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The Whole Dog Journal™



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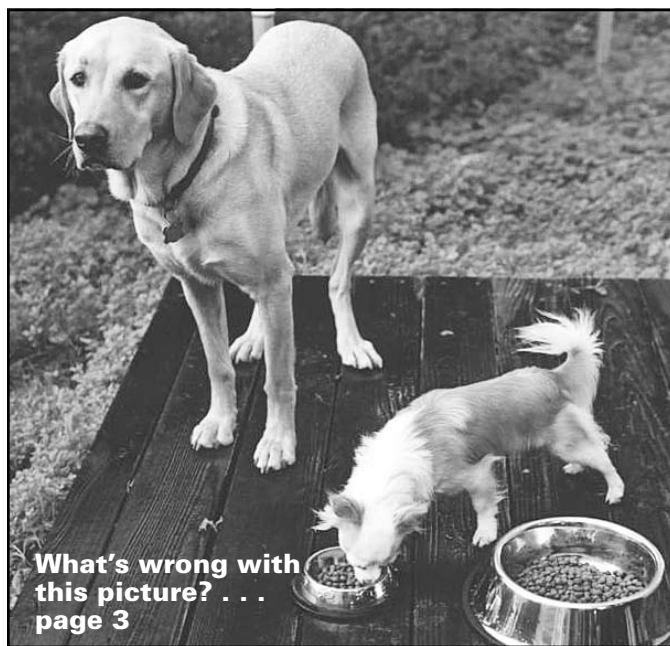
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BY NANCY KERNS

After sharing my life with an eccentric Border Collie (is that a redundant phrase?), I was prepared for odd behavior from an Australian Shepherd belonging to a friend I hadn't seen for years. But as my friend and I chatted in her kitchen over coffee, catching up, I couldn't help but notice her Aussie's strange behavior in front of her food bowl. The dog stood frozen over her bowl, nose poised just above the kibble inside. Occasionally she shoved her muzzle into the food, stirring the kibble vigorously, before taking her vigilant stance just above the food again. She appeared to be scrutinizing the food carefully, before she'd take a single piece of kibble, chew it, and start the process again.

I observed the dog repeat this funny little circuit at least four times over the course of at least 10 minutes before finally interrupting my friend. "Cathy, I give up. What is your dog *doing* with her food?"

"Ah! You noticed her two-hour breakfast!" Cathy laughed. "That started about four years ago . . . ever since the one time that *ants* got into her food bowl. She's been worried about them ever since!"

That was the most extreme sort of eating disorder I had ever heard of in dogs. At least, until I heard of dogs exhibiting a more serious – potentially life-threatening – eating disorder: anorexia.

Dogs lose their appetites for a variety of reasons, few of them as innocent as ants. Most conditions that cause inappetence need to be investigated at your veterinarian's office, and quickly, in the case of older or ill dogs, or those taking medications of any sort.

Just the other day my friend Jamie was telling me about her efforts to get her previously ravenous German Wirehaired Pointer to eat something, anything, since he was started on a drug to treat his Cushing's disease. Overnight, he went from being a canine vacuum, unsafe around any edible item, to completely disinterested in food. Fortunately, having just edited an excellent article about inappetence by Mary Straus (see the next page), I was able to give Jamie plenty of ideas for how to get poor Sammy to eat again.

A medical condition was also behind the sudden loss of appetite experienced by Mokie, who was *my* long-haired Chihuahua before he went to my sister Pam's house for a dog-sitting visit from which he hasn't returned. Mokie is usually a ravenous eater, who Hoovers up sandwich crumbs before they hit the floor and is prone to snatching dog cookies right out from the jaws of Pam's older, slower Jack Russell. (In fact, that's Mokie in the photo on page 5, taking food from an unhungry Labrador 10 times his size.)

When Pam told me that Mokie wasn't eating, I knew something was *seriously* wrong. As it turned out, his back was badly out of whack. He began eating again immediately after a visit to a veterinary chiropractor, although it took him a few days to start stealing food from his packmates again.



