

Your complete guide to natural dog care and training

Whole Dog Journal™



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Marketing or Substance?

Look for third-party certifications.

The latest trend in pet food has to do with ingredient provenance. Over the past year, a number of the companies who make some of the most expensive foods on our “approved foods” lists are making strong claims about their ingredients. It’s not enough to promote “All ingredients from North America,” or the more pointed claim, “No ingredients from China.” Today, a number of companies promote the fact that they formulate their dog foods with sustainably farmed grains, fruits, vegetables, and herbs, and/or humanely raised, grass-fed, and/or free-range food animals and wild-caught fish.



In the cases where the claims are true, it’s a fantastic development for those who can afford these products and the consciousness that drives the impulse to include them. Many of the practices of conventional factory farming of plants and animals harm the environment and are intrinsically cruel to animals. But there is no getting around the fact that so-called “ethically sourced” alternatives are more expensive, and not all pet owners can afford foods that are made with sustainable/humane ingredient sources. But if even some pet owners can afford them, even just some of the time, it helps these companies and the farms from which they buy their ingredients. Every little bit helps.

There are divergent views of this trend within the pet food industry. Long-time industry observers grimly point out that the supply of “ethical” ingredients is incredibly limited, and that using this sort of ingredient in pet food is profligate and perhaps even unconscionable with starving people in the world. In contrast, cheerleaders for the industry promote any trend that sells more pet food – and the enthusiasm for ethically sourced ingredients is strong and growing.

And when a trend gets popular enough, even the industry giants lumber in the right direction. In 2010, Mars Petcare, the world’s largest pet food company, with more than \$17 billion in annual sales, pledged to buy fish only from fisheries or fish farms that are third-party certified as sustainable. And, after credible articles were published in 2014 and 2015 about the use of human slaves on factory fishing boats, Mars and Nestlé Purina (the largest pet food company in the United States, with about \$12 billion in annual sales) both announced that they will take steps to ensure their pet food supply chains are free of human rights abuses and illegally caught seafood.

This is all great news – but don’t take any company’s claims of ethical ingredient provenance for granted. Make sure to look for certification by a legitimate third-party auditor. Today, there are a number of companies that provide verification and certification of not just organic, but also socially, environmentally, and/or humanely responsible ingredient suppliers.

NK



What Price Is Right?

The adage “You get what you pay for” has never been as true as when paying for food – in this case, your dog’s food. Here’s how to find the sweet spot between quality and cost.

I was speaking with a friend recently about working on this article. My friend is not just an experienced dog owner and trainer, but also someone who used to work in the pet food industry. We were discussing the fact that once another dog owner learns that you know something about foods, they almost always ask, “So what’s the best dog food?” My friend said, “Yeah, most people want to buy the best foods they can for their dogs – until you tell them what the best foods cost! Then they change the subject!”

You might not think that is funny, but my friend and I laughed for a solid minute, because we have both experienced that exact conversation *countless* times.

It’s an inescapable fact that quality foods cost money – and the highest quality foods cost a *lot* of money. You simply cannot sell steaks at hamburger prices. And as much as we may want to buy “the best” food for our dogs, most of us have a number – unique to each of us, based on our financial status, the size and number of dogs we own, and perhaps even our relationship with our dogs – to which we will respond, “No, forget it; that’s *too* much.”

We’ve never made cost a part of WDJ’s dog food selection criteria, and have barely mentioned it in past reviews, precisely because of the fact that one dog owner’s “No, forget it” price may be another person’s food selection *starting* point. What you can afford or feel comfortable spending on dog food is a personal matter. But the conversation with my friend made me reconsider this particular elephant in the living room. It occurred to me that perhaps it would be helpful to help people identify the higher-quality foods in any group of identically priced products.

INITIAL SELECTION CRITERIA

In order to recognize a superior product in a group of foods, you have to know what specific attributes indicate quality in a dog food. We look for the following hallmarks of quality:

- Lots of animal protein at the top of the ingredients list. Ingredients in pet food are listed in order of the weight of that ingredient in the formula, so you want to see a named animal protein or named animal protein meal first on the ingredients list. (“Named” means the

How important is price to you when buying food for your dog? Is it the most important criteria to you? If quality is more important, is the cost of the food irrelevant – or is there a price that makes you balk, even if you know that the food is really great?



species is identified: chicken, beef, lamb, etc. “Meal” means a dry, rendered product made from an identified species.)

■ When a fresh meat is first on the ingredient list, there should be a named animal-protein meal immediately or closely following the meat. Fresh meat contains a lot of moisture (which is heavy), so if meat is first on the list, it acts like a diluted protein source; while it adds an appealing flavor and aroma to the food, it doesn’t actually contribute that much protein. That’s why another named source of animal protein should appear in the top two or three ingredients.

■ When vegetables, fruits, grains, and or carbohydrate sources such as potatoes, chickpeas, or sweet potatoes are used, they should be whole. Fresh, unprocessed food ingredients contain nutrients in all their complex glory, with their vitamins, enzymes, and antioxidants intact.

■ Some of us are also looking for products that are made with organic ingredients, and/or humanely raised or sustainably farmed ingredients. It may also be meaningful for some of us to buy from companies who support shelters or rescue, manufacture in “green” plants, participate in recycling and waste reduction programs, and so on.

There are also some things to look out for – undesirable attributes that indicate a lower-quality food:

■ Meat by-products, poultry by-products, meat by-product meal, and poultry by-product meal. Many of the animal tissues that are defined as animal by-products are nutritious, but may be handled indifferently.

■ “Generic” fat sources. “Animal fat” can literally be any mixed fat of animal origin. “Poultry” fat is not quite as suspect as “animal fat,” but “chicken fat” or “duck fat” is better (and traceable).

■ Watch out for a practice commonly

called “ingredient splitting,” whereby two or more very similar food “fractions” appear on the ingredients list. Because the ingredients are listed in descending order of their weight, a manufacturer can make it appear that a higher-quality ingredient is represented in the food in a higher amount than it really is. This is accomplished by using several fractions or versions of an ingredient as separate ingredients (i.e., rice, brewer’s rice, rice bran, rice protein meal). If all the iterations of that ingredient were combined or reconstituted, they would outweigh the higher-quality ingredient, pushing it down on the ingredients list.

■ We don’t recommend foods that use animal plasma or blood meal as a protein source.

■ Added sweeteners. Dogs, like humans, enjoy the taste of sweet foods. Sweeteners effectively persuade many dogs to eat foods comprised mainly of grain fragments (and containing less healthy animal protein and fats).

■ Artificial colors, flavors, or preservatives (such as BHA, BHT, ethoxyquin). The color of the food doesn’t matter to your dog. And it should be flavored well enough with healthy meats and fats to be enticing. Natural preservatives, such as mixed tocopherols, can be used instead.

NOW COMPARE

Once you know what traits you are looking for, go compare the products in the price range that works for you. Make sure you use the calculator app on your phone and calculate the price per pound of any food you are considering. Write the numbers down so you can compare prices at different retail outlets; if you are accustomed to buying your dog’s food in a grocery store, you might be surprised to find that you can find foods of a *much* higher quality at very close to the same price.

For example, Beneful is a brand that’s sold in many grocery and big-box stores. It costs more than many of the foods in the grocery store so

you may be patting yourself on the back for buying a better food for your dog. A 12.5-pound bag of its Grain-Free Chicken variety sells for \$14.19, or \$1.13 per pound. But look at the ingredients (we’ll list just the first 10):

- chicken
- pea starch
- cassava root flour
- chicken by-product meal
- soybean germ meal
- soybean meal
- canola meal
- beef tallow
- dried beet pulp
- poultry and pork digest

This food contains a minimum of 24% protein and 13% fat.

Now, let’s look at the first 10 ingredients of one of the foods on our “approved foods” list (which appears on pages 6-9). We’ll compare it to a product from a company whose average prices are the lowest on our list: Eagle Pack. The Chicken Meal and Pork Meal formula sells for \$39.99 for a 30-pound bag (\$1.33 per pound).

- chicken meal
- pork meal
- ground brown rice
- dehulled barley
- oatmeal
- rice
- peas
- chicken fat
- brewers dried yeast
- flaxseed

This food contains a minimum of 27% protein and 14% fat.

Yes, there is a 20-cent per pound difference in the prices of these foods; the Beneful is less expensive. But the difference in quality is huge.

It’s nice that Beneful uses chicken meat as its first ingredient, but its next animal protein (chicken by-product meal) is fourth on this list. Because meat contains so much moisture, the chicken doesn’t contribute as much protein to the diet as a meat meal.



We don't recommend grocery-store brands such as Beneful, which often advertise that their first ingredient is "real meat," while the remainder of the ingredients are very low-quality.

the United States. Products from its most expensive line, "Gather," sell for \$4.99 per pound. Its Now Fresh foods sell for an average of \$3.21 per pound, and its Go! foods sell for an average of \$2.94 per pound. The company average is \$3.71 per pound.

SPLITTING HAIRS

There may be less obvious differences in the quality of ingredients between products that appear at the top of our "approved foods" list. This is where some of the

companies' intangible factors come into play. At the top end of the price charts, you will see companies who use ingredients that are certified organic, sustainable, and humane; those certifications don't come without a price. You will also see companies with very good safety records, whose names you probably haven't heard associated with any recalls. Quality manufacturing and quality control has a price, too.

Again, that's not to say that we can all afford the price of some of these foods. But when you check to make sure that the foods have many of the traits of a good-quality product and none or few of the traits of low-quality products, you can rest assured that you are in the right ballpark, anyway. *All* of the foods on our approved foods list, even those at the very bottom of the list when they are ordered by average cost (as we have done) are capable of providing superior nutrition to your dog.

Now, all you have to do is find the ones that suit your individual dog – and that's no small feat. There are dogs who thrive on low-quality foods and dogs who wilt when fed expensive foods. The problem in the latter case might lie with a certain ingredient, the percentage of fat, or something else. Don't fret, just try another good-quality food. The great news is that there are plenty to choose from. 🐾

Beneful props up the protein content in this food with low-quality protein sources: chicken by-product meal, soybean germ meal, and soybean meal.

By the way, we'd call the appearance of those last two ingredients "ingredient splitting." If you added the weight of the soybean germ meal and the soybean meal, we'd hazard a guess that they would outweigh the chicken by-product meal, meaning they play a far larger role in the food than the chicken by-product meal.

Animal proteins contain more of the amino acids that dogs require than plant proteins, but plant proteins are less expensive – hence their appearance in lower-priced foods.

In contrast, Eagle Pack uses two high-quality meat meals as the first and second ingredients; this is where the food is getting most of its protein.

As a fat source, the Beneful food uses beef tallow – widely considered to be a lower-quality fat than the chicken fat used in the Eagle Pack food.

