

# The Whole Dog Journal™



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*A monthly guide to natural dog care and training*

OCTOBER 2013

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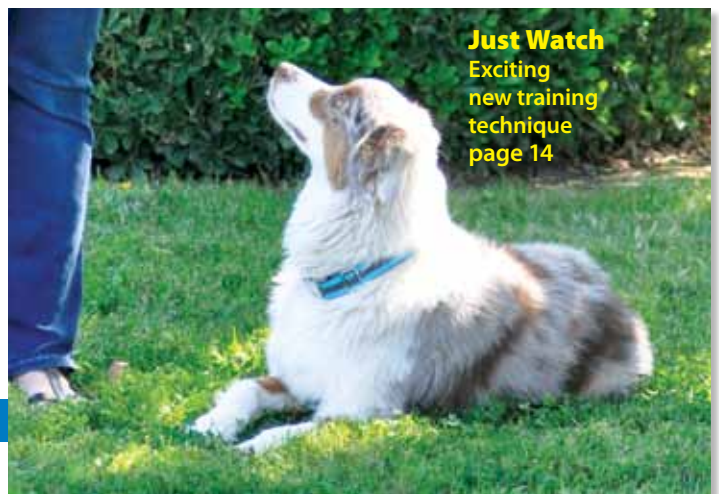


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# Riley, Not Rowdy

*Don't allow a poor initial perception to become a self-fulfilling prophecy.*

BY NANCY KERNS

Last month, in this space, I mentioned a big Labrador I was working with at my local shelter. (That's him on the back cover, only it doesn't look like him, because he's squinting in happiness with his giant rawhide bone, and he has nice big eyes, not piggy squinty eyes. But anyway.) The handsome boy, estimated at about 18 months old, came into the shelter as a stray, picked up by animal control. He lingered in the isolation ward for a couple of weeks; despite his good looks and sweet disposition, no one came looking for him.

He's amiable, and takes no offense from other dogs at all, even if they pummel him out of irritation with his physical clumsiness – which happens *all* the time, both the clumsiness and the pummeling. So he was moved to the adoption ward, where he lingered some more. Why?

For several reasons. Mostly, because this beautiful, friendly dog behaved like a canine tornado. If he walked through a room, it left a trace: things knocked over, drops of the water he just drank left on the floor in a drunken trail, people rubbing their shins (tail whacks) or flip-flopped feet (he didn't seem to understand that human feet are not there to give him traction). Oh, and the barking! Have you ever met a dog with the kind of bark that is not just loud, it's painful? That's this guy.

So, quickly, he got a reputation at the shelter, for being a nut, a spazz, hyperactive. He was given the name "Rowdy." While everyone recognized that he was sweet, they felt he was stupid. All of his panting and thrashing reinforced this perception.

As I worked with him, however, I realized a few things. He was actually really smart. He learned what I wanted him to do *very* quickly, but lacked the self-control to do it for very long. And he wasn't truly hyperactive, although it seemed that way because he is big and uncoordinated. When I came to the shelter early, before the back gates were open to the animal control trucks, I'd let him loose in the several-acre fenced area around the shelter, to see if he wanted to run; he didn't! He'd run a bit, but then walk around with me.

I came to realize that his writhing and

flopping were symptoms of anxiety. Every time I took him into a new setting (like, each different section or room inside the shelter), he reacted with panting and physical exuberance. But as soon as he was comfortable in the new place, and knew what I wanted him to do (mainly, sit!), he would grow calm.

Long story short: I brought him home for a few weeks of training, but more importantly, socialization. I constantly asked him to control himself – Sit! – and reinforced any success richly, with attention, eye contact, calm petting, and food treats. Fetch? Sure! But he had to sit each time before I threw the ball. Go in or out of the house or car? Absolutely, but say "Please" first with a sit. If he grew frantic about anything, I'd ignore him, walk or look away, and pay attention to him only when he was calm again.

And, importantly, I changed his story; I didn't allow him to be "Rowdy." When I took him places, I didn't space out. I *scrupulously* managed his interactions with people so that he always succeeded at behaving well; if any situation developed that looked like it might become too challenging for him (say, an out-of-control dog on a leash coming toward us), I calmly but quickly whisked him to a safe distance, asked him to sit, and reinforced him for observing the situation calmly. People remarked again and again (in Tractor Supply and Home Depot and on the street), at how smart and calm he was. Ha! He is!

He's adopted now, and I'm working with his new family, to make sure that he continues to progress in his new life – a life of Riley, not Rowdy.

NK

## USE CAUTION WHEN FILLING VETERINARY PRESCRIPTIONS AT HUMAN PHARMACIES

*Having your dog's prescriptions filled at a human pharmacy can save money, but dangerous, or even lethal, mistakes can be made if you're not paying attention.*

A few years ago, I was at my vet's office when an older couple brought in a Chihuahua puppy who was very ill. Despite the staff's best efforts, less than an hour later the pup was dead. The cause? A drug overdose, due to a prescription error made by a human pharmacy.

The prescribed amount for this tiny pup was 0.4 mg, but the pharmacist, who had probably never come across such a small dosage, had misread the prescription as 4 mg, so the pup had received 10 times as much of the drug as he was supposed to get. My vet accepted partial responsibility, as he had failed to write a zero in front of ".4" on the prescription. (Veterinarians are now being encouraged to use leading, but not trailing, zeroes when they write prescriptions to help avoid such mistakes.)

It had never occurred to me before that day to review a prescription for accuracy, but you'd better believe I'm careful to check them now. Errors are less likely to occur with prescriptions filled at your vet's office, since the people filling the prescription know their patients and are familiar with common dosages for dogs. The growing use of human pharmacies filling prescriptions for our dogs, however, means we must also deal with pharmacists who may know little or nothing about a canine patient's needs, or have any idea of the size of the patient when filling the prescription. This ignorance can lead to serious, even fatal, errors.

### POTENTIAL FOR MISTAKES

Incorrect dosage amounts are not the only mistakes that human pharmacists may make when filling prescriptions written for pets. Pharmacists currently receive no training in the use of drugs for non-human patients. The VIN (Veterinary Information Network) News Service has written about several problems that veterinarians have seen in recent years.

One example was a pharmacist who told a client that the dosage of diazepam (Valium) that her vet had prescribed for her dog could kill him. The pharmacist was unaware that dosages of many medications, including those used to treat hypothyroidism, seizures, and anxiety, are much higher for dogs than they are for humans, due to differences in metabolism and other factors.

The prescribed dosage was correct, but the client was now afraid to give the medication to her dog, who suffered

as a result. The dog was recovering from knee surgery and the medication had been prescribed to help keep him off his leg and reduce his anxiety. Without it, he overused and injured the leg, requiring additional surgery.

One of the first cases to result in a formal complaint followed by regulatory action, the state's Pharmacy Board issued a "notice of correction" to the pharmacist. In response, he asked that the drug store chain for which he worked provide its pharmacies with references in veterinary dosing and indications, which has since been done.

In other cases, pharmacists have altered doses, believing they are correcting a veterinarian's mistake, or substituted medications inappropriately, without notifying either the veterinarian or the client of the changes. This has led to serious problems for some dogs. For example, when a pharmacist substitutes a different type of insulin for what a diabetic dog is accustomed to, this can cause changes in glucose control and even life-threatening hypoglycemia. In other examples, medication doses have been lowered to the point that they are no longer effective, leading to suffering and even death in some dogs. In one case, a client reduced her dog's seizure medication on the advice of a pharmacist, and the dog developed intractable seizures that led to euthanasia.

Most of the time, veterinarians are unaware of the changes, or learn about them long after the fact, making it difficult for them to treat their patients effectively, or to report what happened to the appropriate authorities.

These problems are not new, but they are increasing as more people turn to human pharmacies in order to save money on their pets' prescriptions. Mistakes may also occur more frequently with large national chains that fill high volumes of prescriptions, where a pharmacist is unlikely to develop a personal relationship with either veterinarians or clients. Pending congressional legislation that would require veterinarians to provide all prescriptions in writing to pet owners with a notice that they can fill the prescription elsewhere could contribute to even more frequent problems in the future.

### TAKE-HOME MESSAGE

Whenever your vet gives you a prescription, make sure you understand the prescribed amount and dosing schedule. Then check the label to make sure that the name of the medication is the same as what your vet prescribed, and that the printed instructions match what your vet told you to give. If you have any questions about the medication, check with your vet, rather than relying on information from the pharmacist. If a pharmacy offers you a substitute medication, do not accept it until and unless you confirm with your vet that the substitution is acceptable. And never change your dog's medication based on a pharmacist's advice. 🐾

— Mary Straus





# Frozen in Place

*Commercial producers of raw, frozen diets for dogs face extraordinary new challenges in their quest to make the healthiest food possible.*

BY NANCY KERNS

**P**eople who believe in the value of feeding their dogs a biologically appropriate diet, comprised largely of raw meat and bones – with other foods added only to ensure that all their nutritional needs have been met, not as lower-cost “fillers” – love frozen raw diets. Food that has been formulated to meet the nutrient standards for a “complete and balanced” diet, and made with (mostly) meat and bones from (often) sustainably raised and humanely slaughtered meats, with the balance comprised of (frequently) organic, local produce . . . What’s not to like? The answer depends on who you are.

If you are an environmentalist, you may not be crazy about the energy required to keep all that food frozen as it makes its way from the manufacturing plant to distributor and retail outlet and ultimately, to your freezer. While many companies ship their products directly from their manufacturing site to your door, the transportation costs of relatively weighty packages (these diets contain, on average, 75 percent water, plus ice to keep the shipment cold), and the stack of waste Styrofoam (that the food is typically packed in) may be daunting.

However, most manufacturers make some efforts to ameliorate these issues. Some offer free shipping for the empty coolers to be returned, so they can be reused. Some minimize the packaging needed. Some sell only within a few hundred miles of their manufacturing plants.

If you own a dog who is prone to pancreatitis, or needs constant dietary scrutiny to keep from gaining weight, you may avoid these diets, which tend to contain more fat than would be healthy for such dogs. Fortunately, there are companies that offer products that are lower in fat than what might be typical.

People who own a very large dog, or several big dogs, might be discouraged by the typically (and relatively) high price of

these diets – at least, if they were interested in feeding raw food every day. Buying in bulk from a local company, however, can seriously offset some of the cost.

## THE FEAR FACTOR

Until the past decade or so, though, the thing that kept most people from buying a frozen raw diet, even if they expressed a strong interest in feeding their dogs “the very best” diet possible (and didn’t want to formulate and make it themselves) was the fear of pathogenic bacteria, such as *Salmonella*, *Listeria*, and *E. coli*.

Understand that experienced raw feeders, as they are known, are not afraid of these bacteria. 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.) And as long as you practice good basic kitchen hygiene and food safety practices, you really don’t have to worry about your family getting sick, either.

However, a recent push from the FDA to test pet foods for *Salmonella*, in particular, has led to dozens of recalls, shaking the confidence of many pet owners about raw foods in particular –



This (and many other) raw pet foods have been subjected to high pressure processing to kill any pathogenic bacteria that may be present.

unaware that the rash of positive tests have resulted from a FDA policy change, not a sudden crisis of competence in the entire pet food industry. (See “Why Are There So Many Recalls?”, next page.)

The principals behind some raw diet companies would rather go out of business than subject their products to any treatment that kills bacteria. Others have shrugged off any misgivings about antibacterial treatments as the price of a career in food production.

Currently, there are products available to owners who are on every different place on the continuum of comfort with the potential danger of bacteria-laden food. 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.

