men with beards always make chicken happen by having a bearded man appear, and feeding your dog bits of chicken, over and over and over again, until he wants furry-faced men to appear so he can have more chicken. The key to successful counter-conditioning, as this process is called, is to always keep the dog below threshold; you want him a little aware of and worried about the aversive stimulus, but not quaking in fear or barking and lunging. (See "Counter-Conditioning," next page.)

**4 TEACH HIM A NEW BEHAVIOR AROUND THE STRESSORS:** Perhaps your dog becomes highly aroused by visitors coming to the door. He's not fearful or aggressive, but the high arousal is a stressor. You can teach him that the doorbell is his cue to run and get in his crate, where he'll receive a stuffed Kong or other doggie delectable (see "Knock Knock," February 2010). Or you can teach him that visitors will toss toys for him to chase if he sits politely when the door opens.

**5 LIVE WITH THE STRESSORS:** You don't have to actively do something about every stressor in your dog's world; every dog can tolerate *some* level of stress and a few stressors. Just try to do something about the ones that are easy to manage or remove from his environment, and be conscious that when he's being exposed to the ones that you can't do much about (say, sounds of construction coming from the building project next door), he may be more likely to exhibit urine-marking or other stress-related behaviors at that time.

**In addition to urine-marking, your dog may exhibit other "naughty" behaviors, such as counter-surfing or chewing household items, when he's under increased stress.**



male markers (diapers are necessary for females). This is a reasonable solution to a vexing problem, if the dog accepts the device easily. If the dog can routinely Houdini his way out of the band, or is clearly distressed by wearing it, then it's not a viable option and medication is a better choice.

We opted for management with Dubhy. He happily accepted his belly band, lined with a sanitary pad, and stood quietly when I told him it was time to put his pants on. Delivering a treat after applying the belly band helped keep him happy about the procedure. He would still mark into the band, so I had to change it as

needed to prevent urine burns on his sensitive, bare abdomen.

Our earlier housetraining effort had at least succeeded in convincing Dubhy not to mark in our presence, so he could go pants-free when the family relaxed together evenings in the living room, and for sleep-time overnight in our bedroom. We used baby gates and closed doors to keep him in view. It was only for his unsupervised house-time that the band was required. Sure, I occasionally grumbled internally about the inconvenience of replacing pads and laundering belly bands, and grouched out loud when he occasionally managed to pee out from under the

band and I had to do clean-up duty, but it allowed us to have a peaceful life with our boy who might otherwise have been the source of much angst over the years.

We lost our beloved Dubhy a few months ago to lymphoma – a nasty and aggressive cancer. We miss him a lot. I'd give anything to have the privilege of putting belly bands on him again. 🐾

*Pat Miller, CBCC-KA, CPDT-KA, is WDJ's Training Editor. She lives in Fairplay, Maryland, site of her Peaceable Paws training center, where she offers dog-training classes and courses for trainers. See page 24 for contact information.*

## COUNTER-CONDITIONING

Counter-conditioning involves changing your dog's association with a scary or arousing 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 white meat from chicken – canned, baked, or boiled, since most dogs love chicken and it's a low-fat food.

Here's how the process works:

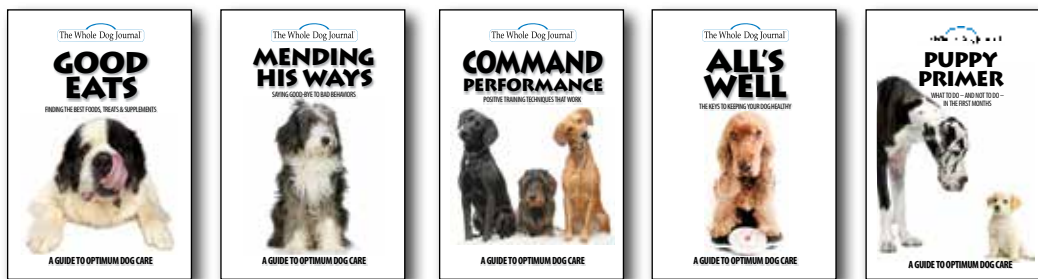
- 1** Determine the distance at which your dog can be in the presence of the stimulus and be alert or wary but not extremely fearful or aroused. This is called the threshold distance.
- 2** With you holding your dog on leash, have a helper present the stimulus at threshold distance X. The instant your dog sees the stimulus, start feeding him bits of chicken, non-stop.
- 3** After several seconds, have the helper remove the stimulus, and stop feeding chicken.
- 4** Keep repeating steps 1-3 until the presentation of the stimulus at that distance 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 stimulus at threshold distance X is now positive instead of negative.
- 5** Now you need to increase the intensity of the stimulus. You can do that by decreasing distance to X minus Y; by increasing movement of the stimulus at distance X (a child walking, skipping, or swinging her arms); by increasing number of stimuli (two or three children, instead of one); increasing the visual "threat" (a tall man instead of a short one, or a man with a beard instead of a clean-shaven one); or by increasing volume (if it's a stimulus that makes noise, such as a vacuum cleaner). I'd suggest decreasing distance first in small increments by moving the dog closer to the location

where the stimulus will appear, achieving his new CER at each new distance, until he is happy to be very near to the non-moving stimulus, perhaps even sniffing or targeting to it.

- 6** Return to distance X and increase the intensity of your stimulus (move the vacuum a little; have two children instead of one; have the man put on a hat, or a backpack), gradually decreasing distance and attaining CERs along the way, until your dog is delighted to have the moderately intense stimulus in close proximity.
- 7** Now, back to distance X, increase intensity again, by having your helper turn the vacuum on briefly, feed treats the instant it's on, then turn it off, and stop the treats. (Or turn up the volume, or add more children, etc.)
- 8** Repeat until you have the CER, then gradually increase the length of time you have your dog in the presence of the increased-intensity stimulus, until he's happy (but not aroused) to have it present continuously.
- 9** Begin decreasing distance in small increments, moving the dog closer to the stimulus, obtaining his new CER consistently at each new distance.
- 10** When your dog is happy to have the higher-intensity stimulus close to him, you're ready for the final phase. Return to distance X and obtain his new CER there, with a full-intensity stimulus – a running, moving vacuum; multiple children laughing and playing; a tall man with a beard wearing a hat, sunglasses, and a backpack. Then gradually decrease distance until your dog is happy to be in the presence of your full-intensity stimulus. He now thinks the stimulus is a very good thing, as a reliable predictor of very yummy treats. In the case of a human stimulus, you can gradually work up to actual interaction with the human(s) at this stage, by having the person(s) drop treats as they walk by, then letting him take treats from their fingers – without direct eye contact, and eventually working up to normal interaction.

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