The grains used in the Eagle Pack food are either whole or lightly processed (ground or dehulled). In contrast, the carbohydrate sources in the Beneful product are highly processed (pea starch, cassava root flour, canola meal). All in all, there is a world of difference between the two foods.

COMPANY AVERAGE PRICE PER POUND

On the following pages, we've listed a number of companies that make good- to great-quality foods. For the first time ever, we've ordered them by the average price of their products so you could compare their features with similarly priced foods.

Here's how we came up with the figures we used for the average sales price:

We collected prices for foods from online retailers and from the companies themselves, asking for their suggested retail prices for the largest-sized bags of their foods (the larger the bag, the lower the price per pound). We calculated the price per pound of each variety of food (by dividing the price by the number of pounds of food in the bag). Then we calculated the average price per pound of food for each *company*, using the figures from each food in each line.

Keep in mind that an average means there are foods that cost more and some that cost less than the average. The company average price per pound will accurately represent those companies whose product lines are priced similarly, but it less accurately represents companies who have widely disparate lines of food.

Consider, for example, the three lines of food that Petcurean sells in

WHOLE DOG JOURNAL'S APPROVED DRY DOG FOODS FOR 2018

PRODUCT NAME Company Information	Average Price/lb.	# Varieties, # Grain-Free	Meat, Meal, or Both?	Range of Protein Content Range of Fat Content	Notes
CARNA4 Toronto, Ontario (855) 422-7624; carna4.com	\$5.78	2, 1 GF	Meat	Min. 28% - 29% protein Min. 15% - 17% fat	Carna4 uses fresh muscle meat, liver, eggs, and fish, whole produce, and certified organic sprouted seeds to make this baked food, and in small batches.
LOTUS Lotus Natural Food, Torrance, CA (888) 995-6887; lotuspetfoods.com	\$3.73	7, 4 GF	Some both, some meat	Min. 18% - 27% protein Min. 8% - 14% fat	Lotus foods are baked, not extruded. Grain-free varieties cost as much as \$4.49/pound; the life stage foods (puppy, adult, senior) contain grain and average \$2.99/lb.
GATHER GO! NOW FRESH SUMMIT Petcurean, Abbotsford, Canada (866) 864-6112; petcurean.com	\$3.71 C\$1.83	31, 14 GF	Some meat, some both, some meal	Min. 21% - 36% protein Min. 8% - 18% fat	Gather line is made with certified free-run and/or wild-caught meat (except for vegan food). Its price (\$4.99/lb) drags company average way up. Some Go! foods (\$2.91/lb) are made with meat; some with meat and meat meal. Now Fresh line (\$3.24/lb) is made with meat. Summit line is made with meat meals and sold only in Canada.
ACANA ORIJEN Champion Petfoods, Morinville, Alberta (877) 939-0006; acana.com, orijen.ca	\$3.70	19, 12 GF	Acana uses both; Orijen uses meat	Min. 27% - 42% protein Min. 13% - 20% fat	Acana has three sub-lines: Acana Heritage (60% meat/meat meal inclusion), Acana Regionals (70% meat/meat meal inclusion), and Acana Singles (50% inclusion of one animal protein per variety). Orijen foods use only fresh and dehydrated meats (no meat meals), no grains, and are higher in protein and fat than the Acana foods.
TIKI DOG Tiki Pets, Chesterfield, MO (866) 821-8562; tikipets.com	\$3.60	4 GF	Both	Min. 26% - 28% protein Min. 16% fat	Baked foods formulated for small dogs. Comes in a small kibble size and in small bags – the largest bag size available is 10 pounds.
CASTOR & POLLUX ORGANIX PRISTINE ULTRAMIX Merrick Pet Foods (a div. of Nestlé Purina) Hereford, TX (800) 875-7518; castorpolluxpet.com	\$3.46	19, 15 GF	Both	Min. 21% - 38% protein Min. 10% - 17% fat	All C&P foods have fresh meat 1st and meat meal 2nd. Organix foods are certified USDA Organic (>95% or more organic). Ultramix line contains many whole ingredients. New line Pristine uses wild-caught fish, grass-fed and/or free-range animals, and many organic ingredients.
STELLA AND CHEWY'S Oak Creek, WI (888) 477-8977 X 100; stellaandchewys.com	\$3.40	7 GF	Both	Min. 32% - 36% protein Min. 14.5% - 16% fat	Raw Coated Kibble is a grain-free baked food coated with freeze-dried raw meat. Raw Blend Kibble is the same, with freeze-dried meat nuggets mixed in. Company claims "responsibly sourced" animal proteins are used.
OPEN FARM Toronto, ON (833) 399-3403; openfarmpet.com	\$3.36	5 GF		Min. 30% - 31% protein Min. 14% fat	Company says all food-source animals are humanely raised, grass-fed/free-range, and all fish is wild-caught – and backs this up with certification from Humane Farm Animal Care (HFAC). The (farm) sources of each ingredient are listed on website. Packaging is recyclable.
TENDER AND TRUE Omaha, NE (877) 616-4455; tenderandtruepet.com	\$3.28	5, 3 GF	Both	Min. 26% - 30% protein Min. 16% - 17% fat	Foods are USDA Organic and contain either Global Animal Partnership (GAP)-certified Step 2 or 3 humanely raised chicken, GAP-Certified Step 1 turkey, or fish with Marine Stewardship Council (MSC)-certification as Sustainable Seafood. Each variety has fresh meat first and meat meal second on the ingredients list.
WERUVA Natick, MA (800) 776-5262; weruva.com	\$3.26	6, 4 GF	Both	Min. 34% - 39% protein Min. 13% - 14% fat	All six varieties are potato-free, four are also grain-free. "Noble grains" used in two. Company says Caloric Melody line is made using 70% animal ingredients; Caloric Harmony line 80%.
WILD CALLING Greeley, CO (855) 628-7387; wildcalling.com	\$3.18	9 GF	Both, except for 1 with meat	Min. 23% - 32% protein Min. 14% - 18% fat	Wild Calling has three lines with three foods each; the products in each line are meant to be rotational. All foods (save one) have a meat first, meat meal second.
INSTINCT Nature's Variety, St. Louis, MO (888) 519-7387; instinctpetfood.com	\$3.15	26 GF	Most both, some meat	Min. 23.5% - 47% protein Min. 11% - 22.5% fat	Instinct Original is tumbled with raw, freeze-dried meat. Each Limited Ingredient food has one animal species. Ultimate Protein line uses only meat (no meat meal). Raw Boost has added freeze-dried nuggets mixed in.

PRODUCT NAME Company Information	Average Price/lb.	# Varieties, # Grain-Free	Meat, Meal, or Both?	Range of Protein Content Range of Fat Content	Notes
FARMINA N&D Colts Neck, NJ (888) 292-9965; usa.farina.com	\$3.02	49, 24 GF	Meat, dehydrated meat	Min. 23% - 42% protein Min. 8% - 22% fat	All the Farmina lines (N&D Grain-Free, Quinoa Functional, Pumpkin Grain-Free, and Ancestral Grain lines) contain fresh and dehydrated meats (no meat meals).
ADDITION Kent, WA (425) 251-0330; addictionfoods.com	\$2.84	6 GF	Meal, w/ one exception	Min. 20% - 26% protein Min. 6% - 14% fat	Addiction makes its own foods in New Zealand. Formulas include probiotics and phytonutrient sources such as berries, kelp, herbs. Kangaroo variety contains dry meat.
HALO Halo, Purely for Pets, Tampa, FL (800) 426-4256; halopets.com	\$2.83	13, 4 GF	Meat	Min. 20% - 27% protein Min. 10% - 18% fat	Halo has always eschewed meat meals in favor of meat. It recently reformulated all its foods and now uses only meats that are GAP 3-certified (comprehensive welfare and care standards) and MSC-certified fish.
NULO Austin, TX (512) 476-6856; nulo.com	\$2.79	14 GF	Both	Min. 30% - 33% protein Min. 7% - 18% fat	Nulo formulated all of its foods for high protein and low-carb levels and a low glycemic index. Medal Series foods are sold exclusively at PetSmart. Freestyle recipes sold through independent retailers and online.
GRANDMA MAE'S New York, NY (888) 653-8021; grandmamaes.com	\$2.78	15, 10 GF	Some both, some meal	Min. 23% - 32% protein Min. 7% - 16% fat	Nine of these have a single animal protein source, with meat 1st and the corresponding meat meal 2nd on ingredients list. Company says no GMOs are used.
PINNACLE Central Garden & Pet, Walnut Creek, CA (866) 500-6286; pinnaclepet.com	\$2.70	5 GF	Both	Min. 25% - 27% protein Min. 10% - 15% fat	Four varieties start with fresh meat and have a meat meal second (5th has fresh eat first and meat meal 5th). Sold only in independent pet supply stores.
VERUS Abingdon, MD (888) 828-3787; veruspetfoods.com	\$2.65	8, 3 GF	Some both, some meal	Min. 22% - 26% protein Min. 8% - 15% fat	Verus discloses ingredient sources, such as chicken from cage-free birds in West Virginia, and uses EU-certified manufacturing.
WELLNESS COMPLETE HEALTH CORE SIMPLE TRUFOODS Wellpet, Tewksbury, MA (800) 225-0904; wellpet.com	\$2.62	38, 22 GF	Both, except for Trufoods, which has meat only	Min. 21% - 36% protein Min. 8% - 18% fat	Complete Health foods provide "whole food nutrition." Core foods are "protein focused, grain free." Simple is a limited-ingredient line. Trufoods are baked and contain meats (no meat meals). Wide range of protein, fat levels.
MERRICK A div. of Nestlé Purina, Amarillo, TX (800) 664-7387; merrickpetcare.com	\$2.56	35 GF	Most both, some meat	Min. 25% - 38% protein Min. 8% - 17% fat	Only grain-free varieties are offered. First ingredient is always meat. Backcountry line mixes in freeze-dried nuggets. All made in Merrick's own plant.
CLOUDSTAR WELLMADE St. Louis, MO (800) 361-9079; cloudstar.com	\$2.46	5 GF	Meal	Min. 24% - 26% protein Min. 8% - 15% fat	Wellmade foods are grain-free baked foods; each is made with a single animal protein (helpful for dogs with food allergies). Peas and lentils are the main carb sources.
FRESHMIX, OSOPURE Artemis Company, Gardena, CA (310) 965-1933; artemiscompany.com	\$2.44	7, 4 GF	Both	Min. 20% - 28% protein Min. 6% - 17% fat	Osopure line is grain-free, and each variety contains a single animal protein source. Freshmix varieties contain several animal protein sources.
TUSCAN NATURAL Pyramid Pet Products, Las Vegas, NV (888) 408-0895; tuscannatural.com	\$2.34	5, 2 GF	Some both, some meal	Min. 24% - 35% protein Min. 12% - 20% fat	Simply Pure line has one animal protein source each (chicken, fish, or lamb). Harvest uses turkey & chicken. Carne is a grain-free food with a high meat inclusion.
FROMM Fromm Family Pet Food, Mequon, WI (800) 325-6331; frommfamily.com	\$2.30	27, 13 GF	Both	Min. 21% - 30% protein Min. 10% - 19% fat	This family-owned company makes its own foods in its own plants. Fromm has three lines: Four-Star Nutritionals, Gold, and Classic (economy line).
EVO Natura Pet (a div. of Mars Petcare) Santa Clara, CA (800) 532-7261; evopet.com	\$2.27	3 GF	Both	Min. 42% protein Min. 18% - 22% fat	Evo was one of the first dry dog foods to contain high animal-protein and fat levels. These products have performed well enough to survive – intact – multiple changes of company ownership.
AZMIRA Tucson, AZ; (520) 886-1727; azmira.com	\$2.25	2	Meal	Min. 22% protein Min. 8% fat	Azmira makes just two foods, a lamb and a turkey variety, both made with whole brown rice, milo, and barley.
PARTY ANIMAL West Hollywood, CA (855) 727-8926; partyanimalpetfood.com	\$2.25	1	Both	Min. 23% protein Min. 14% fat	Organic chicken is the first ingredient, followed by chicken meal, then several organic whole grains.