Conversely, there are people who strongly believe in the value of whole raw foods – bacteria and all – and who credit their dogs’ regular exposure to small amounts of bacteria for the dogs’ vibrant good health. Some of these people are more afraid of “Frankenfoods” – sterilized, irradiated, and/or genetically altered foods – than they are of pathogens. These people will find untreated foods more attractive.

**You have to decide whether you feel most comfortable with a pasteurized product or an untreated one. We’ve**

not seen studies that would lead us to avoid foods treated with a high pressure pasteurization process. But we also feel comfortable with feeding our dogs raw products from companies that use top-quality, naturally raised meats. You have to go with your *own* gut on this one.

## SELECTION CRITERIA

On our list of frozen, raw diets on the following pages, **we've included only companies that offer complete and balanced diets made with top-quality ingredients.** To give you an idea of how the formulation of these diets varies from company to company, we've highlighted one product from each company's offerings, and listed all the ingredients in that food, along with the minimum amounts of protein and fat, and maximum amounts of fiber and moisture in the food. Every company on our list makes at least one chicken-based product, so we highlighted the chicken variety of each company's offerings for easier comparison.

**In general, we look for diets with the following criteria:**

- A named, whole animal protein (such as chicken, beef, pork, duck, etc.) at the top of the ingredients list. No "generic" proteins (such as "meat" or "poultry"). No by-products.

- A good source of calcium. If raw, meaty bones are not used as the calcium source, another source will be needed to make the diet "complete and balanced."

- Every other food ingredient (such as fruits or vegetables) should be whole and fresh; any grains present may be cooked but should be whole.

- No added preservatives (these aren't needed in a frozen food) or artificial colors or flavors.

Those criteria will get you into the right ballpark. With so many good frozen raw diets on the market, how should you select the right one for *your* dog?

- **Price and local availability** will limit your options. Some of these products are costly. It's no wonder; they are made out of very expensive ingredients! Products that can be purchased in local retail stores are generally (but not always) less expensive than direct-shipped products.

Direct-shipped foods might be the only option for those of us who live far from stores that carry these diets. Only you know how much you can afford.

- **Check to see make sure that it's fresh!** All frozen foods are more nutritious and appealing if they are thawed and consumed sooner rather than later. Look for a "best by" date; if the date/code lacks a date of manufacture, contact the company to learn the actual date of manufacture. Some companies suggest their products have a frozen shelf life of up to a year. Others aim to have their products consumed within three or four months of manufacture. If your preferred retailer doesn't sell enough product to keep their stock fresh, ask if they can better manage their inventory. Otherwise, you may have to find another source – perhaps a company that ships food directly to you.

- **Look for ingredients that suit your dog.** Of course you've checked the ingredient list for quality; now examine it for any foods that don't agree with your dog. If he's allergic to or intolerant of certain proteins or grains, you need to make sure they are not in the food.

- **Check the fat content.** These foods can be extremely high in fat. That might be fine if your dog is an active athlete, but potentially dangerous for a dog prone to pancreatitis, as one example.

For more about the history of this canine diet niche, proper sanitation and safe food handling techniques, see "Cold Raw Facts," in the November 2010 issue of WDJ. 🐾

*Nancy Kerns is Editor of WDJ. She washes her hands a lot, and is not afraid of Salmonella.*

## WHY ARE THERE SO MANY RECALLS?

Yes, there have been a record number of pet food recalls in the past year – but not because the pet food industry has suddenly lost its ability to do anything right. In fact, pet food makers are actually working far harder than ever to prevent positive tests for *Salmonella* and other pathogenic bacteria in their products. Because a recall might mean dumping thousands of pounds of perfectly good food, just about every pet food maker now has a "test and hold" program in place, wherein no product gets released for sale until it comes back with negative tests for *Salmonella*. So why do the recalls keep happening?

Generally speaking, the glut of recalls is the result of a reform of our nation's food safety laws. The overall mission of the FDA Food Safety Modernization Act (FSMA), which was signed into law on January 4, 2011, is to "ensure the U.S. food supply is safe by shifting the focus from responding to contamination to preventing it." This change of the FDA's focus has meant more food is getting tested – and guess what? The more you look for something, the more you find it.

Specifically, however, a March 22, 2013 FDA directive explains why there have been so many recalls *lately*. The FDA's field agents were instructed to collect and analyze samples of pet foods, treats, and pet nutritional supplements for *Salmonella*. "FDA's Center for Veterinary Medicine (CVM) is concerned about animal feeds serving as vehicles for transmitting pathogenic and antibiotic-resistant bacteria to humans and other animals, and is particularly concerned about *Salmonella* being transmitted to humans through pet foods, pet treats, and pet nutritional supplements that are intended to be fed to animals in homes, where they are likely to be directly handled or ingested by humans."

The American Pet Products Association reported that agents were directed to collect 300 tests for *Salmonella* in the pet food industry nationally, and that the sampling was to continue through September 30, 2013. So things should be quieting down, recall-wise.

*Salmonella* has been with humans (and thus, our canine companions) for tens of thousands of years. As long as a pet food maker uses good ingredients and good manufacturing practices, your dog (and your family) should survive minor contamination events – like that time you bought a raw chicken home to cook?

COMPANY	DESCRIPTION	HIGHLIGHTED PRODUCT
<p><b>Aunt Jeni's Home Made</b> Temple Hills, MD (301) 702-0123 auntjeni.com</p> 	<p>Aunt Jeni's is available in five single-animal-protein varieties. The beef, chicken, and lamb varieties are made with 65% meat, organs, and bones to 35% vegetables, eggs, and other ingredients (things like herbs, honey, apple cider vinegar, etc.). The turkey and goat varieties are made with 75% meat, organs, and bones and 25% vegetables, fruits, and seeds/nuts. • All formulas are grain-free. • Beef, goat, and lamb are grass-fed, hormone- and antibiotic-free, free-range; chicken and turkey are either Bell &amp; Evans or Eberly. • Formulas are "complete and balanced" as per the AAFCO "nutrient profiles" standard, without an added vitamin/mineral premix; complete nutrient analyses appear on the company website. • Products are packed in tubs (similar to cottage cheese tubs). • Available in select independent pet supply stores nationally; maker will direct-ship frozen product if no retailers are nearby.</p>	<p>Aunt Jeni's Chicken Formula contains: Bell &amp; Evans® chicken, chicken heart, chicken liver, chicken gizzards, finely ground chicken bones, carrots, broccoli, cabbage, sweet potatoes, and apples, farm-fresh whole eggs (including shells), ground organic flax seeds, fresh garlic, raw honey; organic apple cider vinegar; powdered organic alfalfa and kelp, fresh parsley.</p> <p>10% protein, 10% fat, 2% fiber, 71% moisture 358 kcal/cup</p>
<p><b>BARFWorld</b> Danville, CA (866) 282-2273 barfworld.com</p>	<p>BARFWorld is available in three single-animal-protein varieties and one combination (beef, chicken, and lamb) variety. • All formulas are grain-free. • Formulas are "complete and balanced" as per the AAFCO "nutrient profiles" standard, with a few added vitamins and minerals. • Products are presented as patties; the chicken variety is also available in a "nugget" form. • Available in select independent pet supply stores nationally and via direct-ship.</p>	<p>BARFWorld's Chicken Formula contains: chicken, finely ground bone, chicken liver, egg, broccoli, celery, spinach, carrot, ground flax seed, dehydrated alfalfa meal, apple, pear, grapefruit, orange, dried kelp, cayenne pepper, cod liver oil, garlic, vitamin E supplement, zinc oxide, manganous oxide.</p> <p>12% protein, 8% fat, 5% fiber, 72% moisture 1,398 kcal/pound</p>
<p><b>Bravo Raw Diet</b> Manchester, CT (866) 922-9222 bravorawdiet.com</p>	<p>Bravo's "Balance Blends" are available in three single-animal-protein varieties: beef, chicken, and turkey. • All formulas are grain-free. • Beef is grass-fed, hormone-free, imported from New Zealand. • Products are treated with HPP. • Formulas are "complete and balanced" as per the AAFCO "nutrient profiles" standard, with a few added vitamins and minerals; complete nutrient analyses appear on the company website. Bravo also sells a wide variety of raw ground meat, organ, and bone products that are not "complete and balanced" as a convenience for raw feeders who are comfortable formulating their dog's diets themselves. • Products are available in patties and "chubs." • Available in select independent pet supply stores nationally and via some online retailers.</p>	<p>Bravo's Balance Blend Chicken Formula contains: chicken, chicken frames, chicken organs (liver, gizzards, hearts), green beans, broccoli, acorn squash, salt, potassium chloride, vitamin E, zinc oxide, copper sulfate, ferrous sulfate, manganous oxide, potassium iodide, vitamin D.</p> <p>12% protein, 4% fat, 1% fiber, 78% moisture 1,090 kcal/kg or 125 kcal/quarter-pound</p>
<p><b>Darwin's Natural Pet Products</b> Seattle, WA (206) 324-7387 darwinspet.com</p> 	<p>Darwin's products are available in five single-animal-protein varieties: beef, bison, chicken, duck, and turkey. • All formulas are grain-free. • Formulas are made with 69% meat/ground bone/organs and about 29.3% fresh vegetables. Darwin's has two product lines with the same ingredients lists, but the "Natural Selections Meals" are made with free-range meats and organic vegetables; the "ZooLogics Meals" are made with conventional "human-quality" ingredients. • Formulas are "complete and balanced" as per the AAFCO "nutrient profiles" standard, with a few added vitamins and minerals. • Products are vacuum-packed in a unique 2-lb. package, with separately sealed ½-lb. sections. • Two "prescription only" diets (one for kidney health and one for dogs with existing kidney problems) are now offered. • Available only from the manufacturer via direct shipping.</p>	<p>Darwin's Chicken formula contains: chicken (including bone), chicken gizzards, chicken hearts, chicken livers, carrots, squash, yams, zucchini, celery, romaine, parsley, apple cider vinegar, organic kelp meal, organic ground flax seed, sea salt, inulin (extract of chicory), zinc, copper and iron amino acid chelates, vitamin E.</p> <p>12% protein, 8% fat, 1% fiber, 74% moisture 1,3020 kcal/kg or 592 kcal/lb</p>
<p><b>Nature's Menu</b> East Troy, WI (262) 642-9400 naturesmenu.com</p>	<p>Nature's Menu is available in five single-animal-protein varieties: Beef, organic chicken, "regular" chicken, lamb, and turkey. Each is made with about 75% muscle meat (poultry varieties also contain skin) and about 25% organs. A vitamin/mineral premix, utilizing calcium carbonate as a calcium source, is added to each variety to make them "complete and balanced" as per the AAFCO "nutrient profiles" standard.</p> <p>[CONTINUED ON NEXT PAGE]</p>	<p>Nature's Menu Chicken Formula contains: chicken, chicken heart, chicken liver, chicken gizzards, vitamin/mineral premix.</p> 