More information about chiropractic for canines, by the way, appears on page 20 of this issue.

NK

MISSION STATEMENT: WDJ's mission is to provide dog guardians with in-depth information on effective holistic healthcare methods and successful nonviolent training. The methods we discuss will endeavor to do no harm to dogs; we do not advocate perpetrating even minor transgressions in the name of "greater good." We intend our articles to enable readers to immediately apply training and healthcare techniques to their own dogs with visible and enjoyable success. All topics should contribute to improving the dog's health and vitality, and deepening the canine/human bond. Above all, we wish to contribute information that will enable consumers to make kind, healthy, and informed decisions about caring for their own dogs.

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Tales of the Lost Appetite

What to do when your dog refuses to eat.

BY MARY STRAUS

There are few things more frustrating than a dog who won't eat. I discovered how hard this can be on an owner when my Nattie suddenly stopped eating at age 14. I tried every trick I could find to tempt her to eat, while my veterinarian did test after test trying to discover the cause of her sudden lack of interest in food. And I couldn't help feeling rejected when she turned down the meals I so lovingly prepared, making the experience even more stressful.

What should you do when your dog won't eat? Here is the first question that must be answered: Is there something wrong, or is my dog just being picky? Only when you know the answer can you start trying to solve the problem with food selection and preparation tricks. Here are some clues that can help you determine what approach you should try first:

- **Does your dog usually eat anything you put in front of her, or does she have a history of skipping meals?** A sudden change in appetite is likely to be symptomatic of a health problem and cause for a quick trip to the vet, especially in dogs who are normally good eaters.

- **Are there any other symptoms?** When lack of appetite is coupled with lethargy, fever, panting, other signs of pain, vomiting, diarrhea, jaundice, or anything else out of the ordinary, it is a definite cause for concern, and an immediate trip to the vet is indicated.

- **Have there been any changes that might account for the difference in appetite?** If you recently switched to a

new food, or began adding supplements to the food, perhaps your dog is simply telling you that she doesn't like it. Try feeding the food plain, or go back to your old brand and see if her appetite returns to normal. Household changes, such as loss of another pet or an owner being away, might also contribute to a dog's inappetence.

- **Is your dog losing weight?** I've occasionally heard people complain that their dogs won't eat but are substantially overweight. These are often dogs who turn down meals because they're getting more treats and snacks than they need. Check with all family members to discover how

much your dog is really eating before determining that she is inappetent.

I've had two dogs who were real chowhounds, including my 16-year-old Piglet, and even a single missed meal has me rushing them to the vet. With Nattie, who was known to skip a meal on occasion, I waited until she turned down her second meal, which was raw meaty bones (her favorite), before calling the vet and bringing her in the following morning. Remember that animals often try to hide the fact that they are sick, so it's important to pay attention to symptoms when they do occur and act quickly. Don't wait several days to see if they improve on their own.

Causes of inappetence

Lack of appetite is referred to as inappetence or anorexia. There are many reasons why a dog may be reluctant to eat. Dental disease, including broken teeth and infected gums, may cause pain when eating.

Ear infections are another source of pain that can lead to reluctance to eat, especially hard food. Keep in mind that chronic ear infections are almost always related to allergies (either food or environmental), so try to find and eliminate the cause if at all possible, along with treating the existing infection.

Other forms of pain can cause a dog to stop eating. Panting, trembling, walking hunched over, sleeping more than usual, reluctance to run or jump, and irritability can all be signs of pain. Have your vet check your dog if you think that pain might be contributing to lack of appetite.



Dog won't eat? Be alert if this is a new behavior for your dog, or a total departure for a dog who is usually a chowhound. Immediately suspect the food (if you feed a commercial diet) or consider that he may have a health problem.

If you're still unsure, try giving pain medications, such as Tramadol, to see if the symptoms improve. If so, look further to find the source. Treat pain as needed to increase appetite and improve quality of life.