PRODUCT NAME Company Information	Average Price/lb.	# Varieties, # Grain-Free	Meat, Meal, or Both?	Range of Protein Content Range of Fat Content	Notes
THREE DOG BAKERY Kansas City, MO (800) 487-3287; threedog.com	\$2.25	4	Both	Min. 18% - 26% protein Min. 5% - 15% fat	Baked foods, all of which feature a meat as the first ingredient; meat meals follow in all but the "healthy weight" variety.
NATURAL BALANCE A div. of J.M. Smuckers, Burbank, CA (800) 829-4493; naturalbalanceinc.com	\$2.24	28, 15 GF	Some meal, some both	Min. 18% - 32% protein Min. 8% - 17% fat	Super-high-protein, limited ingredient, reduced calorie, and even vegetarian products available. Company makes test results of each batch available online.
HOLISTIC SELECT Wellpet, Tewksbury, MA (800) 225-0904; holisticselect.com	\$2.23	16, 12 GF	Meal	Min. 23% - 35% protein Min. 8% - 17% fat	Company regards digestive health and support as foremost in importance, and adds probiotics and digestive enzymes. Made in company's own mfg. plant.
SOLID GOLD Greenville, SC (800) 364-4863; solidgoldpet.com	\$2.23	25, 6 GF	Both	Min. 18% - 41% protein Min. 6% - 20% fat	A wide variety of foods offered: there are foods with and without grains, potato and potato-free, and products that offer very high protein and moderate protein levels.
NATURAL PLANET, NUTRISOURCE, PURE VITA NutriSource (a div of KLN Family Brands) Perham, MN; (800) 525-9155; klnfamilybrands.com	\$2.18	41, 25 GF	Both	Min. 20% - 32% protein Min. 8% - 16% fat	Natural Planet foods made with free-range organic chicken and some other organic ingredients. NutriSource line has large number of animal protein combinations in grain-containing and grain-free varieties. Each PureVita food contains a single source of animal protein.
PRAIRIE Nature's Variety, St. Louis, MO (888) 519-7387; naturesvariety.com	\$2.15	4	Both	Min. 23% - 27% protein Min. 14% fat	Ingredients start with meat, then meat meal, whole grains, fruits, and vegetables, and even more meat meals.
LIFE'S ABUNDANCE Jupiter, FL (877) 387-4564; lifesabundance.com	\$2.14	5, 1 GF	Meal	Min. 25% - 30% protein Min. 11.5% - 19% fat	Multi-level marketing: Buy food from a local rep (or become a rep!) or have it autoshipped. (Prices used for average are autoship prices.)
NUTRAM Elmira, ON; (844) 234-2464; nutram.com	\$2.12	15, 6 GF	Some meal, some both	Min. 22.5% - 36% protein Min. 9% - 17% fat	Optimum absorption is Nutram's goal. Foods are formulated with moderate, not high, levels of quality protein.
DR. TIM'S PET FOOD Marquette, MI (906) 249-8486; drtims.com	\$2.11	10, 2 GF	Meal	Min. 26% - 32% protein Min. 18% - 25% fat	Low-ash meat meals are used, chosen to provide a proper amino acid profile. Auto-, direct-ship available. Note: Some varieties contain porcine plasma or porcine blood meal (a source of protein we don't approve of).
HEALTH EXTENSION Melville, NY (800) 992-9738; healthextension.com	\$1.99	13, 5 GF	Both	Min. 24% - 27% protein Min. 9% - 18% fat	Made in small batches, never recalled, uses non-GMO produce, and other "responsibly sourced" ingredients. Company is family-owned and operated.
CANIDAE San Luis Obispo, CA (800) 398-1600; canidae.com	\$1.98	25, 19 GF	Some both; some meal only	Min. 20% - 32% protein Min. 8.5% - 18% fat	"Pure" line (all GF) starts with fresh meat, follows with meat meal. Under the Sun line (single protein, GF, no potato) starts with meal, follows with fresh meat in about the 6th spot. All Life Stages line = meal only.
PETGUARD Green Cove Springs, FL (800)874-3221; petguard.com	\$1.98	2	One both, one none	Min. 27% protein Min. 15% fat	Lifespan variety starts with fresh chicken and then chicken meal, whole brown rice, and oatmeal. Petguard Organics is a vegetarian diet (we recommend this only for dogs who are allergic to animal proteins).
PET CHEF EXPRESS New Westminster, BC (604) 916-2433; petchefexpress.ca	\$1.96	1	Meal	Min. 25% protein Min. 10% fat	Just one variety of food is offered, "salmon and potato" (also contains oats, millet, and barley). Company offers home delivery in BC and retail sales in BC and ON.
BORÉAL Beamsville, ON (800) 253-8128; borealpetfood.com	\$1.95	10, 4 GF	Some both; some meal	Min. 24% - 29% protein Min. 12% - 18% fat	All foods formulated for a low glycemic index and to be affordable and sustainable. Original line contains both meat and meals; Proper and Vital lines contain only meals.
NEWMAN'S OWN Westport, CT (203) 222-0136; newmansown.com	\$1.92	2	Both	Min. 21% - 24% protein Min. 10% - 12% fat	Ingredients start with fresh meat; meat meal appears a few ingredients lower on the labels. Many organic ingredients used.
EARTHBORN HOLISTIC Midwestern Pet Foods, Evansville, IN (800) 474-4163 x 450 earthbornholisticpetfood.com	\$1.91	16, 12 GF	Meal	Min. 22% - 38% protein Min. 7% - 20% fat	Venture grain-free line offers novel proteins (including squid!). Earthborn's "holistic" line uses meat meals and whole grains. Earthborn recycles its bags and offers a "UPCs for Trees" program.

PRODUCT NAME Company Information	Average Price/lb.	# Varieties, # Grain-Free	Meat, Meal, or Both?	Range of Protein Content Range of Fat Content	Notes
PRECISE Precise Pet Products, St. Helena, CA (888) 477-3247; precisepet.com	\$1.90	17, 4 GF	Some meal, some both	Min. 22% - 30% protein Min. 7% - 20% fat	Precise has three lines: (economy line) Precise Naturals, Precise Naturals Grain-Free, and Precise Holistic (our favorite of the three, these contain meat and meat meals).
DOGSWELL Los Angeles, CA (888) 559-8833; dogswell.com	\$1.87	10, 8 GF	Some both, some meal	Min. 24% - 32% protein Min. 12% - 18% fat	Dogswell and Nutrisca lines are grain-, potato-free and contain meat and meat meals 1st and 2nd. Vitality and Happy Hips contain grain; latter has joint supplements.
DR. GARY'S BEST BREED Findlay, OH (800) 500-5999; bestbreed.com	\$1.86	15, 2 GF	Meal	Min. 21% - 32% protein Min. 7% - 17% fat	Dr. Gary's emphasizes the use of healthy, balanced fats for healthy skin, coat, energy, and stamina. Fiber sources are chosen for their pre- and pro-biotic characteristics. All formulas meet EU standards.
AVODERM Breeder's Choice (a div. of Central Garden & Pet), Walnut Creek, CA (866) 500-6286; avodermnatural.com	\$1.85	22, 13 GF	Some meal, some both	Min. 20% - 30% protein Min. 8% - 16% fat	Avocado and avocado oil are featured in all Avoderm foods. Revolving Menu grain-free line uses both meat and meal; the 7 varieties are formulated with similar nutrient levels so an owner can rotate among them.
BLACKWOOD Blackwood Pet Food, Lisbon, OH (888) 843-1738; blackwoodpetfood.com	\$1.84	14, 6 GF	Meal	Min. 20.5 - 28% protein Min. 9% - 15% fat	Blackwood is the "house brand" at Ohio Pet Foods, so they can make their products in small batches (for fresher food). "Sensitive Diet" line offers novel protein sources.
NATURE'S SELECT Anaheim, CA; (714) 993-5500; naturalpetfooddelivery.com	\$1.84	9, 3 GF	Meal, with one exception	Min. 22% - 33% protein Min. 10% - 17% fat	Another multi-level marketing company. Buy from a local rep for home-delivery or sell food yourself. Made with animal protein meals and whole foods.
BENCH & FIELD Grand Rapids, MI (800) 525-4802; benchandfield.com	\$1.81	1	Meal	Min. 24% protein Min. 15% fat	Bench and Field offers only one dry food, made with chicken meal. Food is sold in upscale grocery (Trader Joe's, Whole Foods) and direct-shipped (free shipping).
EVANGER'S Wheeling, IL (847) 537-0102; evangersdogfood.com	\$1.80	6, 3 GF	Both	Min. 24% - 33% protein Min. 6% - 15% fat	Varieties include pheasant & brown rice, whitefish & sweet potato. Evanger's dry dog foods are made by an independent contract manufacturer.
WHOLE EARTH FARMS Merrick Pet Care, a div. of Nestlé Purina, Amarillo, TX (800) 323-3353; feedgoodness.com	\$1.72	8, 6 GF	Both	Min. 26% protein Min. 8% - 13% fat	These foods all have meat meals as the first one or two ingredients, and a meat appearing 5th or 6th on the label. They are all formulated to provide 26% protein, and contain probiotics and prebiotics.
SPORT DOG FOOD Ronkonkoma, NY (631) 662-2185; sportdogfood.com	\$1.70	11, 7 GF	Meal	Min. 20% - 31.5% protein Min. 10% - 22.8% fat	Baked foods, coated with "proprietary blend of salmon oil, herring oil, probiotics and freeze-dried proteins, fruits, and vegetables." Direct shipping available.
TASTE OF THE WILD Diamond Pet Products, Meta, MO (800) 442-0402; tasteofthewildpetfood.com	\$1.70	12 GF	Both	Min. 25% - 32% protein Min. 13% - 18% fat	Most varieties have meat as first ingredient and meat meal second. New line, Taste of the Wild Prey, are limited-ingredient foods.
ULTRA HOLISTIC Nutro (a div. of Mars), Franklin, TN (800) 833-5330; ultraholistic.com	\$1.62	11	Both	Min. 23% - 29% protein Min. 10% - 16% fat	Ultraholistic foods all contain chicken, chicken meal, lamb meal, and salmon meal. They also contain some grain fractions (rice bran, brewers rice) and plant proteins.
FIRSTMATE, KASIKS, SKOKI FirstMate Pet Foods, North Vancouver, BC (800) 658-1166; firstmate.com	\$1.58	15, 9 GF	Meal	Min. 18% - 32% protein Min. 8% - 20% fat	FirstMate makes its own foods in British Columbia. Each FirstMate and Kasiks food includes a single animal-protein source – helpful for feeding food-allergic dogs. Company claims free-run chicken and lamb are used. Skoki is FirstMate's economy product (\$1.12/pound).
CHICKEN SOUP FOR THE SOUL Cos Cob, CT (800) 658-0624; chickensouppets.com	\$1.39	11, 4 GF	Both	Min. 21 - 30% protein Min. 8% - 18% fat	Ingredients lists for all formulas start with fresh meat, immediately followed by meat meals, then whole grains.
PROFESSIONAL+ Diamond Pet Foods, Meta, MO (800) 342-4808; professionalpetfood.com	\$1.33	4 GF	Both	Min. 21% - 26% protein Min. 10% - 15% fat	All varieties start with meat, then meat meal, then grain-free carb sources: peas, lentils, sweet potatoes, fava beans.
EAGLE PACK Wellpet, Tewksbury, MA (800) 225-0904; eaglepack.com	\$1.27	7	Meal	Min. 23% - 27% protein Min. 6% - 14% fat	Eagle Pack's foods are made with meat meals and whole grains. Guaranteed Analyses include omega-3 and -6, calcium, phosphorus, and probiotic levels.