COMPANY	DESCRIPTION	HIGHLIGHTED PRODUCT
<b>Nature's Menu</b> [CONTINUED FROM PREVIOUS PAGE]	<ul style="list-style-type: none"> <li>• All formulas are grain-free.</li> <li>• Products are available in patty form.</li> <li>• Available in select independent pet supply stores and veterinary hospitals in and near Wisconsin; maker will direct-ship frozen product.</li> </ul>	20% protein, 12% fat, 1% fiber, 72% moisture kcals not available
<b>Nature's Variety Instinct Raw Bites</b> Lincoln, NE (888) 519-7387 naturevariety.com	Nature's Variety is available in seven varieties: beef, chicken, organic chicken, duck, lamb, rabbit, and venison. All varieties are made with 95% meat, organs, and bones to 5% vegetables, fruits, and other ingredients (things like herbs, honey, apple cider vinegar, etc.). • All formulas are grain-free. • Chicken and duck varieties also contain turkey; venison variety also contains lamb. Beef, organic chicken, lamb, and rabbit varieties contain only one animal protein source. • Products are treated with HPP. • Formulas are "complete and balanced" as per the AAFCO "feeding trials" standard – wow! – without an added vitamin/mineral premix – wow, again. • Products are available in "bites" (like a "nugget"), medallions, patties, and chubs. • Available in select independent and specialty pet supply stores nationally.	Nature's Variety Instinct Raw Chicken Formula contains: chicken (including ground chicken bone), turkey, turkey liver, turkey heart, apples, carrots, butternut squash, ground flaxseed, montmorillonite clay, broccoli, lettuce, spinach, dried kelp, apple cider vinegar, parsley, honey, salmon oil, olive oil, blueberries, alfalfa sprouts, persimmons, inulin, rosemary, sage, and clove.  15% protein, 12% fat, 2% fiber, 65% moisture 65 kcal/oz
<b>Northwest Naturals, Inc.</b> Portland, OR (866) 637-1872 nw-naturals.net	Northwest Naturals is available in seven varieties: beef, bison, chicken, chicken & salmon, lamb, and turkey. All varieties are made with 80% meat, organs, and bones to 18.15% vegetables, fruits, and other ingredients (things like dried kelp, apple cider vinegar, etc.), and 1.85% vitamins/minerals. • All formulas are grain-free. • Products that contain poultry are treated with HPP. • With the exception of just the chicken & salmon variety, all varieties contain only one animal protein source.	Northwest Naturals Chicken Formula contains: chicken, ground chicken bone, chicken liver, chicken gizzard, cantaloupe, carrots, broccoli, romaine lettuce, egg, ground flaxseed, salmon oil, apple cider vinegar, blueberry, cranberry, inulin, dried kelp, potassium chloride, sodium chloride, ginger, parsley, garlic, zinc proteinate, iron proteinate, vitamin E supplement, copper proteinate, manganese proteinate, mixed tocopherols (as preservative), vitamin D supplement
	<ul style="list-style-type: none"> <li>• Formulas are "complete and balanced" as per the AAFCO "nutrient profiles" standard.</li> <li>• Products are available in chubs, "dinner bars," and nuggets.</li> <li>• Available in select independent pet supply stores nationally.</li> </ul>	12% protein, 10% fat, 2% fiber, 72% moisture 45 kcal/oz
<b>Pepperdogz</b> Bellevue, WA (866) 866-3649 pepperdogz.com  	Pepperdogz is available in four varieties: beef, buffalo, chicken, and turkey. All varieties are made with 70% meat and organs, and 30% vegetables, and fruits. • All formulas are grain-free. • All varieties contain only one animal protein source. • Formulas are "complete and balanced" as per the AAFCO "nutrient profiles" standard without an added vitamin/mineral premix. • Products are available in patties. • Available in select independent pet supply stores in Oregon and Washington.	Pepperdogz Chicken Formula contains: chicken, chicken gizzards, chicken livers, carrots, broccoli, Napa cabbage, pumpkin, apples, ground eggshells, parsley, apple cider vinegar, organic cold-pressed flax seed oil, wild salmon oil, safflower oil, natural vitamin E, organic kelp, ground chicory root, organic rosemary leaf, organic wheatgrass, organic alfalfa, turmeric  13% protein, 8% fat, 2% fiber, 69% moisture 354 kcal/half-pound patty
<b>Primal Pet Foods</b> San Francisco, CA (866) 566-4652 primalpetfoods.com  	Primal Pet Foods are available in eight single-animal-protein varieties (with one obvious exception): beef, chicken, duck, lamb, pheasant, rabbit, turkey & sardine, and venison. • All formulas are grain-free. • Formulas are made with 78% meat/ground bone/organs, 20% produce, and 2% supplements. • Beef is grass-fed, hormone-free, imported from New Zealand. • Products that contain poultry are treated with HPP. • Formulas are "complete and balanced" as per the AAFCO "nutrient profiles" standard, with a few added vitamins and minerals; complete nutrient analyses appear on the company website. • Primal also sells a wide variety of raw ground meat, organ, and bone products that are not "complete and balanced" as a convenience for raw feeders who are comfortable formulating their dog's diets themselves. • Products are available in nuggets, patties, and chubs. • Available in select independent pet supply stores nationally and via some online retailers.	Primal Pet Food Chicken Formula contains chicken, chicken necks, chicken gizzards, organic kale, organic carrots, organic yams, chicken livers, organic broccoli, organic apples, cranberries, blueberries, organic pumpkin seeds, organic sunflower seeds, minerals (zinc sulfate, copper carbonate, sodium selenite), organic parsley, organic apple cider vinegar, salmon oil, organic coconut oil, organic quinoa sprout powder, dried organic kelp, alfalfa, natural vitamin E  12% protein, 11% fat, 1% fiber, 72% moisture 50 kcal/oz



COMPANY	DESCRIPTION	HIGHLIGHTED PRODUCT
<p><b>Raw Advantage</b> Kettle Falls, WA (866) 331-5185 rawadvantage petfood.com</p>	<p>Raw Advantage Dinners are available in two varieties: chicken and turkey. • Dinner product line contains organic whole grains, and are “complete and balanced” as per the AAFCO “nutrient profiles” standard. Other product lines are meant for intermittent and supplemental feeding only. • All animal protein sources are organic. • Dinner formulas are made with 50% meat/ground bone/organs. • Products are available in patties. • Available in select independent pet supply stores, via some online retailers, and shipped directly from the manufacturer.</p>	<p>Raw Advantage Organic Chicken Dinner Formula contains organic chicken (including ground bone), organic millet, organic oats, organic carrots, organic zucchini, organic kale, organic beets, organic ground flaxseed, organic dried kelp, organic wheat-grass, organic garlic powder, and organic lecithin</p> <p>11% protein, 8% fat, 2% fiber, 65% moisture 843 kcal/lb</p>
<p><b>Stella &amp; Chewy's</b> Milwaukee, WI (888) 477-8977 stellaandchewys.com</p>	<p>Stella &amp; Chewy's offers seven varieties of raw, frozen, “complete and balanced” (as per the AAFCO nutrient guidelines) diets for dogs; five contain a single animal protein (beef, chicken, lamb, rabbit, venison) and two contain multiple sources of animal protein: duck/goose/turkey, and beef/salmon/turkey. • Poultry sources are all cage-free; venison is grass-fed. Most fruit and vegetable sources are organic. • All formulas are grain-free. • Products are treated with HPP. Further, Stella &amp; Chewy's tests every batch for bacterial contamination (and the results are posted online) before shipping. • Products are available in small and large patties. • Available in select independent pet supply stores and from some online retailers.</p>	<p>Stella &amp; Chewy's Chicken Formula contains chicken ground with bone, chicken liver, chicken gizzard, pumpkin seed, potassium chloride, organic cranberries, organic spinach, organic broccoli, organic beets, sodium phosphate monobasic, organic carrots, organic squash, organic apples, organic blueberries, choline chloride, dried pediococcus acidilactici fermentation product, dried lactobacillus acidophilus fermentation product, dried bifidobacterium longum fermentation product, dried enterococcus faecium fermentation product, taurine, tocopherols (preservative), calcium carbonate, zinc proteinate, zinc sulfate, iron sulfate, iron proteinate, vitamin E supplement, niacin, copper sulfate, copper proteinate, manganese sulfate, sodium selenite, manganese proteinate, thiamine monohydrate, pyridoxine hydrochloride, vitamin D3 supplement, calcium iodate, vitamin B12 supplement</p> <p>15% protein, 9% fat, 2% fiber, 70% moisture 1,529 kcal/kg; 345 kcal/large patty; 65 kcal/small patty</p>
<p><b>Steve's Real Food for Pets</b> Murray, UT (801) 784-8364 stevesrealfood.com</p>	<p>Steve's Real Food offers four varieties: beef, chicken, turkey (all made with a single animal protein) and “turducken,” (containing turkey, duck, and chicken). • Poultry sources are all vegetarian-fed; duck and chicken sources are free-range. • Formulas are made with 80% meat/ground bone/organs and about 20% produce. • Formulas are “complete and balanced” as per the AAFCO “nutrient profiles” standard without added vitamins/minerals. • Products are available in nuggets and patties. • Available in select independent pet supply stores, Whole Foods stores, and from some online retailers.</p>	<p>Steve's Real Food Chicken Formula contains: ground chicken, raw ground chicken bone, chicken livers, broccoli, chicken gizzards, carrots, romaine lettuce, cantaloupe, peppers, raw goat's milk, flaxseed, dried kelp, cod liver oil, anchovy oil, coconut oil, inulin, sunflower seeds, salt, mixed tocopherols, eggshell membrane, dicalcium phosphate</p> <p>11.1% protein, 10.5% fat, 0.9% fiber, 74.2% moisture 44 kcal/oz</p>
<p><b>Vital Essentials</b> Green Bay, WI (800) 743-0322 vitaessentialraw.com</p>	<p>Vital Essentials offers seven varieties: beef, wild boar, chicken, duck, fish, rabbit, and turkey (all made with a single animal protein source). • Formulas are “complete and balanced” as per the AAFCO “nutrient profiles” standard with very limited added vitamins. • Products are available in nuggets and patties. • Available in select independent pet supply stores.</p>	<p>Vital Essentials Chicken Formula contains: chicken (including ground bone), chicken heart, chicken liver, herring oil, d-alpha tocopherol</p> <p>11% protein, 9.5% fat, 0.6% fiber, 74% moisture 58 kcal/oz</p>





# Alphabet Soup

## How to decipher daVeterinary code.

BY BARBARA DOBBINS

**W**hen PWD Rover, MACH, CGC, OTCH, RE, began favoring his RHL, Rover’s trainer, Molly Millikin, CPDT-KA, suggested that he be examined at an AAHA-accredited clinic. After an initial exam and tests were conducted by Dr. Terry R. Whitecoat, VMD, Dr. Whitecoat recommended that Rover be taken to see Dr. Collie G. Deluxe, DCVSMR.

What the heck do all those letters mean? They can seem as random as letters in a bowl of alphabet soup. But those acronyms pack a lot of information in just a spoonful. The letters around a dog’s name indicate what competitive titles he has attained. The letters after a trainer’s name indicate what sort of education and certification she has attained. And the letters after a veterinarian’s name, or having to do with her practice, tell you what sort of advanced education and certification she has.

Here’s a guide to deciphering all the letters that you may see that have to do with *veterinary* professionals. In future issues, we’ll explain the letters having to do with dogs’ and trainers’ titles.

### VETERINARY LETTERS

There are dozens of professional organizations that offer educational opportunities for veterinarians who have a special interest in a type of medicine. Other veterinary medical groups have been organized for the express purpose of developing guidelines and standards for practitioners who wish to pursue an advanced level of knowledge about a certain type of medicine.

Many of the organizations listed in this section provide training, education, and support for veterinary professionals in specific areas of medicine, but don’t call them “specialties.” That word is reserved exclusively to designate veterinary organizations that provide training and certification in specialties that have been recognized by the American Veterinary

Medical Association (AVMA); these specialties are described after this section (see “Veterinary Specialties,” page 12).

Note also that while a good number of

alternative and complementary medical associations offer advanced training and certification, none, as yet, have obtained “board-certified” recognition by the AVMA.

■ **AAHA:** The American Animal Hospital Association is an international association committed to ensuring high-quality veterinary standards, improving pet care, and supporting small animal practices. AAHA has developed a set of accreditation standards that are widely used as benchmarks to measure excellence in veterinary medicine.