Dogs who are sick, including dogs with cancer and those undergoing chemotherapy, are often reluctant to eat. Kidney disease, for example, can cause nausea and gastric ulceration due to excess acidity.

If you recently opened a new bag of your dog's regular food and he turns up his nose at it, pay attention – this could be a sign that the food is spoiled or moldy, and possibly dangerous. Even if only one dog in your household doesn't want to eat and the rest are fine with the food, it would be safer to get a new bag and see if that solves the problem.

During last year's pet food recalls, there were many heartbreaking stories of owners coaxing their dogs to eat the food that was making them sick before the full story was known. Most stores will let you return a bag of food if you suspect something is wrong with it. If any symptoms are seen, such as vomiting or diarrhea, they should be reported to the manufacturer of the food.

Many medications list nausea and anorexia as potential side effects. If your dog is on medication and becomes reluctant to

eat, talk to your vet to see if a substitute is available, or if there is a way to make the pills easier on your dog's stomach. For example, some meds that are normally given away from meals can be given with food instead to help with stomach upset.

Warning: In some cases, loss of appetite can be a symptom that the medication you are giving is dangerous. This is especially true in the case of NSAIDs (non-steroidal anti-inflammatory drugs) such as Rimadyl, Deramaxx, and even aspirin. Corticosteroids such as prednisone can cause gastrointestinal ulceration and associated inappetence.

If your dog is on any of these drugs and stops eating, you should discontinue the medication immediately (don't stop prednisone without your vet's okay). Get your dog to the vet, especially if other symptoms are present, such as vomiting, diarrhea, black or tarry stools, or lethargy.

Tests to look for the cause

There are a variety of tests that can be done to try to pinpoint the reason for your dog's reluctance to eat. Here are the ones that we did for Nattie, sequentially over a period of about three weeks:

- **Blood tests**, which may need to be repeated in order to identify any trends or problems that were not apparent right away.

- **Abdominal and chest x-rays**, to look for signs of obstruction, tumor, enlarged heart, or anything else that might explain a reluctance to eat.

- **Ultrasound**, to look further for anything that might not show up on x-ray. The radiologist should check the adrenal glands as well as all of the internal organs.

- **ACTH stimulation test**, to check for Addison's disease, which can cause inappetence even if the adrenal glands appear normal. Note that inappetence can also be a sign of adrenal exhaustion, even when the ACTH test is normal. In this case, the adrenal glands may be enlarged. You can test for this only at certain laboratories, such as the University of Tennessee's endocrinology lab.

If immunoglobulins and cortisol are low (or declining) and sex hormones are high (or rising), it's suggestive of adrenal exhaustion, also referred to as atypical Cushing's disease or hyperes-

trogenism. This syndrome is treated with low, physiological doses of cortisol, such as methylprednisolone, and thyroid hormones.

- **Leptospirosis blood titer test.** This test may not become positive until your dog is in the recovery stage. We waited two weeks before doing this test on Nattie.

- **Tick blood panel.** Tick-borne diseases often cause a syndrome vets refer to as "ain't doing right," where something is affecting the dog but the cause is not apparent on tests or exam.

- **Endoscopy**, which involves inserting a camera down the dog's throat into the stomach. An endoscopic exam makes it possible to visually check for abnormalities and take tissue samples to look deeper for problems.

Your vet may recommend other tests, depending on your dog's symptoms and history.

In Nattie's case, all of the tests were negative other than pre-existing early stage kidney disease, which had not progressed and therefore was not considered to be a likely cause of her loss of appetite. At this point, the specialist said that everything had been ruled out except a brain tumor. She recommended an MRI to check for that, but I declined. I felt the likelihood of a brain tumor being the cause and of a tumor being treatable were not high enough to justify the expense and the stress the tests would cause my dog.

When is lack of appetite normal?