You Can Manage

Not all behavior problems require training solutions; sometimes, managing the dog's environment is the solution.



Jumping up, especially when excited or greeting people, is a behavior that few dog owners appreciate. There are a number of training methods that can address this behavior, but it can be faster and more effective to employ management techniques that can prevent the behavior altogether.

What if I told you that you could improve your dog's behavior without training him? That you could prevent him from doing many of the behaviors that you don't like – without any cues or treats or learning curves?

Well, these things are completely possible. You can accomplish these goals through management – the art of controlling your dog's environment to prevent him from being reinforced for behaviors you don't want. It's an incredibly valuable piece of any good training or behavior-modification program. Whether you are looking at a short-term or long-term management solution, the better you are at it, the easier it is for you and your dog to succeed.

In fact, management is the correct answer to most questions that are posed to professional dog trainers that begin, "How do I stop my dog from . . ." (fill in your dog's favorite inappropriate behavior here). In many cases, management is necessary while the dog learns a new, more appropriate behavior. In others, management offers a simple long-term solution or replaces unrealistic training expectations.

TAKE THREE STEPS

I offer my clients a three-step formula for reprogramming or preventing unwanted behaviors; management plays a big role in the formula.

■ **Step #1 - Rephrase the issue:** Identify what you want the dog to do instead of what you want him not to do.

■ **Step #2 - Manage:** Figure out how to prevent the dog from being rewarded for the unwanted behavior, because behaviors that are rewarded are reinforced; in other words, the dog is more likely to do them again. If you can prevent the dog from being rewarded, he will be less likely to do them again. Believe it or not, this step, the management part, is often the easiest step.

■ **Step #3 – Train:** Figure out how to consistently reward your dog for the desired behavior identified in the first step. This may be the hardest part, but it will be easier to accomplish because of your Step #2 efforts.

Here are some examples of how you might use the three-step process for dealing with several behaviors commonly cited by owners as annoying and undesirable.

“ HOW DO I STOP MY DOG FROM JUMPING UP? ”

1 - Rephrase: “How do I teach my dog to greet people politely, by sitting, or at least by keeping all four feet on the floor?”

2 - Manage: Control your dog's environment to prevent her from being rewarded for jumping up on people. You can use the following tools:

- A leash or tether to restrain her as people approach; allow them to feed her a treat and/or pet her only after she sits.
- Crate, pen, closed doors, so when you can't

closely supervise her interactions with visitors, you can confine her to a safe area so she can't practice her jumping-up behavior.

- Education. Arm your visitors with information in advance of their first meeting with the dog so they know how to behave appropriately in response to her jumping up.
- Exercise, because tired dogs tend to be better-behaved dogs.

3 - Train: Consistently reward her for sitting when she greets people. Use “negative punishment” (dog’s behavior makes a good thing go away) by turning away or stepping away when she tries to jump up. (See “No More Jumping Up,” WDJ December 2009.)

“HOW DO I STOP MY DOG FROM GOING POTTY IN THE HOUSE?”

1 - Rephrase: “How do I teach him to go to the bathroom outside?”

2 - Manage: Prevent him from being rewarded for peeing on the carpet. A full bladder causes discomfort; urinating relieves that discomfort. Urinating on the carpet is more rewarding for an un-housetrained dog than suffering the discomfort of “holding it” until he can go outside. Use the following tools:

- Veterinary consultation. You will need a veterinarian to rule out any possibility of a urinary tract infection or gastrointestinal problem.
- *Frequent* trips outside (like, once an hour). Take the dog outside so frequently that his bladder/bowels are *never* full to the point of discomfort (every hour on the hour, at least at first).
- Crate, pen, or tether (use the latter only when you are home). Use these tools during the times when

CRITICIZING THE MANAGEMENT

Some dog-training professionals speak poorly of management. Far more times than I care to count I’ve heard trainers say, “Management always fails.” What they mean is, as just one example, if you are relying on baby gates and doors to keep your cat-chasing dog from scaring or hurting your elderly cat, there is a good chance that, at some point, someone will fail to completely close a door or gate.

I cringe every time I hear this. In my world, management is a critically important piece of a successful training program and can also be key to successful long-term living with canine behavior challenges. There are many dogs who have lifelong loving homes thanks in part, at least, to a well-designed and implemented behavior management plan. It worries me to hear anyone discourage dog owners from using management tools and plans.

Of course, that doesn’t mean we forego training altogether. There are many circumstances where we manage behavior until we succeed in training or modifying behavior, and there are times when we choose to manage for the life of the dog.

Management can have a high potential for failure, and whether we choose management as a long-term or just short-term solution depends on two things:

- The likelihood of management failure
- The consequences if management does fail

If the likelihood of management failure is low and consequences are minor, then management can be a realistic solution. The higher both factors rise, the more important it is to work to modify your dog’s behavior rather than relying on a lifetime of management.

LIKELIHOOD OF MANAGEMENT FAILURE

There are a number of factors that determine likelihood of management failure in any given circumstance. These include:

- Number of humans in the household. The more humans, the greater the chance someone will slip up.
- Children in the household.
- Humans (adult or child) in the home who aren’t committed to the management plan, or worse, who deliberately seek to subvert the management plan.
- Level of activity in the home. The more chaotic the environment, the greater the likelihood of a management “oops.”
- Dog’s determination. The more persistent and determined your dog is to overcome management efforts, the more likely he is to succeed.

CONSEQUENCES OF MANAGEMENT FAILURE

If you are managing a counter-surfer and management fails, perhaps you lose the peanut butter-and-jelly sandwich you left on the counter, or worse, the holiday Tofurkey. But if you are managing a dog who doesn’t do well with children, you could end up with a mauled child – or worse.

you can't supervise him closely enough to prevent him from soiling the carpet when you're not paying attention. Keeping his crate unsoiled is more rewarding to most dogs than relieving even a moderately full bowel or bladder.

- Close supervision. When your dog is in the house and not in a crate, pen, or tether, you must pay attention to him. You need to be able to notice when he acts restless (a sign that he has to eliminate) and take him outside quickly, before he has a chance to relieve himself on the carpet.

3 - Training: Implement a full house-training program that includes going outside with him regularly and rewarding him with praise and a treat immediately after he goes to the bathroom in the appropriate toilet spot. (For more about housetraining, see "Potty Time," WDJ June 2013.)

“ HOW DO I KEEP MY DOG FROM CHEWING UP MY SHOES, BOOKS, FURNITURE, ETC.? ”

1 - Rephrase: "How do I get her to chew on her own things and only her own things?"

2 - Manage: Prevent her from being rewarded for chewing on inappropriate objects. Things like shoes, books, and furniture have a nice firm-but-giving texture that feels good (is rewarding) to a dog's teeth and gums, especially to



a puppy or young dog who is teething. You have a lot of tools available for managing this behavior:

- Picking up and putting away non-chew objects when your dog is in the room.
- Removing her from the room when non-chew objects must be left within dog-reach (or putting her in a crate or pen, or on a tether or leash if necessary).
- Supervising the dog closely and distracting her from inappropriate objects with offers of appropriate chew items.
- Exercising her a lot; tired dogs tend to be well-behaved dogs.

3 - Training: Provide her with irresistible objects specifically for chewing, food-stuffed Kongs, and other safe items. If she is given the opportunity to chew only acceptable items, she will eventually develop a strong preference for chewing on these things and your personal possessions will be safe. (See "Chew, Chew, Train," August 2007.)

“ HOW DO I STOP MY DOG FROM CHASING JOGGERS (OR CATS, BIKES, LIVESTOCK, OR DEER)? ”

1 - Rephrase: "How do I teach my dog to stay with or return to me in the presence of fast-moving objects?"

2 - Manage: Don't let her have the opportunity to be rewarded for chasing. And don't have unrealistic training expectations; that is, don't expect to be able to train a dog who finds "chase" very reinforcing to "not chase" in the absence of containment. This includes most of the herding breeds, terriers, hounds, and sporting breeds. With these dogs especially, use those management tools:

- Fences – that is, solid physical fences of sufficient height. These are great tools for thwarting chasing behaviors.
- Doors that keep your dog safely confined indoors except when directly supervised can go a long way toward preventing rewards for chasing.
- Leashes and long lines are ideal for preventing chase rewards.
- Exercise – in this case, on a leash or long line, or in a securely fenced area. Tired dogs tend to be well-behaved dogs. Tired dogs tend to have happy owners.

3 - Train: Teach your dog a very reliable recall. Train her to drop to a down at a distance. Teach her a solid "Wait" cue that will pause her in mid-stride, even when she is in chase mode. (See "Rocket Recalls," September 2012.)