AAHA is the only organization that accredits animal hospitals throughout the United States and Canada; currently, more than 3,200 veterinary clinics hold the “AAHA-accredited” designation. In general, clinics that seek out and stay current on AAHA accreditation have a special interest in providing above-



average, up-to-date service and care to their clients and patients.

Accreditation helps veterinary hospitals stay on the leading edge of veterinary medicine and ensures a wide range of quality services, such as diagnostic testing (xray and laboratory) for prompt diagnosis and an on-site pharmacy so treatment can begin immediately.

■ **AAVA:** The American Academy of Veterinary Acupuncture was established to improve animal health by the advancement of veterinary acupuncture, Traditional Chinese Veterinary Medicine, and Traditional Asian Medicine. Credentialed membership is awarded to individuals who are citizens or permanent residents of the U.S., are licensed graduates of a college or school of veterinary medicine, and who have successfully completed an AAVA-approved veterinary acupuncture/TCM course or equivalent.

Advanced certification is awarded and the title of Fellow of the American Academy of Veterinary Acupuncture (FAAVA) is conferred after successfully passing an examination. The exam demands that candidates demonstrate expert knowledge about the classical and neuro-physiologic basis of acupuncture and Chinese medicine, and their application for successful diagnosis and treatment of veterinary patients.

■ **AAVC:** The American Association of Veterinary Clinicians is an organization of clinicians (vets who practice medicine

in a clinic, as opposed to those who work in a laboratory or research) with an interest in veterinary clinical teaching and research. The AAVC sponsors matching programs for internships and residencies to expedite selection of applicants for vet schools, colleges, and private practices.

■ **AAVSB:** The American Association of Veterinary State Boards is a not-for-profit association comprised of 58 veterinary licensing boards. Its primary function is to provide quality, relevant programs and services that these boards can rely on to carry out their statutory responsibilities (regulating veterinarians) in the interest of public protection.

■ **ACCC/AVCA:** The Animal Chiropractic Certification Commission of the American Veterinary Chiropractic Association is the primary national credential for this field in North America. The organization establishes standards of care in animal chiropractic, conducts a professional certification program, awards credentials to individuals who meet established criteria, and promotes professional accountability and visibility. Certified Doctors may call themselves “certified in animal chiropractic by the Animal Chiropractic Certification Commission of the AVCA.”

Note that both veterinarians and doctors of chiropractic may be certified in animal chiropractic; but a doctor of chiropractic who is not a vet must have a referral from a vet for a diagnosed problem before treating an animal.

■ **ACSMA:** The American Canine Sports Medicine Association is an organization for veterinarians, physical therapists, trainers, and other professionals devoted to addressing the medical and surgical problems encountered in the canine athlete and the working breeds. Note that this organization offers information resources for veterinarians and non-veterinarians who work in this field; there is also a board certification for veterinarians in sports medicine (see ACVSMR: The American College of Veterinary Sports Medicine and Rehabilitation).

■ **AHVMA:** The American Holistic Veterinary Medical Association explores and supports alternative and complementary approaches to veterinary healthcare, and is dedicated to integrating all aspects of animal wellness in a socially and environmentally responsible manner. Its annual conference introduces many “conventional” veterinarians to the wide range of alternative and complementary medical modalities available to veterinarians, and the latest research in these modalities.

■ **AVMA:** The American Veterinary Medical Association, founded in 1863, is a not-for-profit association representing veterinarians in the United States, with the mission to improve animal and human health, and advance the veterinary medical profession.

The AVMA is responsible for the profession’s Principles of Veterinary Medical Ethics. Its Council of Education sets the standards for the accreditation of veterinary medical programs accepted by all states, and its Committee on Veterinary Technician Education and Activities sets the standards for the accreditation of veterinary technician education programs. The AVMA Educational Commission for Foreign Veterinary Graduates evaluates the competence of graduates of colleges of veterinary medicine that are not accredited by the AVMA Council on Education. Finally, the AVMA’s American Board of Veterinary Specialties (ABVS) establishes and evaluates criteria



**Veterinarians can obtain basic or advanced (Fellow) certification in acupuncture from the American Academy of Veterinary Acupuncture.**

**A veterinarian who is awarded the title of Master of Laboratory Animal Science has advanced education in the welfare and legal and ethical use of laboratory animals, as well as management and development of a lab animal facility.**



for recognition of veterinary specialty organizations.

■ **AVSAB:** The American Veterinary Society of Animal Behavior is a group of veterinarians and research scientists dedicated to improving the lives of animals and people through an understanding of animal behavior. Note that animal behavior is also a field in which a veterinarian can become board-certified; see the ACVB, American College of Veterinary Behaviorists, below.

■ **BFRAP:** Bach Foundation Registered Animal Practitioners hold a certificate of registration issued by the Bach Centre and work to the Bach Centre's Bach Foundation Code of Practice. Both veterinarians and non-vets can obtain this certification; but a practitioner who is not a veterinarian must have a referral from a veterinarian for a diagnosed veterinary problem before treating an animal with the Bach Flower Remedy system.

■ **BVETMED/BVSC/BVSC:** The Bachelor of Veterinary Science is a bachelor's degree conferred for studies in veterinary science in the United Kingdom and some other countries. These degrees are equivalent to DVM/VMD degrees in the U.S. They are not called "doctorate" degrees due to nomenclature differences among degree designations between the U.S. and Canada and the U.K.

■ **CCRA:** The Canine Rehabilitation Institute offers two certifications, one for vets and physical therapists (CCRT, next item on list), and the CCRA (Certified Canine Rehabilitation Assistant) for veterinary technicians and physical therapy assistants.

■ **CCRT:** The title of Certified Canine Rehabilitation Therapist is awarded only to trained veterinarians and physical therapists by the Canine Rehabilitation Institute. (Physical therapists – people with training in this field on humans – are certified in the U.S. by the Com-

mission on Accreditation in Physical Therapy Education. Some hold Bachelor's and/or Master's degrees in physical therapy, while others obtain a Doctor of Physical Therapy (DPT) degree.)

■ **CERTA AH:** Applied Animal Herbalism Certificate from the Companion Animal Sciences Institute (CASI). Open to all, CASI is a private professional skills development institution providing advanced, comprehensive, science-based, home-study in dog training, dog daycare operation, shelter and rescue work, and canine nutrition and fitness; it does not grant degrees and therefore it is not accredited. Both veterinarians and non-vets can obtain this certification; but a practitioner who is not a veterinarian must have a referral from a veterinarian for a diagnosed veterinary problem before treating an animal.

■ **CERT CN AND CERT ACN:** Canine Nutrition Certificate and Advanced Canine Nutrition Certificate from the Companion Animal Sciences Institute (see Cert AAH above).

■ **CVH:** A Certified Veterinary Homeopath is a veterinarian who has also been certified by the Academy of Veterinary Homeopathy (AVH).

■ **CVPM:** Certified Veterinary Practice Manager with a credential from Veterinary Hospital Managers Association (VHMA).

■ **DVM:** Doctor of Veterinary Medicine from an accredited college or university. All veterinary schools in North America

use this designation except for the University of Pennsylvania, which issues a degree of VMD. See VMD, below.

■ **MLAS:** Master of Laboratory Animal Science. This degree is offered by one university in the U.S. and several in Europe. Laboratory animal welfare and management, and the legal and ethical aspects of laboratory animal use, are among the topics studied for this degree.

■ **MRCVS:** Veterinarians practicing surgery in the United Kingdom must be registered members of the Royal College of Veterinary Surgeons (RCVS). FRCVS veterinary surgeons have received the Diploma of Fellowship (the highest award of the RCVS) by either the submission of a thesis or for meritorious contributions to learning. "Fellows," through their research, push frontiers by creating new knowledge in a wide range of subject areas.

■ **PHD:** Doctoral degree from an accredited college or university.

■ **RVT/LVT/CVT:** Registered Veterinary Technician/Licensed Veterinary Technician/Certified Veterinary Technician. Each state has different requirements for credentialing veterinary technicians; some are registered, some licensed, and some certified.

A veterinary technician is a graduate of an AVMA-accredited two-year program, from a community college, college, or university. Almost every state requires a veterinary technician to take and pass a credentialing exam, which is either state-administered or administered by the



AAVSB (i.e., the Veterinary Technician National Examination or VTNE).

#### ■ STATE VETERINARY ASSOCIATIONS:

Each state has its own veterinary regulatory agency. These are the organizations that you would contact to determine whether a veterinarian is licensed and had ever been the subject of disciplinary action, and to file a complaint against a vet.

#### ■ VMD: Veterinary Medical Doctor.

The University of Pennsylvania calls its degree a veterinary medical doctorate and abbreviates it as such; it is equivalent to DVM.

■ **WSAVA:** The World Small Animal Veterinary Association (WSAVA) is an association of associations. Its membership consists of international veterinary organizations with the primary purpose to advance the quality and availability of companion animal care and create a unified standard of care for the benefit of animals and humankind.

### VETERINARY SPECIALTIES

In veterinary medicine, as in human medicine, there are general practitioners – the basic family doctor type – and specialists. Many people use the word “specialist” loosely, as in “My vet specializes in holistic medicine,” but actually the word has a legal definition and it involves more than just identifying a practice that is limited to a certain type of medicine.

In the U.S., veterinary specialists are those (and only those) who have been board-certified by one of the 22 veterinary specialty organizations recognized by the American Veterinary Medical Association (AVMA) in one of 41 specialties. This list has grown over the years; currently the AVMA’s American Board of Veterinary Specialties (ABVS) is considering petitions to add two more specialties to its list: Shelter Medicine (which would fall under the already large umbrella of American Board of Veterinary Practitioners [see below] and Equine Dentistry [which would fall under the purview of the American Veterinary Dental College [see below]).

Each AVMA-recognized specialty organization develops the training requirements for its certification. The most common include the completion of an internship (usually one year),

completion of a residency training program (usually two to three years) under the supervision of veterinarians who are board-certified in that specialty, and a final examination. There are some exceptions. Some specialty organizations will accept several years of veterinary practice experience in lieu of an internship; one accepts extensive practice experience with a certain species to become eligible to examine for certification as a specialist with that species.

Once they have met all the requirements of their specialty, veterinarians are awarded “Diplomate” status. Board-certified specialists indicate this status with the capital letter D before the abbreviation of the specialty organization; for example, a veterinarian certified by the American College of Veterinary Surgeons would list the letters “DACVS” after his/her name.

Some organizations require extensive advanced training in not only the specific area of specialty, but also in related areas of veterinary medicine.

For example, to become board certified in veterinary surgery, an individual must also complete at least 80 hours of training with a board-certified veterinary anesthesiologist, at least 80 hours with a board-certified veterinary radiologist, at least 80 hours with a board-certified veterinary internal medicine specialist, and at least 80 hours with a board-certified veterinary pathologist during the three or more years of a veterinary surgical residency. You can see how a board-certified veterinary surgeon would have much more training and experience than an ordinary veterinarian who does surgery.

The benefits of seeing a specialist for difficult-to-diagnose or complicated cases can’t be overvalued. A veterinarian who has sought out additional education and training in a given field will almost always be more likely to successfully diagnose and treat complicated conditions. She generally will equip her clinic with the most sophisticated diagnostic tools and stay informed about new and more effective treatments.

**The following specialty organizations are recognized by the AVMA according to the policies and procedures of the ABVS:**

■ **ABVP:** The American Board of Veterinary Practitioners certifies veterinarians

who demonstrate knowledge and expertise in *species-oriented* clinical practice.