“ HOW DO I KEEP MY DOG FROM ROAMING? ”

1 - Rephrase: "How do I keep my dog safe at home?"

2 - Manage: Use appropriate physical means to keep him safely confined at home and make sure he never experiences and reaps the rewards of the "joy" of running loose in the neighborhood.

I occasionally have potential clients call and ask me how to train their dogs to stay on their property without a fence and without a human present. This is an unrealistic training expectation, and I never accept such a training assignment; I don't believe it can be done safely and humanely. For most, if not all dogs, there are stimuli that are strong enough to induce them to break through the shock of an electric fence collar simple boundary-training program. This is a case where management tools are indispensable:

- Solid physical fences of sufficient

height. (See “Fence Sense,” May 2009.)

- Doors. Keep him safely confined indoors except when directly supervised, to prevent him from being rewarded for roaming.
- Leashes and long lines; physical restraint tools are ideal for preventing roaming rewards. (Note: We do not recommend tying or chaining a dog as a routine method of outdoor confinement.)
- Neutering. Lowering a dog’s testosterone level can be an effective way of eliminating one very strong motivation for roaming.
- Exercise; tired dogs tend to be well-behaved dogs.

3 - Train: Teach your dog a very reliable recall. Train him to drop to a down at a distance. Teach him a solid “Wait” cue that will pause him in mid-stride, even when he is in chase mode. And then never leave him outdoors alone, unfenced, and unsupervised.

“ HOW DO I MAKE MY DOG STOP STEALING FOOD FROM THE TABLE, COUNTER, OR COFFEE TABLE? ”

1 - Rephrase: “How do I get him to only eat things that are in his bowl or on the floor?”

Dogs are opportunistic eaters by their very nature. They are morally incapable of “stealing” food. A dog in the wild who eats food when and where he finds it is smart – and much more likely to survive than one who passes food by just because it happens to be above eye level.

2 - Manage: Clearly, the food that he finds on counters tastes good and is very rewarding. Prevent him from being rewarded for counter-surfing by never leaving food on the counter, or leaving your dog unsupervised in a room with food on a table (even for a *minute*).



Photo credit: Bonnie Anderson

Use the following management tools:

- Closed doors. If food must be left out, shut the dog in another room so he can’t have access to it.
- Cupboards. Put food away! Never leave it out as an invitation to counter-surf.
- Crates, pens, leashes, and tethers; these are all reasonable means of restraint to prevent his access to food you don’t want him to have.
- Exercise; tired dogs tend to be well-behaved dogs.

3 - Train: Teach him a positive “Leave It!” or “Walk Away!” cue and consistently reward him for ignoring food on the counter and for keeping all four feet on the floor around food-laden counters and tables. Reinforce him generously for lying on his “mat” in food areas, so he learns to offer his “mat” behavior in the presence of food. (See “Stop! Thief,” January 2011 and “Teach Your Dog to Trade and Walk Away,” February 2017.)

We could keep going, but you should be getting the idea by now. Any time you’re faced with a behavior challenge, just apply these three simple steps – rephrase, manage, and train – to design your action plan for managing and/or modifying the inappropriate behavior.

MANAGE TO MANAGE

Then there are those cases where it makes far more sense simply to manage the environment to prevent the behavior from happening, without investing time and energy into the training end.

My all-time favorite management story was the Peaceable Paws client in Carmel, California, who asked me to teach his Australian Shepherd-mix to stop drinking out of the toilet.

I told him that it would be far easier to teach him (the supposedly more intelligent species) to close the toilet lid or shut the bathroom door, than it would be to train the dog not to take advantage of a constantly fresh water source. “In fact,” I told him, “your dog is probably trying to figure out how to train you to stop peeing in his water bowl!” This was one of those cases where it made much more sense to implement a simple management technique than to expend the energy required to train the desired behavior.

He got the message. When I visited the house for our next appointment, the bathroom door was securely closed. 🐾

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A Better Biome

Fecal transplants can help dogs with chronic digestive problems recover their health, by helping them build an improved microbiome.



Yes, it sounds distasteful, but fecal transplants are being used to help chronically ill dogs (and humans!) recover from everything from hemorrhagic gastroenteritis (HGE) to allergies.

The term alone is a conversation-stopper. Fecal transplants? For dogs? Don't laugh. Fecal transplants are making headlines as a wonder drug for pets and people.

Forty years ago, when *Clostridium difficile* colitis or "C. diff," a bacterial infection resulting from antibiotic therapy, became an epidemic in American hospitals, nothing cured its debilitating, non-stop diarrhea. For most patients, as soon as an effective treatment was discontinued, symptoms returned. Finally, doctors tried a technique that had been

successfully used decades earlier but which wasn't formally adopted because the thought of it made people uncomfortable. When fecal matter from healthy donors was transferred to the colons of sick patients, more than 90 percent recovered. Their symptoms resolved within hours and never returned.

Veterinarians who gave fecal transplants to puppies with chronic diarrhea, or to adult dogs with gastrointestinal problems, reported similar success rates.

Transferring microbial material from healthy to sick ruminants, such as cattle, is a long-established veterinary practice, but fecal microbial transplantation, or FMT, is so new to veterinary medicine that much remains unknown. As a result, the treatment is controversial and not widely available, though a growing number of veterinarians and caregivers are exploring this option. Understanding your dog's microbiota and the history of fecal transplants will help you make informed decisions for your best friend regarding the treatment and prevention of gastrointestinal illnesses.

THE MICROBIOME

The term "microbiome" was coined by molecular biologist Joshua Lederberg, recipient of the 1958 Nobel Prize in Medicine, to signify the ecological community of commensal (living cooperatively on or within another organism), symbiotic (living in close and mutually beneficial proximity), and pathogenic (capable of causing disease) microorganisms that share the body's space.

Today "microbiome" is an umbrella term used to describe communities of bacteria, viruses, fungi, and other microbes in the body. Most intestinal microbes reside in the cecum, which is a "pocket" of the large intestine, where they are known as the "gut microbiome."

Bacteria are the most studied of these microorganisms, and the terms "microbiota" and "microflora" describe bacterial communities on mucosal and skin surfaces. The human body contains more than a thousand separate species of bacteria, most of which are important to health and some of which can cause disease.

Little attention was paid to the microbiome until testing methods, such as whole genome sequencing, made the National Institutes of Health's Human Microbiome Project (HMP) and related research possible. The HMP, a five-year study launched in 2008, explored connections between changes in the microbiome and human health and disease.

Dogs have microbiomes, too. In fact, studies have found that people and dogs living in the same household share much of the same microbiome. Complex colonies of microorganisms live in the ears, mouth, respiratory tract, and skin, but most occupy the digestive tract.

A healthy microbiome destroys harmful pathogens, including disease-causing viruses, fungi, bacteria, and parasites. As a result, the microbiome is the immune system's first line of defense. Differences in microbiomes help explain why some dogs exposed to diseases like parvovirus, distemper, leptospirosis, Lyme disease, canine flu, heartworm, or kennel cough

get sick while others remain symptom-free.

“Friendly” or beneficial bacteria secrete chemicals that destroy harmful bacteria and, if they are present in sufficient numbers, colonies of beneficial bacteria starve harmful microbes by depriving them of nutrients and space.

In addition, the microbes in a healthy microbiome can bind to toxins, such as allergens and substances that cause cancer, removing them from the body through normal elimination.

The mucus membrane that lines the gastrointestinal tract from esophagus to colon contains lymphocytes and macrophages, which are different types of white blood cells that attack or disable agents of infection. This membrane, the gut-associated lymphoid tissue (GALT), prevents digestion-improving bacteria from penetrating other tissues or entering the bloodstream, where they can cause damage.

A healthy microbiome not only improves a dog’s digestion, but also creates some nutrients, including thiamin (vitamin B1), cobalamin (vitamin B12), and short-chain fatty acids that help your dog absorb minerals such as calcium, iron, and magnesium.

In addition, the microbiome helps regulate the body’s endocrine system and metabolism, and there are links between the microbiome and mental health. In short, the microbiome affects nearly every aspect of your dog’s health and happiness.

TRANSPLANTATION

The necessary ingredients for a successful fecal transplant are a healthy donor and a method for transferring material from donor to patient.

In humans, donors have often been family members or close friends. In the past few years donor banks have been created to store fecal matter from volunteers. These volunteers must be healthy, with no recent antibiotic use and no bowel disease, and who are tested for conditions including bloodborne pathogens and parasitic infections.

Human clinics mix donor feces with sterile saline solution, then ho-

mogenize and/or filter the mixture to remove particles that might clog equipment. Both fresh and frozen material has been shown to be effective. The donor’s stool can be administered orally through a nasogastric tube or rectally through a retention enema via endoscope during a colonoscopy. The latter method is often preferred because it administers the fecal suspension directly into the ileum (the small intestine’s final and longest section) and the entire colon.

There are not yet any commonly accepted guidelines for canine donors, though of course health is an obvious concern. Some clinics that offer FMT treatment require donor dogs, which can be any breed or size, to have a normal body weight; be free from malignancies, parasites, allergies, and gastrointestinal disease; and to not have received antibiotics within the

past three months or longer. Some clinics require donor dogs to be vaccinated against specific illnesses, while others prefer no vaccinations.

In a University of Helsinki study of dogs with inflammatory bowel disease described by Jean Dodds, DVM, in an April 2017 “Fecal Microbiota Transplantation” report at her Pet Health Resource Blog (drjeandoddspealthresource.tumblr.com/page/27), potential donor dogs were required to be naturally born (like humans, infant dogs are born sterile and acquire their first microbiota in the birth canal) and breast-fed (the mother’s colostrum and milk are important foods for the developing microbiome) and have no history of systemic antibiotic use throughout their lives, in addition to other health screenings.

Dr. Dodds recommends that if a patient needing a fecal transplant has

The history of fecal transplants

For millennia, Chinese physicians used what they called “yellow soup,” made with fecal matter from healthy donors, to treat patients with food poisoning or severe diarrhea. During World War II in North Africa, Bedouin camel herders gave the stool of healthy camels (a traditional treatment for diarrhea) to German soldiers with bacterial dysentery. Sick ruminants have long been treated for similar symptoms with the cud of healthy animals.

But it wasn’t until Ben Eiseman, MD, Chief of Surgery at Denver General Hospital, successfully treated four patients for chronic diarrhea caused by a painful colon inflammation associated with *Clostridium difficile* that human fecal transplants appeared in the medical literature. His report in the November 1958 journal *Surgery* described how retention enemas containing the stool of healthy donors cured patients within hours.

Dr. Thomas Borody, an Australian gastroenterologist, began experimenting with human fecal transplants when a patient developed incurable colitis after vacationing in Fiji in the 1980s. Searching the medical literature for alternative treatments, he found Dr. Eiseman’s paper and, using stool donated by the patient’s brother, administered the material by enema on two consecutive days. The patient’s diarrhea quickly disappeared and never returned.

In 2014, “ABC News” interviewed Dr. Borody about his 25 years of experience with fecal microbiota transplantation (FMT). He claimed that in addition to quickly clearing *C. diff* infections, FMT has successfully treated other gastrointestinal problems such as colitis and Crohn’s disease – and, more controversially – he considers the gut a gateway for toxins to enter the body, triggering diseases like rheumatoid arthritis, Parkinson’s, and autism.

The U.S. Food and Drug Administration approves FMT for only one condition, recurrent *C. difficile* infections. There are as yet no official guidelines for the veterinary applications of FMT.

specific food intolerances, the donor animal must eat a diet compatible to that patient for 10 to 14 days before fecal samples are obtained so that its feces do not contain reactive allergenic food residues that could harm the patient.

She also recommends that the patient not receive any antibiotics, colostrum supplements, prebiotics, probiotics, digestive enzymes, herbal bowel preparations, or heartworm, flea, or tick treatments for 10 days before the transplant.

FMT treatment sounds like a miracle cure, but it doesn't work for every patient. In some cases, the effects of FMT have been temporary, or the procedure had to be repeated because the introduced fecal material was not effectively absorbed, or the transplanted bacteria were overwhelmed by existing medical conditions.

The cost of FMT varies according to the methods used, testing procedures, sedation, veterinary consultation, and donor screening, ranges from \$500 to \$1,500 or more.

DYSBIOSIS AND INFLAMMATORY BOWEL DISEASE (IBD)

The term "dysbiosis" describes weakened or depleted beneficial microbes such as those that make up the microbiome. As soon as the body's population of beneficial microbes declines, pathogens begin to crowd them out, resulting in nutritional deficiencies and illnesses, including inflammatory bowel disease, or IBD. The main symptoms of inflammatory bowel disease in dogs are vomiting, diarrhea, and weight loss with, in some cases, blood or mucus in the stool.

What causes dysbiosis? While most of the blame goes to antibiotics – the wonder drugs that destroy beneficial as well as harmful bacteria – researchers list additional contributing causes such as processed foods, genetically modified foods, pesticides, chemical preservatives, pasteurization and other enzyme-destroying treatments that kill germs in food, vaccines, prescription drugs, and the stresses of modern life.

Dysbiosis contributes to leaky gut syndrome, in which undigested or partially digested food particles move through the digestive tract's mucous lining and enter the blood stream. This can happen when the mucous lining shrinks and thins, leading to injury and inflammation. Leaky gut syndrome has been blamed for a variety of symptoms and illnesses, including food allergies, hot spots, skin irritations, yeast infections, diarrhea, constipation, inflammatory bowel disease, autoimmune disorders, joint pain, imbalances involving the liver or pancreas, thyroid problems, weight gain, diabetes, slow metabolism, and low energy.

The methods most frequently suggested for reversing dysbiosis include avoiding antibiotics, pesticides, prescription drugs, and toxins, all of which – especially antibiotics – can damage the microbiome. Feeding fresh, whole foods rather than sterilized processed foods is recommended because fresh foods contain bacteria that support the microbiome. Daily outdoor exercise supports the microbiome by exposing

a dog to many naturally occurring microbes. Probiotic supplements are often recommended, although there is disagreement as to which products work well for dogs and which best survive a dog's high concentrations of stomach acid. Other probiotic sources include foods that are themselves rich in beneficial bacteria, such as naturally fermented vegetables. Foods and supplements containing prebiotics, or fiber that nourishes beneficial bacteria, support the microbiome as well.

As effective as probiotics can be in preventive medicine, when a dog has inflammatory bowel disease, probiotics are unlikely to help. In fact, there is no scientific support for their therapeutic use in canine IBD.

Human IBD is difficult to diagnose and usually involves intestinal biopsies, but identifying IBD in dogs should become easier thanks to a unique pattern of microbes that accompanies the illness. In October 2016, the journal *Nature Microbiology* reported that researchers at the University of California San Diego School of

The promise of further poop studies

While there are no clinical trials proving any of the following claims, veterinarians who use FMT believe that it does far more than repair a dog's digestion.

For example, Dr. Margo Roman says that when a dog's unbalanced microbiome becomes healthy, symptoms like behavioral problems, aggression, skin and coat problems, and even coprophagia (stool eating) disappear. She has used FMT in the treatment of canine liver failure, kidney failure, allergies, adrenal exhaustion, atypical Addison's disease, atypical Cushing's disease, and methicillin-resistant *Staphylococcus aureus* (MRSA).

Dr. Thomas Borody considers FMT a possible treatment for humans with Parkinson's disease, autism, and rheumatoid arthritis, and other physicians claim it may help prevent or treat Alzheimer's disease, depression, acne, type 2 diabetes, cancer, and more.

In many cases such theories are based on observations that may be coincidental, such as when a patient with rheumatoid arthritis is treated with FMT for a digestive disorder and the arthritis symptoms diminish along with the patient's diarrhea.

In these early days of FMT therapy, it's impossible to know how the treatment really works or what benefits it may offer. After all, Western medicine is just beginning to look at fecal matter as something other than waste. But with the microbiome becoming a hot medical research topic, we can expect to learn much more in the years ahead.

Medicine analyzed fecal samples from dogs with and without IBD and discovered that they were able to predict which dogs had the disease with more than 90 percent accuracy. While there is not yet a veterinary test for canine IBD, diagnosing the illness with a simple stool sample may be possible in the future.

GETTING RESULTS

As Dr. Dodds explained in her Fecal Microbiota Transplantation report, the practice of FMT has been used in veterinary medicine for years. “Since clinical trials or pilot studies were not completed,” she wrote, “these FMT procedures are considered anecdotal. However, there is nothing wrong with anecdotes because they can encourage the medical community to conduct clinical trials that give us more concrete and definite answers as well as point us in proper directions.”

One report from the March 24, 2016, Bradenton Herald in Bradenton, Florida, describes the work of Kevin Conrad, DVM, at Southeastern Guide Dogs in Palmetto, Florida. Dr. Conrad had been looking for a better way to treat dogs with recurrent diarrhea when he discovered FMT. “We see 250 dogs a year, and there were a lot of repeat offenders with symptoms not going away,” he said. “We’d either repeat antibiotics or adjust their feeding. It could take days, weeks, or months to get one dog feeling better, and I knew there had to be an easier process.”

Dr. Conrad took stool from healthy dogs, screened it by culturing microbes to check for certain bacteria, then liquified the stool and injected it into the intestines of sick puppies with a rectal tube. Within 12 to 24 hours, their symptoms began to clear. He then used the method to treat adults and pregnant dogs.

“What we tried is to do a fecal transplant on a pre-litter mom while she is pregnant, and she’s dropping a whole litter of puppies without diarrhea issues,” he said, “So now we are not only treating it but preventing it.”

At Angell Animal Medical Center in Boston, Massachusetts, Erika

de Papp, DVM, considers FMT “an exciting avenue of potential therapy for chronic enteropathies.” She cites a study conducted at the Ontario Veterinary College at the University of Guelph in Canada in which FMT successfully treated dogs and cats for chronic diarrhea that did not respond to or was only moderately controlled by the standard therapies of diet manipulation, antibiotics, anti-inflammatories, and probiotics. Donor stool was screened for parasites, *Giardia*, *Salmonella*, *Campylobacter*, *C. difficile*, and (in the case of cats) *Tritrichomonas foetus*.

Patients received an enema to clear their intestines before receiving FMT and then a fecal suspension delivered via enema was retained in the colon for 45 minutes. The patients’ fecal microbiomes were evaluated before and after FMT through 16S rRNA gene product sequencing. Within 24 hours, their symptoms improved, and within 48 hours of treatment, the patients’ microbiomes resembled those of their donors rather than their own stool.

Noting that the success of FMT with human patients has helped the procedure gain general acceptance, Dr. de Papp said, “I hope we can convince our veterinary clients that this is not an entirely unpalatable treatment.”

POOP IN A PILL

With their need for special equipment and sedation, Microbial Fecal Transplantation procedures can be expensive and time-consuming. Wouldn’t it be simpler just to give a dog some pills to swallow?

Yes, says microbial ecologist Holly Ganz, PhD, co-founder and CEO of AnimalBiome (animalbiome.com), a company that analyzes the microbiomes of dogs and cats and offers treatment in the form of healthy fecal material in capsules. “Our microbiome assessment kits can help you and your veterinarian determine whether your pet’s disorder is linked to an imbalanced gut microbiome,” she explains.

The \$95 analysis identifies all of the bacteria in a dog’s fecal sample, establishes a baseline profile of the dog’s gut

What you can do

- If your dog has chronic digestive problems (such as persistent diarrhea and/or severe gas), ask your veterinarian about a fecal microbial transplant treatment for your dog.
- To get more information about your dog’s microbiome, send a fecal sample and \$95 to AnimalBiome.com.

health, and compares it to the microbiome profiles of other dogs. Learning whether a dog’s digestive disorder is linked to a bacterial imbalance, or discovering an imbalance before it affects the animal’s health, can help veterinarians and caregivers make appropriate changes in diet, lifestyle, or medical treatment.

For dogs with symptoms of inflammatory bowel disease or similar disorders, AnimalBiome offers capsules containing fecal matter from donor dogs who are screened for health, age, fecal consistency, behavior, and microbiome composition based on Illumina sequencing of amplified 16S rRNA. Donated material is quarantined for at least 30 days to ensure that the donors remained healthy. Donors regularly go outdoors for walks, have not had antibiotic treatment in the prior six months, have diverse microbiomes, and are not overweight.

Pathogen screening for donor dogs includes *Clostridium perfringens* antigen, *Clostridium perfringens* alpha toxin, *Clostridium perfringens* beta toxin, *Clostridium difficile* toxin A, *Clostridium difficile* toxin B, *Cryptosporidium spp*, *Salmonella spp*, *Giardia spp*, and Canine Parvovirus 2.

AnimalBiome charges \$200 for the capsules; but for \$300 you can get the capsules plus before and after microbiome assessments.

Do capsules work? Though no one has conducted clinical trials with dogs, the human research is encouraging.

In a 2014 study conducted by researchers from Massachusetts General Hospital, Boston Children’s Hospital,

Harvard Medical School, and Tel Aviv University, 20 patients ranging in age from 11 to 89 who had at least three episodes of recurrent *C. difficile* infection took 15 stool capsules from pre-screened, healthy donors over a two-day period. In 14 of the patients, diarrhea resolved after the first treatment. The remaining six patients were treated again, and four of them recov-

ered. None of the successfully treated patients experienced a recurrence of symptoms in the following eight weeks, resulting in a 90 percent success rate.