A veterinary degree gives a vet the legal right to diagnose and treat any type of non-human animal for any sort of medical condition; it does not necessarily make her an expert in treating any specific *type* of animal. She can open a practice and say that it’s limited to small animals, or even just dogs and cats, but she may *not* say that she specializes in dogs or cats unless she has obtained a board certification by the ABVP in Canine and Feline Medicine.

The other species-oriented veterinary specialty certifications are Avian, Beef Cattle, Dairy, Equine, Exotic Companion Mammal, Feline, Food Animal, Reptile and Amphibian, and Swine Health Management. Note that there is no board-certification that deals solely with dogs; the Canine and Feline Practice certification comes closest.

These species-oriented certifications may still seem somewhat general, as compared to ophthalmology (as just one example). But consider that it takes a minimum of six years of clinical practice experience with the specific patient species before an applicant can take the examination for this certification.

■ **ABVT:** Veterinarians who are certified by the American Board of Veterinary Toxicology have special training as regards the toxicological hazards to pets, livestock, and wildlife.

■ **ACAW:** Veterinarians who are certified by the American College of Animal Welfare demonstrate an advanced level of expertise in all aspects of animal welfare science and animal welfare ethics. (This board certification is one of the newest specialties recognized by the ABVS and has a provisional status.)

■ **ACLAM:** The American College of Laboratory Animal Medicine advances the humane care and responsible use of laboratory animals through certification of veterinary specialists, professional development, education, and research.

■ **ACPV:** American College of Poultry Veterinarians.

■ **ACT:** Diplomates of the American College of Theriogenologists have advanced training in theriogenology (the branch of veterinary medicine concerned



**A DACVR has advanced training in diagnostic imaging such as radiology, ultrasound, computed tomography (CT), magnetic resonance imaging (MRI), and nuclear medicine.**

benign and malignant disorders of the skin, hair, ears, and nails.

■ **ACVECC:** American College of Veterinary Emergency and Critical Care.

■ **ACVIM:** The American College of Veterinary Internal Medicine is the international certifying organization for veterinary specialists in *five* different areas: cardiology, large animal internal medicine (LAIM), neurology, oncology, and small animal internal medicine (SAIM).

■ **ACVM:** The American College of Veterinary Microbiologists certifies veterinarians with special expertise in microbiology (includes the fields of bacteriology, mycology, immuno-serology, and virology).

■ **ACVN:** American College of Veterinary Nutrition. Veterinary nutritionists formulate commercial foods and supplements as well as home-prepared diets, manage the medical and nutritional needs of individual animals, and recommend specific nutritional strategies that are used to prevent and treat diseases.

■ **ACVO:** American College of Veterinary Ophthalmologists.

■ **ACVP:** American College of Veterinary Pathologists. Two types of certification may be earned: Anatomic Pathology or Clinical Pathology.

■ **ACVPM:** Diplomates of the American College of Veterinary Preventative Medicine help prevent and control diseases of food animals and humans, combining the disciplines of veterinary microbiology, epidemiology, immunology, parasitology, public health, production medicine, and clinical medicine.

■ **ACVR:** Diplomates of the American College of Veterinary Radiology receive advanced training in diagnostic imaging such as radiology, ultrasound, computed

tomography (CT), magnetic resonance imaging (MRI), and nuclear medicine. Certification may be earned in Radiology (Diagnostic Imaging) and Radiation Oncology (Radiation Therapy).

■ **ACVS:** American College of Veterinary Surgeons. This board defines the standards of surgical excellence for veterinary medicine. According to its website, "Approximately 70 veterinarians earn Diplomate credentials every year. More than 60 percent of the ACVS Diplomates operate in private and specialty practices that accept cases on a referral basis from primary care practitioners. The remainder are primarily employed by academic institutions and industry where they teach, conduct research, practice in teaching hospitals, and participate in the development of new products and treatments which improve the quality of veterinary and human health care."

■ **ACVSMR:** The American College of Veterinary Sports Medicine and Rehabilitation is another new specialty with provisional recognition by the AVMA AVBS. There are two recognized veterinary specialties: Veterinary Sports Medicine and Rehabilitation (Canine) and Veterinary Sports Medicine and Rehabilitation (Equine).

■ **ACZM:** The American College of Zoological Medicine certifies veterinarians with expertise in zoological medicine, addressing the care of captive zoo animals, free ranging wildlife species, aquatic animals, birds, reptiles and amphibians, and non-domestic companion animals. Zoological medicine incorporates principles of ecology, wildlife conservation, and veterinary medicine.

■ **AVDC:** Diplomates of the American Veterinary Dental College have training in advanced veterinary dentistry, including diagnosis of oral problems, malocclusions and orthodontics, crowns, endodontic (gum) disease, and anesthesia. 🐾

*In the next installment, we'll look at training and behavior "letters."*

*Barbara Dobbins, a former dog trainer, writes about dogs and studies canine ethology. She lives in the Bay Area with her Border Collie, Duncan.*

with reproduction, including veterinary obstetrics).

■ **ACVAA:** American College of Veterinary Anesthesia and Analgesia.

■ **ACVB:** Diplomates of the American College of Veterinary Behaviorists are veterinarians who have attained specialist status in animal behavior. They have received additional training, generally at least three years, and they have authored a published research project in animal behavior, written case reports, and passed a two-day examination.

Veterinary behaviorists are trained to diagnose and treat problems in animals, whether they are medical or behavioral. They are also licensed to prescribe drugs and are familiar with psychotropic medications, their uses, interactions with other medications, and side effects.

■ **ACVCP:** Veterinarians who are certified by the American College of Veterinary Clinical Pharmacology have received intensive training in the use of veterinary drugs.

Pharmacology is often described as a "bridge science" because it incorporates knowledge from a number of basic science disciplines including physiology, biochemistry, and cell and molecular biology in order to rationally develop therapeutic treatments.

■ **ACVD:** Diplomates of the American College of Veterinary Dermatology have expertise and specialized training in diagnosing and treating of animals with



# Copy That!

***Dogs can not only learn new behaviors by imitating other dogs, but also by imitating us! Here's how to put this skill to good use.***

BY PAT MILLER, CBCC-KA, CPDT-KA

**I** remember, years ago, confidently and assertively telling my training academy students “Dogs don’t learn through imitation.” But, degree by degree, I’ve been proven to be wrong. I’m taking it well, however, because the studies that have established this ability in dogs are so exciting, and their implications have expanded our ability to train and communicate with our dogs so much.

First, there was the 1997 study in which some litters of puppies were allowed to watch their narcotics detection dog mothers while working in a real-life work environment, while other litters of puppies did not. When the pups were six months old, the pups who watched their mothers at work learned the task more easily and quickly than the pups who did not watch.

Later, Ken Ramirez, currently the executive vice president of animal collections and training at Chicago’s world-famous Shedd Aquarium, demonstrated how he taught his dog that the cue “Copy!” means “Do what that other dog just did.” When he shared his “Copy!” procedure at Karen Pryor’s Clicker Expo

in 2011, the dog training world sat up and took notice.

Now there is an exciting new development in the study of canine cognition, thanks to Italian PhD ethologist Claudia Fugazza, who is currently studying at Eotvos Lorand University in Budapest, conducting research on social learning and imitation with Professor Adam Miklosi. Fugazza has developed a training method she calls “Do As I Do,” which relies on a dog’s social cognitive skills to learn new behaviors by imitating humans. Did you get that? Fugazza tells us that dogs can learn new behaviors by imitating *human* behavior.

According to Fugazza, using her training protocol, owners can teach new behaviors to their dogs by simply showing them what to do. Then they can put the new behavior on cue.

This flies in the face of everything I have learned in the past. It makes sound biological/survival sense that dogs could and should be able to imitate each other’s behavior. But imitate the behavior of an entirely different species? *Seriously?*

Skeptic that I am, I ordered the DVD and was completely and totally gobsmacked. I was so taken by the procedure



**In Phase 1 of this technique, the dog learns the imitation rule – to “do as I do.” He’ll be hearing a new cue (“Copy!”) followed by one he knows. Trainer Sarah Richardson, owner of The Canine Connection in Chico, California, first asks Rhodie to “Wait.”**



**Next, she performs the behavior (in this case, “Touch the cone”), returns, and gives him the new “Copy!” cue, followed by the verbal cue he knows for that behavior (“Touch!”), taking care not to use her eyes or posture to give him a “hint.”**



**When Rhodie reliably performs “Touch” after the demonstration, the “Copy!” cue, and the “Touch!” cue, Sarah omits the “Touch!” cue. When he reliably performs the behavior he has seen demonstrated, he’s ready to advance to the next phase.**



I immediately determined to try it with one of my dogs, Bonnie, an eight-year-old Scorgidoodle.

### A LITTLE PREP WORK

It was a humbling experience. For starters, your dog has to know at least three behaviors (other than “Sit!”) on verbal cue – without any body prompting, gestures, or even a sideways shift of the eyes. This is necessary in order to avoid inadvertently giving him a very subtle cue to perform (see “The Clever Hans Phenomenon,” page 16).

For Bonnie, I selected the behaviors “Down,” “Tap,” (touch an Easy Button with a paw), and “Up” (step up and sit on a “Stepper”). I discovered that “Down” was solidly on verbal cue, but we needed some work on “Tap” and “Up” to fade the very natural, subtle but unacceptable body prompts. After several brush-up sessions focusing on those two verbal cues, we were ready to proceed.

### LEARNING TO IMITATE

Bonnie needed to learn the “imitation rule” (Phase 1). That is, whatever behavior I do, followed by the cue “Copy!” means “You are supposed to do the same behavior.” (I chose to use “Copy!” rather than Fugazza’s suggested cue of “Do it!” because I use “Do it” to initiate the “101 Things to Do With a Prop” game.)

I stood in front of Bonnie, told her to “Wait,” and then did the behavior myself (either push the button, step up and sit on the Stepper, or lie down facing her). Then I returned and gave the “Copy!” cue, followed by the verbal cue for the behavior I had just performed, *without any body-language prompting*. In theory, the association between repetitions of “Copy!” and the verbal cue for the behavior that was just demonstrated, teaches the dog that “Copy!” means “Do whatever I just did.” Would it work for Bonnie?

Well . . . eventually. Because the behaviors that I had selected for her weren’t as solidly on verbal cue as I had hoped (other than the “Down”), we worked through several permutations of “Copy!”, “Cue!”, and waiting to see what she did. She tended to offer the three behaviors somewhat randomly at first; alternatively, she’d sit and wait, looking at me hopefully for further instructions. Each time I got an incorrect response (or no response) I started over: cued her to “Wait” while I performed the behavior, returned to stand in front of her and said

## HIGHLIGHTS FROM “DO AS I DO”

Claudia Fugazza’s “Do As I Do” DVD (available from Tawzer Dog Videos, eight hours, \$99, [tawzerdog.com](http://tawzerdog.com), 208-639-1321) does an excellent job of explaining her training program, and includes numerous clips of dogs learning the method at a seminar. Fugazza suggests that there are several benefits to be gained from implementing the training, including:

- ✓ Ease of training object-related actions
- ✓ Improve the dog’s attentiveness toward owner
- ✓ Enhance the relationship between dog and owner
- ✓ Exercise the dog’s cognitive abilities

The technique is taught in three phases. In Phase 1, the dog learns the “imitation rule” with three known behaviors. In Phase 2, he generalizes the rule to other known behaviors. In Phase 3, the trainer uses the rule to teach the dog new behaviors.



### TERMINOLOGY

**SOCIAL LEARNING:** Acquiring information or behaviors from the observation of or interaction with others.

**IMITATION:** Science considers this a “special” ability but there is no single agreed-upon definition. Therefore there is no agreement about which species possess the ability to imitate.