Invasive means do not need to be used to deliver the transplant. “The study showed you can use frozen donor stool successfully and safely,” says the study’s co-author, pediatric gastroenterologist George H. Russell, MD, MS.

Surveying the Canine Microbiome

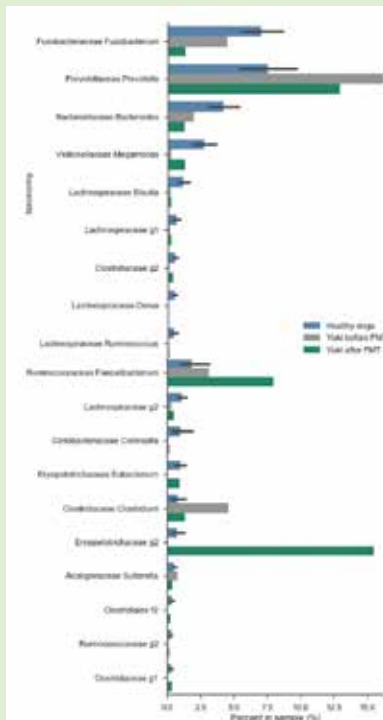
Yuki is a McNab Shepherd-mix, currently 15 ½ years old, owned by Holly Ganz, PhD, AnimalBiome’s co-founder and CEO. About two years ago, Yuki began exhibiting clinical signs of hemorrhagic gastroenteritis (HGE) nearly once a month. She was able to eat only a chicken and rice-based kibble and one treat that contained only chicken. Other foods would trigger bouts of bloody diarrhea and it would take a couple of weeks for her stools to become normal.

Starting in late April 2017, Yuki was given AnimalBiome’s Gut Restoration System for dogs. The capsules were given twice a day for four weeks.

While taking the capsules, Yuki’s stools improved in consistency and color and continued to improve in the following month. Subsequently,

Ganz was able to reintroduce other protein sources and healthy treats into Yuki’s diet. She hasn’t had another bout of gastroenteritis since, and her stools continue to have a healthy consistency and color.

At left are some of the results of Yuki’s microbial analyses. The complete report shows how Yuki’s microbiome changed after receiving fecal transplants, and compares the analyses from Yuki’s fecal samples taken before and after treatment with average values of samples taken from healthy dogs. Each bacterial type found in the samples is described and its presence in the dog’s microbiome is discussed. The “ideal” microbiome is not yet identifiable, but these surveys are fascinating.



MY DOG ALREADY EATS POOP

Early proponents of so-called “evolutionary” or “biologically appropriate raw diets” have noted that the droppings of healthy herbivores, including deer, elk, sheep, and cattle, are a treasure trove of probiotics, prebiotics, and other nutrients. In her *Complete Herbal Handbook for the Dog and Cat* (Farrar, Straus and Giroux, 1991), Juliette de Bairacli Levy (see “Grandmother Nature,” WDJ July 2006) wrote, “Dogs should never have their natural instincts thwarted in the matter of diet. They should not be prevented from eating the droppings of grass-fed cattle and horses, from which they can get many vital elements derived from the herbage on which the animals have grazed and in a form easily assimilated by the dog.”

In his popular book *Give Your Dog a Bone: The Practical Commonsense Way to Feed Dogs for a Long Healthy Life* (Warrigal Publishing, 1993), Australian veterinarian Ian Billinghurst reminded readers that all dogs are scavengers. “They receive valuable nutrients from material we humans find totally repugnant,” he said, “things like vomit, feces, and decaying flesh... Feces are a highly valuable food consisting of the dead and living bodies of millions upon millions of bacteria.”

The manure of deer, elk, cattle, sheep, geese, and other grass-eating animals contains B-complex vitamins, vitamin K, minerals, beneficial bacteria, essential fatty acids, enzymes, antioxidants, and fiber.

The obvious problem with free-range poop-eating is that the donors of ingested fecal matter might be ill, have an imbalanced or damaged microbiome, carry a contagious disease, or contain parasites such as *Giardia*, *Coccidia*, roundworms, tapeworms, or whipworms. Livestock droppings may also contain medications such as ivermectin used for deworming that could make your dog sick (see “Dogs with a Drug Problem,” WDJ December 2012).

For farm dogs and dogs in rural areas, the benefits of eating manure probably outweigh the risks, but co-

prophagia (a dog's habit of eating its own stool or that of other dogs) can cause problems. Eating his own stool won't expose a dog to new microorganisms that could bring balance to his microbiome – and consumption of the droppings of dogs with an unknown health status is inadvisable.

However, consuming the stool of a healthy dog with a vigorous microbiome may be just what the doctor ordered – and in this case the doctor is holistic veterinarian Margo Roman, DVM, at the Main Street Animal Services of Hopkinton (MASH Clinic). Her first stool-treatment patient was Stovin, a Standard Poodle who was diagnosed with inflammatory bowel disease as a nine-week-old puppy. When he arrived at MASH in 2012, he was three years old, weighed 43 pounds, was unable to walk, and was taking a cocktail of antibiotics. His owner had already spent \$16,000 on testing, medications, and blood transfusions, to no avail.

Stovin's initial treatment, which included acupuncture and the replacement of prescription medications with nutritional supplements, resolved his intestinal distress and his health improved. Then, in an effort to reverse the effects of prolonged antibiotic treatment, Dr. Roman had Stovin ingest stool from her own healthy, organically raised dog. She had been thinking about this approach for years, she says. "Dogs eat poop anyway. I wouldn't be doing anything that they don't already do – I'm just directing them toward the right poop to eat."

Stovin's recovery was so impressive that MASH Clinic veterinarians went on to perform more than 5,000 fecal transfers on dogs and cats to treat IBD, *C. difficile*, *C. perfringens*, *Giardia*, and other problems.

Dr. Roman puts patients on a fresh, raw diet of GMO-free foods supplemented by probiotics, colostrum, nutraceuticals, and glandular supplements that support gut health. She reports that when a patient is prepared in this way, the fecal transplant usually works in a single treatment.

To perform the transplant, she

Microbiome clinical trials

For information about ongoing, planned, or completed clinical trials involving dogs and the microbiome, search online for "clinical trials" and "canine fecal transplants" or "canine microbiome."

You will find, for example, the University of Florida College of Veterinary Medicine is currently recruiting Golden Retrievers and Australian Shepherds for a clinical research trial to determine whether the types of bacteria in a dog's gut could be a factor in allergic skin disease.

The University of Pennsylvania School of Veterinary Medicine is currently enrolling dogs with clinical signs of Canine Chronic Enteropathy (CCE, a common cause of diarrhea, vomiting, and weight loss) in a clinical trial to determine the composition of the gastrointestinal tract's microbiome before, during, and after treatment.

For information about Fecal Microbial Transplantation research in general, visit the Fecal Transplant Foundation (thefecaltransplantfoundation.org) and The Power of Poop (thepowerofpoop.com).

combines healthy fecal matter with sterile saline in a blender, then filters it to remove large pieces. She applies the blended fecal matter with a syringe into the rectum.

Some dogs need repeated transplants, in which case their owners come by Dr. Roman's clinic, pick up a bag of poop, take it home, and keep it in the freezer. When their dog starts having an issue, she says, they pop a piece of the frozen poop down the dog's throat, and he gets better.

For more about Microbiome Restorative Therapy and Dr. Roman's approach to gut health, see her blog, *Eat Sh*t & Live* (eatsh-tandlive.com).

THE FUTURE OF FMT

Because no published peer-reviewed studies have examined the use of FMT in dogs or cats, a group of veterinarians at a 2015 international meeting of gastroenterologists formed a research committee to document the state of the art. Their report, "Commentary on key aspects of fecal microbiota transplantation in small animal practice" (J. Chaitman, et al, *Veterinary Medicine: Research and Reports*, May 31, 2016), addressed FMT mechanisms, indications, donor selection, preparation, administration, safety, and regulation.

There are few or no guidelines for performing FMT in small animals, and veterinarians tend to consider it

for gastrointestinal disorders when there are no other options. In human medicine the use of FMT for disorders other than recurrent *C. difficile* infections is not yet supported by scientific evidence, and while FMT may improve the health of dogs with acute and chronic GI inflammation, diarrhea, and inflammatory bowel disease, many questions remain unanswered.

One of those questions is regulatory. Is FMT a drug? According to the US Food and Drug Administration, if fecal microbiota is intended for use to treat or prevent disease, it would be considered a drug. At this time, the Center of Veterinary Medicine has not developed a specific policy of enforcement regarding investigational new animal drug requirements for the use of fecal microbiota for transplantation, but the procedure's status may change, especially if synthesized microbiota are developed and patented.

As the *Veterinary Medicine* report concluded, "Ongoing clinical and basic science research studies will bring the strength of science and clinical observation and enhance our understanding of how important the gut microbiota is to host health." 🐾

Freelance writer CJ Puotinen is the author of The Encyclopedia of Natural Pet Care and other books. See page 24 for book-purchasing information.



How Can You Know What Your Dog Feels?

Part two of an excerpt from Denise Fenzi's newest book, Beyond the Basics: Unlock Your Dog's Behavior.



The puppy on the right is not being stubborn, spiteful, balky, or willful – she got spooked by the sudden approach of a bold, bristling Beagle. Forcing her to face the Beagle may frighten her further and cause her to lose trust in her handler.

How can we know what dogs are feeling? Obviously we cannot ask them, and since they have different body shapes, vocalizations, and expressions than humans, it's not always obvious what might be taking place inside those furry little heads. Now what?

We have two basic strategies. First, we can become keen observers of dog body language and behavior. Second, we can ask ourselves this question: "If a two-year-old child were showing this behavior under similar circumstances, what emotions might I suspect were at play?" Let's look at each of these in turn.

Dog body language can be quite difficult to read, so it's important to consider the context when interpreting behavior. Not only do you need to consider the environment (for example, dogs will pant when they're hot, but

also when they're stressed), you also need to look at all of the body parts together. Although many people attempt to correlate each type of movement with a specific emotion, the easier approach is simply to compare the overall pictures of a distressed dog to a happy dog.

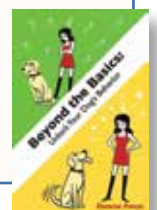
■ **Distress.** What does a distressed dog look like? Generally speaking, you'll probably see a dog who pants when he's *not* hot, avoids eye contact, keeps his head or body low, yawns when he's not tired, licks his lips in the absence of food, shows the whites of his eyes, has large dilated pupils, tucks his tail between his legs, or holds it straight up and very stiff. Keep in mind that all stress signals also have a normal variant; a dog may lick his lips because he is stressed, but he may also lick his lips if he has just finished a meal! There is no reason to assume stress unless the context suggests it.

You can tell that your dog is becoming overwhelmed with stress if he freezes, runs away, or begins to fight back. All of these options are possible depending on the situation or the individual dog.

Some dogs respond to stress by becoming passive and quiet, with extreme stress causing a dog to freeze and stop moving. Anxious dogs may attempt to cling to their owners for support. Other dogs become frantic, excited, or start running around for no apparent reason at all. These dogs might rely on themselves

Editor's Note

Denise Fenzi is the founder and head trainer at the Fenzi Dog Sports Academy, an online school dedicated to providing high-quality instruction for competitive dog sports. Last month, we published the first half of the first chapter of Fenzi's newest book that is aimed exclusively at pet dog owners and pet dog trainers; this excerpt is the second half of the first chapter. If you are interested in purchasing this or any other of Fenzi's books, see "Resources," page 24.





Fortunately, the frightened puppy's handler positioned himself to block the bold approach of the Beagles, slacked his leash so his pup didn't feel constricted, and gave her an encouraging pat. She recovered quickly from the alarming event and likely won't suffer future apprehension as a result of this interaction.

to feel safe, scanning the environment obsessively, and showing an inability to relax and settle. Some especially fearful dogs will try to drive away something that they perceive as dangerous by barking or lunging. It doesn't matter if it truly is dangerous or not. If your dog thinks it is, you need to take it seriously.

Do not attempt to make your dog "face his fears." Minimizing and ignoring fear issues does not make them go away. When you either ignore fear or force your dog to face it in an effort to "prove" that something is not dangerous, you are heading down the wrong path. You can easily end up with total shut down or with defensive aggression.

Here's a human example to make this more clear. Let's say you're afraid of mice. In an effort to help you adapt, your best friend "helpfully" locks you in a room with mice everywhere, crawling all over you. Maybe you start screaming. Maybe you lash out, trying to stomp on the mice. Maybe you become so overwhelmed with fear that you become catatonic.

Regardless of how you react, how do you think you would feel about the friend who put you in that situation? Would you trust her or want to spend time with her again? Probably not. Your dog is the same way. Don't become the enemy.

Fearful behavior needs to be taken seriously and worked through thoughtfully and carefully. It can take

hundreds – maybe even thousands – of pleasant and positive events to overcome the effects of one negative event. If you think your dog has more than a mild problem with fear, you need to contact a dog training behaviorist to help you. Learning from a book is fine for most training and for mild behavior problems, but if you're dealing with more extreme behavior, you need professional help to guide you.

■ **Anger.** How about anger? Dogs experience anger for many of the same reasons that people do, usually because they have lost something they want, like food, toys, or attention. Rather than walking away and accepting that loss, they may try to get it back with threats.

You might see your dog growling,

posturing stiffly, making hard eye contact, or – if all else fails – lunging, snapping, or even biting! Although most dog bites occur out of fear, the reality is that dogs can become angry and react badly as a result. In the same way that very fearful dogs require specialized professional help, if your dog shows strong aggression and a willingness to use physical force to "get his way," then you need professional help, not a book. Contact a dog behaviorist to help you.

■ **Happy.** So what do happy dogs look like? Happy dogs have open and relaxed body language. They tend to approach somewhat sideways, wiggling all over. Their tails wag fast and loose. Their eyes are open and bright; ears are forward and up or very relaxed;



Frequently, what looks like an angry dog is actually a very frightened dog.

Photo credit: Dreamstime.com

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Set your dog up to succeed: Conduct your training sessions when she is happy without being frantic and alert but not overstimulated.

and their focus tends to shift easily from one interesting option to another. If you're not sure how this looks, pay attention to your dog's behavior when you come home after a brief absence and he's cheerfully following you through the house.

Keep in mind that even happy emotions can be overwhelming, which might tinge your dog's behavior with a frantic quality. For example, in that first minute after you get home, your dog might be happy to see you, but he might also be jumping on you, vocalizing, panting heavily, and showing wide eyes and dilated pupils. Or, he might simply run around, releasing his happy/frantic energy with movement. Or, his focus may be scattered leaping on you, and then running off to grab a toy, and then back to you!

Happy body language is always good but – and this is big – remember that if the dog is overwhelmed by his emotions, he will not be receptive to training until he is in a calmer state of mind. A “too happy and excited” dog is just as much at risk of showing problematic behavior as a “too scared or unhappy” dog.

One of the most useful indicators of happy or distressed body language is a solid understanding of what your dog normally looks like under a variety of circumstances. If you know what your dog looks like when the two of you are engaged in your dog's favorite activity – like playing ball – then you know what one variant of happy looks like. If you have seen your dog when he was startled by a stranger on the street, then you know what fearful body language looks like.

All of this requires that you pay attention; take the time to observe your dog in your day to day life and you'll be well ahead of the game.

DOGS AS TODDLERS

The second way to interpret your dog's behavior is to imagine that he is a toddler. This requires combining what you see in the dog's behavior with what you know of the context and then making some educated guesses.

Let's say your dog is acting hyper. He has just been released from his crate after a long night's sleep. He's moving around a lot, chewing your things, and maybe even mouthing you. He grabs your shoes and runs off with them. If this was a toddler, what would you be thinking? Probably that he's bored. So what's the solution? Do something with him!

Now how about this: Your dog is acting hyper, but he's been out all day, visiting people, playing ball at the park, and socializing with other dogs. He's had dinner and now you want to watch TV but he can't stop moving. He's chewing on things, maybe even mouthing you! He grabs your shoes and runs off with them. If this was a toddler, what would you be thinking? That he's tired! He's had a busy day and now he needs to sleep. So what's the solution? Put him to bed! He may complain in the crate for a couple of minutes, but if the issue really is exhaustion, he will soon fall asleep.

If you look only at behavior and emotion without context, it's very likely that you'll head down the wrong path. In one case, you have a bored dog, and in the other you have a tired dog; both are exhibiting the same problematic behavior but the appropriate solution requires knowledge of the context. If you ask yourself what the problem would be if your dog was a toddler, you may well find the solution.

GUESSING WRONG

In truth, we cannot know what a pre-verbal child or baby is thinking, but that doesn't mean that we don't try to understand what he needs! When your baby is crying, you try to find the most likely cause. Sometimes you'll be right; you'll be able to solve the problem and the crying will stop. Other times you'll be wrong and you'll have to try something else. It's okay to be

wrong; just keep looking for the answer! Humans as a species spend an enormous amount of time refining our social skills with each other, trying to understand the emotions and behaviors of others so that we can get along most effectively in the world. If you take this approach with your dog, you'll reap enormous benefits.

Of course, sometimes you'll set yourself up to guess wrong. Let's say you just came home from a movie to find that your dog has peed on your bed, ripped up your favorite book, barked for an hour straight, and is now sound asleep in a happy puddle in the middle of the couch.

You look at this from a human point of view. Why would you pee on your best friend's bed, scream nonstop, and rip up her stuff? You may conclude that your dog must be angry because you went out and had fun without him! He made a big mess for you to find when you came home in order to punish you before falling asleep, smugly dreaming about how he taught you a lesson. And herein lies the danger with anthropomorphism: You didn't look at the situation from the point of an emotional two-year-old; you looked at it as an older child or as an adult! You attached *your* emotions, your anger at the destruction, to what you found when you got home. You assumed an emotion like spite, yet there is no evidence that dogs have anything like that. You gave him the emotions of an adult human, and he is far from that!

Dogs (and toddlers) are not thinking about what happened earlier; they are thinking about what is happening right now! They live in the moment. Dogs are not thinking about how you'll feel when you come home and find the mess; they are simply reacting to whatever is happening right now, and whatever emotions come along with those events. Dogs do not think about what you did yesterday unless something you are doing right now reminds them of it (like when you're getting the leash to take them for a walk in the neighborhood and yesterday that walk was scary).

Dogs do not plot revenge or try

What you can do

- *Keep in mind that dogs experience a range of emotions in much the same way as a two-year-old child, and that the impact of those emotions can be responsible for problematic behavior and prevent you from creating any meaningful change.*
- *Consider your dog's behavior and body language within the context of the circumstances before you try to solve a problem.*
- *Learn to understand your dog's emotions. If you do, you're much more likely to be successful at creating a training plan that works – and odds are pretty good that your dog will have a lot more fun with you, too!*

to figure out how to make you suffer. That's a very complex thing to do! While there is very compelling evidence that dogs experience basic emotions like anger and joy, there is no scientific evidence that dogs feel more complex emotions like guilt or spite. While your dog might suffer if and when you punish her, it does not cause her to feel remorse over what has already happened.

So if you assume that your dog is acting with the intention of creating discomfort for you, then you are giving your dog credit for significantly more emotional abilities than he possesses. Dogs do not experience those emotions. Neither do two-year-olds. It's a bad trap to start assuming that your dog is out to get you.

Remember, when you're trying to use human motivations to guess what motivated a dog, use the motivations of a two-year-old. If you're not familiar with two-year-olds, ditch that strategy entirely! Instead, just consider your dog as a creature who lives in the moment, with whatever is happening at that time. 🐾

Denise Fenzi is the founder of Fenzi Dog Sports Academy. See page 24 for contact and book-purchasing information.

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RESOURCES

BOOKS AND VIDEOS

Denise Fenzi is the co-author (along with Deborah Jones, PhD) of *Dog Sports Skills, Book 1: Developing Relationship and Engagement; Book 2: Motivation; and Book 3: Play*, and *Beyond the Back Yard: Train Your Dog to Listen Anytime, Anywhere*. She also has a new book, *Beyond the Basics: Unlock Your Dog's Behavior*, excerpted in this issue. These books are available from thedogathlete.com and from wholedogjournal.com

WDJ Training Editor Pat Miller is author of many books on force-free, pain-free, fear-free training, including:

- *Do Over Dogs: Give Your Dog a Second Chance at a First Class Life*
- *How to Foster Dogs*
- *Play With Your Dog*
- *Positive Perspectives*
- *Beware of the Dog: Positive Solutions for Aggressive Behavior in Dogs*

All of these are available from wholedogjournal.com

HOLISTIC VETERINARIANS

American Holistic Veterinary Medical Association (AHVMA)
PO Box 630, Abingdon, MD 21009

For a list of holistic veterinarians in your area, send a self-addressed, stamped envelope to the address above, or search ahvma.org

TRAINING AND INSTRUCTION

Denise Fenzi

Fenzi Dog Sports Academy
fenzidogsportsacademy.com

The Fenzi Dog Sports Academy is an online school devoted to training dog and handler teams at the highest levels of competition in a range of sports. Owner Denise Fenzi's passions are competitive obedience and no-force (motivational) dog training. Denise travels throughout North America teaching seminars on topics related to dog obedience and building drive and motivation.

Pat Miller, CBCC-KA, CPDT-KA

Peaceable Paws Dog and Puppy Training
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peaceablepaws.com

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