**FUNCTIONAL IMITATION:** The dog reaches the same goal, and given the species-specific limitations, he does it in a similar way. For example, if you pick up an object with your hands and cue your dog to “Do it!” he will pick the object up with his mouth, not his paws.

**CULTURE:** Information that is socially acquired from other individuals through social learning processes and that may modify the behavior of an individual (Fugazza raises the intriguing question about whether dogs, by this definition, have a culture. One would think the answer is yes.)

### CHARACTERISTICS OF A SPECIES THAT FAVOR SOCIAL LEARNING

- ✓ The general level of sociability
- ✓ The presence of parental care
- ✓ The tendency to explore and play that affect the chance to make innovations that can be socially transmitted

### ONGOING RESEARCH

Fugazza is continuing her research into our dogs’ ability to learn through imitation, and invites dog owners to participate in her Do As I Do research. If you would like to participate you can contact her at: [Claudia.happydog@gmail.com](mailto:Claudia.happydog@gmail.com) or visit her website for more information: [apprendimentosociale.it/en](http://apprendimentosociale.it/en)

She leaves us with this one last thought, an invitation to explore further the world of canine cognition:

“The dog’s mind is more flexible than we think.”

“Copy!”, followed by the appropriate verbal cue. It wasn’t until our third practice session that I began to see glimmers of understanding; hesitantly at first, then with growing confidence, Bonnie would perform the correct cued behavior.

When I could see that she knew what to do before I gave her the cue for the behavior, I stopped using the cue, using only the “Copy” cue after performing the behavior myself. At first, she seemed confused, and went back to offering random behaviors. If she offered the correct

one she got a click-and-treat and very happy praise. If she offered an incorrect behavior I simply reset her, performed the behavior again, returned to stand in front of her, and gave the “Copy!” cue. It was exciting to watch as her correct responses gradually began to outnumber the incorrect ones. I could see she was beginning to understand the “rule.”

I had watched several dogs try to learn the rule on the Do As I Do DVD. Some were brilliant, apparently grasping the imitation rule after just a couple

of sessions. Others were still struggling at the end of the two-day seminar. Of course, I assumed Bonnie would exhibit the “brilliant” end of the rule-learning continuum, but in all honesty she was more just slightly toward the brilliant side of center. Or maybe I was the one who was less than brilliant; it was easy to see on the DVD that the dogs with the more skillful trainers learned the rule more quickly. Hmm...

In my defense, the trainers on the DVD had Fugazza herself coaching them. In contrast, I was stumbling around on my own, trying to remember what I had watched, and occasionally hearing bits of Fugazza’s charming Italian accent in my mind’s ear saying, “Mmmm... You ges-turd weeth yur eyez!” when I caught myself glancing at the “easy” button along with my “Copy!” cue.

Nevertheless, despite my ineptitude, Bonnie did seem to catch on to the imitation rule after three days, with several sessions per day. Although we weren’t flawless, we were about 90 percent by the end of the third day; nine out of ten times when I would perform the behavior myself, return to stand in front of her, and then give her the “Copy!” cue, she would perform the behavior.

We’re ready to start Phase 2 (generalization of the rule), adding three more behaviors that Bonnie already knows. These do not have to strictly on verbal cue – apparently that’s most important for the *first* three behaviors. After the next three are solid, we’ll move on to the very exciting Phase 3, where we will see if Bonnie can copy behaviors that she hasn’t previously been taught. Then we will copy behavior *sequences*. Woo hoo!

Fugazza believes that her “Do As I Do” method has great potential for application in training, with possibilities for quickly teaching dogs new behaviors, including shaping. Whether or not that proves to be true, it’s great fun to have a new training challenge for me and my dogs. I’m already planning to offer “Copy That” workshops in 2014. Can your dog copy that? 🐾

*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 dog trainers. Pat is also author of many books on positive training. See page 24 for more information.*

## THE CLEVER HANS PHENOMENON



Clever Hans was a German horse in the early 1900s who was supposedly able to solve math problems and perform other amazing tasks. His owner, math teacher, amateur horse trainer, and mystic Wilhelm von Osten, said Hans could add, subtract, multiply, divide, work with fractions, tell time, keep track of the calendar, differentiate musical tones, and read, spell, and understand German. When given a math problem

either orally or in writing, Hans would answer by tapping his hoof.

As a result of the large amount of public interest in Clever Hans, the German board of education appointed a commission to investigate von Osten’s scientific claims. The panel, known as the Hans Commission, consisted of 13 people, including a veterinarian, a circus manager, a Cavalry officer, a number of school teachers, and the director of the Berlin zoological gardens. This commission concluded in September 1904 that no tricks were involved in Hans’s performance.

The commission’s findings were handed off to Oskar Pfungst, a German comparative biologist and psychologist. Using multiple trials, Pfungst found that Hans could get the correct answer even if von Osten himself did not ask the questions, ruling out the possibility of fraud. However, the horse got the right answer only when the questioner knew what the answer was, and the horse could see the questioner. Pfungst determined that when von Osten knew the answers to the questions, Hans got 89 percent of the answers correct, but when von Osten did not know the answers to the questions, Hans only answered six percent of the questions correctly.

Pfungst then examined the behavior of the questioner. His examination determined that as Hans’s taps approached the right answer, the questioner’s posture and facial expression showed an increase in tension, then relaxed when the horse made the final, correct tap. This body language provided a cue that Hans used to know when to stop tapping. Pfungst believed that van Osten really thought Hans was answering the questions, and was not deliberately perpetrating a fraud.

Thanks to Clever Hans, today when an animal touted to be brilliant is suspected of responding to the handler’s unintentional cues, it’s referred to as the Clever Hans phenomenon. Also thanks to Clever Hans, researchers created processes such as “double-blind study” for preventing non-human and human animals from responding from unintended cues given by the researchers to their subjects.

Clever Hans may not really have been able to do math, but it was certainly very clever of him to figure out how to read human body language well enough to answer the questions correctly and, no doubt, be reinforced for it.



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# Favorite Remedies, Continued

*Updates on the use of and sources for some less-recognized but often effective alternative treatments and supplements.*

BY CJ PUOTINEN

**W**hole Dog Journal readers often try techniques and products described in the magazine, but sometimes years go by before we need something we read about, or it disappears from the market, or we have trouble finding it, or we simply forget all about it. Last month we revisited green tripe, Seacure, and Willard Water. Here are two more go-to products featured in previous issues that might now be perfect for you and your dog.

## PAW EMT GEL AND EMT SPRAY PAW

As we reported seven years ago (in “Accelerated Wound Healing,” WDJ August 2006), many products are marketed as a first-aid kit in a tube, jar, or bottle, but EMT Gel truly lives up to that description.

EMT Gel’s key ingredient, bovine collagen (also described as “a natural medical hydrolysate Type I collagen”), acts as a tissue adhesive, providing a matrix for new cell growth while sealing and protecting wounds and significantly reducing pain, bleeding, scarring, wound weeping, and the risk of infection.

Once applied, EMT Gel can be left undisturbed, which simplifies dressing changes. The collagen forms a plug that stops bleeding by encouraging clotting, and its occlusion of nerve endings reduces pain. Veterinarians in research universities and clinical practice recom-

mend EMT Gel for abrasions, lacerations, skin ulcers, gunshot wounds, bites, first- and second-degree burns, electrical injuries, frostbite, post-surgical incisions,

suture and IV sites, skin graft sites, bleeding ear injuries, skinned elbows, and other wounds.

According to its manufacturer, EMT Gel reduces bleeding, promotes rapid healing, reduces pain and itching, deodorizes wounds, protects wounds and newly formed tissue, provides an optimal environment for wound healing, is easy to use and cost-effective, conforms to wounds of all shapes and sizes, is naturally absorbent, has excellent adhesion qualities, is safe, non-toxic, and non-sensitizing, and can be used on all animals. Some users routinely apply it to their own injuries.

EMT Gel is sold in 1-ounce tubes and has a two-year shelf life.

A spray-on version (EMT Gel Spray) is available for the treatment of scrapes, first- and second-degree burns, scratches, lick granulomas, hot spots, and other skin injuries. In addition to wound-healing collagen, the nontoxic spray contains a bitter taste (Bitrex®, or denatonium benzoate) which deters many dogs from licking it off.

Websites featuring EMT Gel and Spray publish testimonials from users who credit the products with saving their dogs’ lives or at least making them more comfortable.

One of the happy users in our 2006 article was Shannon Rogers-Peisert of Liberty, Missouri, whose black Labrador



**Both EMT Gel and EMT Spray (seen here) are ideal for protecting wounds or scrapes that are on parts of the body that would otherwise be difficult to dress or wrap.**

Retriever, Cody, severed an artery while jumping a fence. “There was blood everywhere,” she says. “I had a sample tube of EMT Gel and thought to use it before taking Cody to the emergency clinic. The vet said it kept Cody from bleeding to death.”

In New Mexico in 2002, Troy Sparks spent quail season’s opening day hunting with Lucy, his Llewellyn Setter. When they returned to the truck, he noticed a blood clot on Lucy’s neck, and as he began to clean the wound, blood poured down her neck. Sparks applied EMT Gel, gauze, and vet wrap to hold it in place, then drove to Lucy’s veterinarian two hours away. When the vet removed the dressing, a six-inch stream of blood shot out. After getting stitches, Lucy recovered quickly.

In Athens, Georgia, Kevin Johnston competes in field trials with German Shorthaired Pointers. As Johnston’s mother, Linda Lowe, explained, “Lefty, who runs and quarters faster and harder than any dog we have ever owned, was running in a trial on grounds that were very hard and rocky. Lefty ran on Saturday. On his first point on Sunday, he held up a bleeding foot. All four of his feet had very raw pads, with some injuries as large as quarters.”

Johnston had recently competed in a Dog of the Year trial at which he was given a sample of EMT Gel. He cleaned Lefty’s paw pads with saline solution and applied EMT Gel, a procedure he repeated the next day. “We were sure Lefty would not be able to compete for several weeks,” said Lowe, “but within two days he was much better and after four days, his paw pads seemed to be completely healed. We were very impressed with how quickly this product worked.”

Warren Befort of Burlington, Kansas, reported that his 4-year-old pointer, Angie, is a prolific bird dog but prone to injury. “On several occasions,” he said, “she has cut herself in the field, requiring a visit to the vet to get sewn up. In the past, the trip to town could mean significant blood loss and lots of anguish.”

After reading about EMT Gel, Befort decided to keep a tube on hand. “The last time Angie sliced her tail,” he said, “the cut was over an inch long and fairly deep. I immediately broke out the EMT Gel, applied a liberal amount to the wound, covered it with gauze, and wrapped it with elastic tape. By the next morning the wound was noticeably better. I am

now convinced not to go anywhere with Angie without taking the EMT Gel, too.”

## BEST USE

To use EMT Gel, clean the wound by rinsing it with plain water or a saline solution; then apply the gel to the wound and the surrounding area. Allow superficial wounds to air-dry and, for deeper wounds, cover with a non-stick dressing. If using the spray, keep it away from the dog’s eyes and nose because of its bitter-tasting ingredient.

EMT Gel and Spray should be stored at room temperature and protected from freezing. Extreme heat may affect the gel’s viscosity but not its performance.

EMT Gel can be messy and may not stop heavy bleeding unless pressure is applied to the wound, and the spray can be slow to dry. In some cases, possibly because the product was old and because



PHOTO BY STEPHEN NAGY, MD

plain gauze rather than a non-stick dressing was used, the gel stuck like glue to paw pads or other injuries as well as to the gauze. Not all dogs are deterred by the spray’s bitter taste, in which case lick granulomas and similar wounds can be protected with bandaging or the use of an Elizabethan collar until the wound heals. Most users report good results for both the gel and spray on superficial wounds and wounds that are easily accessed.

## SYSTEMIC ORAL ENZYME THERAPY

Most WDJ readers are familiar with digestive enzymes, protein-like compounds that, in small amounts, speed biological reactions in the digestive process.

But enzymes do much more than react with food in the digestive tract. Many enzymes are cultivated for use in industrial processes, medical testing, food production, and as ingredients in household products such as pet stain removers, laundry detergents, toothpaste, and facial cleansers. Enzymes cause seeds to sprout, flowers to blossom, plants to grow, autumn leaves to change color, and fruits to ripen. Living animals manufacture thousands of enzymes for various functions throughout their bodies.

Some enzymes – called systemic oral enzymes – are swallowed and then absorbed into the bloodstream, where they affect the entire body, removing inflammation at its source and improving a variety of conditions. These include pancreatin, a pancreatic enzyme; papain, derived from papayas; and bromelain, derived from pineapples. Taken between meals, they move past the stomach to the small intestine, from which they travel throughout the body.

When we explored systemic oral enzyme therapy in January 2001 (“Enzyme Therapy for Quicker Canine Injury Recovery”) and October 2005 (“A Digestive Enzyme Supplement Helps Dogs

Recover from Illness and Injury”), the leading brand for human and pet use was Wobenzym N, then manufactured by Naturally Vitamins, Inc.

Wobenzym N (which is usually referred to simply as Wobenzym) was developed in the 1950s in the United States by Drs. Max Wolf and Helen Benitez of Columbia University, who named the product “wo” for Wolf, “ben” for Benitez, and “zym” for enzymes. Their research showed that proteolytic (protein-digesting) enzymes have four significant properties when circulating through the body: they reduce inflammation, break down harmful fibrous tissue, reduce blood viscosity to prevent harmful clotting without the adverse side effects of aspirin and other blood-thinning medications, and support immune function.

Despite its benefits, Wobenzym did not become a successful over-the-counter remedy until it moved to Germany, where only aspirin outsells it. Wobenzym is also the most thoroughly researched enzyme supplement available worldwide, having been tested in over 100 medical studies and clinical trials, most of them conducted in Europe.

Wobenzym is recommended for bruises, sprains, and all types of sports injuries as well as arthritis and any illness that involves inflammation. The bioflavonoid rutin, one of Wobenzym’s





ingredients, prevents the discoloration and pain associated with bruises. German surgeons routinely prescribe Wobenzym to prevent bruising, swelling, edema, and pain. It significantly reduces post-surgical recovery time, and German hospitals give large amounts to those with serious injuries to prevent brain swelling and speed recovery.

## FORMS AND TYPES

For many years Wobenzym was available as beige tablets with a clear coating (a sugar-free product developed for the American market) and as red tablets containing a small amount of sugar in their coating (the European version). The red tablets were also sold under the brand name Fido-Wobenzym for use with dogs.

After our articles appeared, Naturally Vitamins replaced Wobenzym with Medizyme, which contains the same formula. Fido Wobenzym disappeared and was replaced by Medizyme Fido. Wobenzym N is now sold by the supplement maker Garden of Life and by Douglas Laboratories, which calls it Mucos Pharma Wobenzym N.

In addition to Wobenzym N, both Garden of Life and Douglas Laboratories sell the original German formula, Wobenzym PS, which stands for Professional Strength.

Wobenzym N, Medizym, and Medizym Fido contain the same six enzyme ingredients in identical proportions while Wobenzym PS contains only three enzymes. All are protected by enteric coatings that survive stomach acid and break down in the small intestine. (To

compare products, see the ingredient lists on page 23.)

FlavenZym by VitaCost contains the same six enzymes as Wobenzym N and Medizym, though in slightly different proportions. Of the products described here, FlavenZym is the least expensive. Search online for proteolytic enzymes, systemic oral enzyme therapy, or enteric-coated enzymes and you'll find additional products as well.

## WHAT THEY DO

Systemic oral enzymes taken between meals on an empty stomach once or twice per day:

- Support the body's natural inflammation response, resulting in reduced pain and swelling.
- Increase flexibility, mobility, strength, and range of motion.
- Support joint and tendon health.
- Temporarily relieve aches, pains, and muscle soreness resulting from everyday activities.
- Reduce recovery time after sports injuries, accidents, or surgery.
- Normalize blood flow at injury sites, resulting in rapid healing and the reduction of pain.
- Improve oxygenation and the reduction of edema (fluid retention and swelling).

**Wobenzym is the best-known systemic oral enzyme supplement on the market, but several effective products have similar formulas. Check the list on page 23 to compare labels and find one that best suits your dog.**

- Reduce scarring.
- Improve respiratory problems, seasonal allergies, and sinus infections.

In addition, some human and veterinary studies have found that systemic oral enzyme therapy helps slow or prevent the spread of cancer.

## DOSING YOUR DOG

For maximum effectiveness, systemic oral enzymes should be taken on an empty stomach at least 45 minutes to one hour before meals or at least one to two hours after.

When adapting over-the-counter human enzyme products for canine use, consider your dog's weight. Label directions are appropriate for a 100-pound human. Considering the well-documented safety of enzyme products (note the cautions below before using), proportions can be approximate. For dogs over 80 pounds, the human dose is likely to be effective and well tolerated. For dogs weighing 50 pounds, cut the dosage in half; for those weighing 25 pounds, use one-fourth of the recommended amount. See all of the recommendations and cautions presented here before deciding on a specific product and dose.

Labels on single-ingredient products like bromelain and pancreatin sold as digestive enzymes give dosages for use with food. In addition to using these enzymes with food, the same dosage twice or three times per day between meals is appropriate for systemic therapy.

Experts disagree as to whether enteric-coated tablets taken between meals work better than capsules, as uncoated pancreatin and bromelain capsules have been shown to be effective by themselves. Some dog owners use both strategies – enzyme powders with food and enzymes in uncoated or enteric-coated capsules between meals – to be sure their dogs receive the support they need, especially while recovering from an illness or injury. For convenience, digestive enzyme powders can be placed into empty two-part capsules, which are sold in natural food markets.



## CAUTIONS & SIDE EFFECTS

Oral enzyme products can be problematic for any dog who is allergic to beef (*Bos taurus*), pork (*Sus scrofa*), papaya (*Carica papaya*), pineapple (*Ananas comosus*), or any other food-source ingredient. If your dog has specific allergies, check product labels or contact manufacturers to verify ingredients and their sources. Many dogs with seasonal allergies and food sensitivities have improved as a result of taking enzymes both with food and between meals, but it's a good idea to try a small first dose and check for adverse reactions before increasing to therapeutic levels.

**Dogs with bleeding disorders should not take systemic oral enzymes** because they reduce clotting and thin the blood. For the same reason, large doses are not recommended immediately before surgery. Those whose dogs have a serious illness, such as liver disease, or are pregnant or nursing should consult a veterinarian before giving enzymes between meals. Digestive enzymes given with food at recommended maintenance doses are usually safe for dogs with clotting disorders and other illnesses because they interact with the body the same way that enzymes in raw food do. Follow label directions and, if in doubt, consult a holistic veterinarian.

In some cases, human patients taking very high doses of systemic oral enzymes have developed a buildup of uric acid, a waste product from protein breakdown, in the urine or blood. Allergic reactions, bleeding disorders, and uric acid buildup are rare side effects. More common are temporary reactions that disappear when the therapy is discontinued or the dosage is reduced, including minor changes in the patient's stool and/or gastrointestinal disturbances such as flatulence, nausea, diarrhea, or a feeling of fullness.

Our 2005 article quoted Beverly Cappel, DVM, of Chestnut Ridge, New York, who had recently conducted a double-blind placebo-controlled crossover study of Wobenzym N (Fido-Wobenzym) in the care and management of canine arthritis. Sixty dogs diagnosed with various types of arthritis were divided into two groups and given Fido-Wobenzym or identical placebo tablets for six to nine weeks. The study tested doses of one tablet twice per day or two tablets twice per day.

"This was a placebo-controlled trial," said Dr. Cappel, "but it was obvious which dogs were taking the Wobenzym.

They were the ones who stopped limping soon after the study started and were able to go for longer walks. Their owners noted that these dogs appeared to have much less pain. They started acting like young dogs again. A key benefit was the reduction of inflammation. Several patients who responded well were older dogs who were having trouble getting up or couldn't do stairs or would only go for very short walks. Being able to get up the stairs again or go for longer walks – those are priceless benefits. After the study concluded, many owners came in for refills."

However, Dr. Cappel reported that some dogs in her study developed platelet problems. She first noticed symptoms in patients whose owners were already giving them Wobenzym for arthritis or cancer at doses higher than Fido-Wobenzym's label recommendation. She said that Wobenzym is not likely to produce adverse effects at doses of up to two tablets twice per day (four tablets daily), but as a precaution, she recommended no more than three tablets per day, which she considered very safe. Owners of dogs taking higher amounts, such as six or more tablets daily, should watch for any of the following symptoms, which might indicate platelet problems, internal bleeding, or anemia: small blood spots on the gums, pale gums, any abnormal bleeding, or bloodshot eyes.

None of Dr. Cappel's patients who developed platelet problems became sufficiently anemic to develop white or pale gums. The problem, which occurred in male and female dogs of different ages, breeds, sizes, and conditions, several of whom ate a raw home-prepared diet, developed within the first six weeks of daily supplementation with Wobenzym. Immediately reducing the dose or stopping the product resolved these symptoms.

Enteric-coated capsules should be swallowed whole, not chewed. Powders, such as digestive enzymes or bromelain, can be mixed with a small amount of water and given between meals, but it's usually easier to dose a dog with tablets or capsules. If your dog is hard to pill, give tablets or capsules with the smallest amount of food your dog will swallow. For best results, try to get your dog to drink a few ounces of water with each dose. Refrain from giving snacks or training treats within an hour of using systemic oral enzymes.

Enzymes are easily damaged by heat.

For example, bromelain powder retains its enzyme activity for 10 years or more if refrigerated but is inactivated in just a few hours if stored near a hot oven or sunny window. Always store enzyme products in a cool, dry location.

## TREATING SPECIFIC CONDITIONS

Systemic oral enzyme therapy has a general or tonic effect that improves conditions throughout the body, so instead of treating a single problem or illness, it addresses several. A dog with heart disease, arthritis, infected gums, and an ear hematoma is likely to improve in all of these areas, not just one. In fact, our hypothetical patient will probably experience improved digestion, faster wound healing, brighter eyes, and a calmer, more focused personality, especially if the therapy is continued for several months.

To treat acute injuries, sprains, bruises, contusions, hematomas, pulled muscles, abrasions, broken bones, and burns, give twice the maintenance dose for several days, or consider the protocol described in the next section, checking to be sure your dog is not developing any of the bleeding symptoms mentioned earlier. In general, frequent, small doses are more effective than single large ones, so consider dividing the dose throughout the day. Healing will occur as the injury is cleared of damaged tissue, congestion, and debris. When there is noticeable improvement, reduce the dosage to maintenance levels.

For chronic joint conditions such as arthritis, tendonitis, and hip or elbow dysplasia, give the maintenance dose twice per day. Conditions that develop slowly over time take longer to clear than sudden injuries. When the animal shows significant improvement, gradually switch to the recommended maintenance dose and continue indefinitely. If the maintenance dose is used, give it twice as often as recommended, or increase the dosage as well as frequency until symptoms improve. For acute infections, such as bronchitis, use larger doses; for chronic allergies, continue the maintenance dose for several months.

Dogs recover quickly from spaying, neutering, oral surgery, elective surgery, and emergency surgery with the help of enzyme supplements. Taken for a month or more before the operation, maintenance doses help prepare the body for healing.

# The Whole Dog



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Because enzymes thin the blood and help prevent clotting, some experts warn against using these supplements for 7 to 10 days before and after surgery. Others suggest using the maintenance dose until a day or two before surgery, then resuming it a day or two after. And some vets (see below) prescribe enzymes before and after surgery without interruption. Discontinuing oral enzymes reduces the risk of hemorrhage, but it increases the likelihood of swelling, pain, and other conditions. For best results, consult a holistic veterinarian and consider the patient's physical condition, medical history, and type of surgery. (As noted above, dogs with clotting disorders should not take enzymes between meals.)

### ONE VET'S PROTOCOL

Our 2005 article interviewed Mary Foster Rodriguez, DVM, of Gainesville, Florida. Since 2000, she has prescribed systemic oral enzymes for dogs with arthritis, hip dysplasia, injuries, skin and coat problems, autoimmune disorders, and any condition that involves inflammation. Although she prescribes much higher doses than those on the label, she reports that her patients have yet to experience any platelet problems or signs of anemia. "I've given Wobenzym and now Medizym to hundreds of dogs, most of whom I see regularly," she says. "Some have been taking it every day for many years. Other

than dogs with bleeding disorders, the only situation where I wouldn't use systemic oral enzymes would be if the dog has a stomach ulcer, which is rare but can result from taking certain medications."

Several years ago Elliott, a large 13-year-old terrier-mix with hip dysplasia and severe arthritis in both knees, slipped on a hardwood floor and couldn't get up. His owner, Leanne Lawrence, took him to three veterinarians, all of whom recommended that Elliott be euthanized to put him out of his misery. Then she found Dr. Foster Rodriguez, who makes house calls.

"I always carried Wobenzym with me in those days," says Dr. Foster Rodriguez, "just as I always carry Medizym today, and as soon as I saw Elliot, I started him on five tablets per hour. I also had Leanne encourage him to stand and walk on a safe, carpeted surface, because motion often helps dogs with his condition feel better. Just after his third dose, he and Leanne were walking down the street."

Elliott resumed his active life, even though he was diagnosed with bone cancer at 15. "I treated him homeopathically and holistically," says Dr. Foster Rodriguez, "and the bone tumor went away. It really amazed the veterinarian who did his biopsy, along with everyone else. Elliot finally died in his sleep at age 17."

For most conditions Dr. Foster Rodriguez starts canine patients with one

## RESOURCES

### ❖ EMT GEL AND EMT GEL SPRAY

Marketed under three manufacturer names (Trophy, Lambert Kay, and PBI/Gordon) and sold online and in hunting dog and pet supply stores and catalogs. For more information, see [gundogsupply.com](http://gundogsupply.com) and [emtgel.com/testimonials](http://emtgel.com/testimonials).

### ❖ SYSTEMIC ORAL ENZYME THERAPY

**FlavenZym** is made by VitaCost, [vitacost.com](http://vitacost.com). Sold in health food stores and online.

**Medizym** and **Medizym Fido** are made by Naturally Vitamins, Inc, [naturally.com](http://naturally.com). Sold in health food stores and online. Note that Medizym and Medizym Fido are the same product with different labels.

**Wobenzym N** and **Wobenzym PS** are made by Garden of Life, [gardenoflife.com](http://gardenoflife.com)

**Mucos Pharma Wobenzym N** and **Wobenzym PS** are made by Douglas Laboratories, [douglaslabs.com](http://douglaslabs.com). Sold in health food stores and online.

For information about systemic oral enzyme therapy and research supporting its use, see [n.wobenzymonline.com](http://n.wobenzymonline.com)

tablet per 10 pounds of body weight up to a maximum of five tablets at a time given twice or three times per day.

“In a serious condition where the dog is badly injured or can’t move because of pain,” she says, “I’ll give that amount more often, every one or two hours. As soon as the dog responds, I study his symptoms and look for physical comfort, improved range of motion, increased playfulness, and similar improvements. Once I see those changes, I wait a longer period before giving more. I also start reducing the dose as the dog improves, which might be within a few days or weeks, depending on the patient. Once the dog is on a daily dose that produces good results, we continue it for several weeks before cutting back. I teach clients to monitor their dogs by paying close attention to all of the possible variables.”

Dr. Foster Rodriguez monitors a dog’s odor as well as symptoms such as loose stool or diarrhea to determine whether a saturation dose has been reached. “The odor is distinctive,” she says, “and it affects the skin, breath, and feces. If a dog smells something like cat urine, I know it’s time to reduce the dose because the dog is consuming more than her body can utilize.”

To determine whether a reduced initial or maintenance dose can be effective, she reduces the amount by one or two tablets in each divided dose during the day and continues at that rate unless symptoms recur. If a dog begins limping or shows other symptoms, she increases the dose again.

“I’ve noticed that the longer dogs are on a maintenance dose of Medizym, the fewer crises they have,” she said. “It seems to prevent injuries as well as treat them. And the Medizym dogs recover much faster from surgery. I watch for post-operation swelling but that seldom occurs in dogs taking Medizym. If they aren’t already taking it, I recommend giving one tablet per 10 pounds of body weight, up to a maximum of five tablets at a time for larger dogs, for a week or two before elective surgery.

“I don’t know what I’d do without Medizym,” she concludes. “As far as I’m concerned, it’s a miracle.” 🐾

*CJ Puotinen, author of The Encyclopedia of Natural Pet Care and other books, is a frequent contributor to WDJ. She and her husband live in Montana with Chloe (black Lab), Seamus (Cairn Terrier), and a red tabby cat.*

## COMPARE INGREDIENTS

### Wobenzym N – Serving size 3 tablets (human dose)

Approximate retail price: 100 tablets \$38; 200 tablets \$65; 400 tablets \$125; 800 tablets \$206. Search online for sale prices.

<b>Pancreatin</b> 56,000 USP units protease (pancreas) <i>Sus scrofa</i>	300 mg
<b>Papain</b> 492 FIP-units (International Pharmaceutical Federation) <i>Carica papaya</i>	180 mg
<b>Bromelain</b> 675 FIP-units <i>Ananas comosus</i>	135 mg
<b>Trypsin</b> 2,160 FIP-units (pancreas) <i>Sus scrofa</i> from dried purified aqueous extracts	72 mg
<b>Chymotrypsin</b> 900 FIP-units (pancreas) <i>Bos Taurus</i>	3 mg
<b>Rutoside trihydrate</b> (Rutin) <i>Sophora japonica</i> from dried purified aqueous extracts	150 mg
<b>Other ingredients:</b> Cellulose, vegetable-based enteric coating, vegetable stearate, natural vanilla flavor, purified water.	

### Wobenzym PS Professional Strength – Serving size 3 tablets (human dose)

Approximate retail price: 100 tablets \$50; 180 tablets \$83. Search online for sale prices.

<b>Bromelain</b> 1,350 FIP-units	270 mg
<b>Rutoside trihydrate</b> (Rutin)	300 mg
<b>Trypsin</b> 4,320 FIP-units (pancreas)	144mg
<b>Other ingredients:</b> Microcrystalline cellulose, calcium phosphate, hydroxypropyl cellulose, vegetable-based enteric-coating, vegetable stearate, silica, natural vanilla flavor, purified water.	

### Medizym – Serving size 3 tablets (human dose)

Approximate retail price: 100 tablets \$37; 200 tablets \$63; 400 tablets \$121; 800 tablets \$210. Search online for sale prices.

<b>Pancreatin</b> 78,000 USP units protease (pancreas) <i>Sus scrofa</i>	300 mg
<b>Papain</b> 2.9 million USP-units 180 mg <i>Carica papaya</i>	180 mg
<b>Bromelain</b> 324 GDU/GM <i>Ananas comosus</i>	135 mg
<b>Trypsin</b> 180,000 USP-units (pancreas) <i>Sus scrofa</i>	72 mg
<b>Chymotrypsin</b> 22,500 USP-units (pancreas) <i>Bos Taurus</i>	3 mg
<b>Rutoside</b> <i>Sophora japonica</i>	150 mg
<b>Other ingredients:</b> Silica, oligo polysaccharides, modified plant cellulose, pH-resistant enteric coat blend, and vegetable stearic acid.	

### Medizym Fido – Serving size 1 tablet. Canine dose: Small (13-20 pounds) 1 tablet daily;

medium (21-50 pounds) 2 tablets daily; large (51-100 pounds) 3 tablets daily, or as directed. Approximate retail price: 100 tablets \$37. Search online for sale prices, or purchase Medizym, which is the same product with a different label.

<b>Pancreatin</b> 78,000 USP units protease (pancreas) <i>Sus scrofa</i>	100 mg
<b>Papain</b> 2.9 million USP-units 180 mg <i>Carica papaya</i>	60 mg
<b>Bromelain</b> 324 GDU/GM <i>Ananas comosus</i>	45 mg
<b>Trypsin</b> 180,000 USP-units (pancreas) <i>Sus scrofa</i>	24 mg
<b>Chymotrypsin</b> 22,500 USP-units (pancreas) <i>Bos Taurus</i>	1 mg
<b>Rutoside</b> <i>Sophora japonica</i>	50 mg
<b>Other ingredients:</b> Silica, oligo polysaccharides, modified plant cellulose, pH-resistant enteric coat blend, and vegetable stearic acid.	

### FlavenZym – Serving size 3 tablets (human dose)

Approximate retail price: 180 tablets \$28; 800 tablets \$80. Search online for sale prices.

<b>Pancreatin</b> 10x56,000 USP units protease from pancreas <i>Sus scrofa</i>	224 mg
<b>Papain</b> 492 FIP-units from papaya <i>Carica papaya</i>	120 mcg
<b>Bromelain</b> 675 FIP-units from pineapple <i>Ananas comosus</i>	134 mg
<b>Trypsin</b> 2,160 FIP-units from pancreas <i>Sus scrofa</i>	79 mg
<b>Chymotrypsin</b> 900 FIP-units from pancreas <i>Bos Taurus</i>	4.5 mg
<b>Rutin</b> (rutosid 3H2O) <i>Sophora japonica</i> (seeds)	150 mg
<b>Other ingredients:</b> Dicalcium phosphate, cellulose, stearic acid (vegetable source), magnesium stearate (vegetable source), silicon dioxide, croscarmellose sodium, enteric coating (sodium alginate, purified stearic acid) and aqueous release system (purified water, ethylcellulose, ammonium hydroxide, medium chain triglycerides and oleic acid).	



 RESOURCES 

**TRAINING AND INSTRUCTION**

❖ **Pat Miller**, CBCG-KA, CPDT-KA, Peaceable Paws Dog and Puppy Training, Fairplay, MD. Group and private training, rally, behavior modification, workshops, intern and apprentice programs. Trainers can become "Pat Miller Certified Trainers" (PMCT) by successfully completing Pat's Level 1 (Basic Dog Training and Behavior) and both Level 2 Academies (Behavior Modification and Instructors Course). (301) 582-9420; [peaceablepaws.com](http://peaceablepaws.com)

**BOOKS AND DVDS**

❖ WDJ Training Editor Pat Miller is author of *Positive Perspectives* and *Positive Perspectives 2; Power of Positive Dog Training; Play With Your Dog;* and *Do Over Dogs: Give Your Dog a Second Chance at a First Class Life*. Available from [dogwise.com](http://dogwise.com) and [wholedogjournal.com](http://wholedogjournal.com)

❖ *The Encyclopedia of Natural Pet Care* and *Natural Remedies for Dogs and Cats*, by WDJ contributor CJ Puotinen, are available from [dogwise.com](http://dogwise.com) and from [wholedogjournal.com](http://wholedogjournal.com)

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