There are times when a poor appetite can be expected. Female dogs in heat as well as the male dogs nearby frequently lose their appetite for a time. However, inappetence following a heat cycle can be a sign of pyometra, which requires an immediate vet visit.

Adolescent puppies, especially of some larger breeds, are notorious for alternating between being extra-hungry and skipping meals. Younger puppies may be reluctant to eat because of teething pain (soft food and chewing on something cold can help in this case). Hot weather can make a dog want to eat less. Some dogs prefer eating at certain times of the day and may turn down food offered at other times.

Additives such as supplements and

What you can do . . .

- Have a complete vet check, including blood work, to rule out any obvious causes of inappetence.
- Try offering a variety of different foods, warmed to body temperature, to tempt your sick dog to eat.
- Be relaxed and calm at mealtime, as your anxiety and stress can contribute to your dog not wanting to eat.
- Don't immediately offer an alternative to a healthy dog who turns down a meal, as this can condition him to be picky.





Sometimes, competition increases a dog's willingness to dig in and eat. But timid dogs or dogs who have been intimidated may back away from competition. Know your dog and pay attention to deviations from his normal behavior.

some foods may cause your dog to turn away from his meals. If your dog doesn't like supplements added to his food, try giving them in pill form instead (see "Giving pills," in text below, for hints on how to make this easier). Many dogs refuse to eat vegetables, and may turn down meals if there are any mixed in. Other foods that your dog dislikes may also cause him to turn away if they are added to his meals. While Nattie had enjoyed yogurt in the past, she would not touch it after developing problems with her appetite, so keep in mind that tastes may change over time as well.

Dogs who are fed too much may also be picky about their meals. If you have a picky dog who is overweight, look at how much you're feeding, both at mealtime and in between, to see if the problem isn't related to too many snacks and treats. Try reducing the amount you feed by 10 percent at a time to see if you can get your dog to begin to slowly lose weight, along with being hungrier at mealtime.

Some dogs have problems with bile if their stomachs are empty for too long. This can lead to vomiting of yellow liquid in the early morning hours, often accompanied by nausea and lack of appetite. In this case, feeding them a late-night snack before bed can help.

When my dogs seem to feel nauseous, I've found that if I can get them to eat a small amount of something special to start

with, their stomachs seem to settle. Then they are willing to eat their regular meal.

Picky eaters

If your dog frequently turns down meals but is happy and healthy otherwise, he simply may be more finicky than most. However, to be safe, make sure you mention your dog's poor appetite/picky eating habit to your veterinarian at your dog's annual exams.

Picky dogs can be born that way, or you can inadvertently condition them to be picky. Some dogs simply do not have the overweening interest in food more commonly associated with the species, and others may have certain foods that they dislike, possibly because they've learned that eating a particular food causes them discomfort. If your dog eats reluctantly, try switching brands of food and protein sources to see if he gets more excited when you feed something different.

You can also try adding various fresh foods and flavorings to his meals, such as meat and eggs (raw or cooked), cottage cheese, yogurt, gravy, healthy leftovers, etc. These foods are good for your dog and they make him look forward to his meals; there is nothing wrong with that!

There is one caution to this approach, however. Offering something else *when* your dog turns down a meal can condition him to be picky. Hovering over your dog while he eats, or otherwise mak-

ing mealtime stressful, can also create eating disorders.

If you have a healthy dog who is a picky eater, put his food down for a limited amount of time – say, 10 to 15 minutes – while ignoring him. Then calmly pick up any remaining food and offer him nothing else until the next meal. It's fine to offer something different at the next meal, but not right away, as you don't want your dog to learn that you will give him something better if he turns down a meal.

Competition with other dogs may either increase or decrease your dog's desire to eat. If you feed dogs together, try feeding the one who doesn't want to eat in a crate or another room, to see if he feels more comfortable eating alone. If you feed your dogs separately, maybe letting another dog eat his food if he doesn't want it in a reasonable amount of time may convince him that being picky isn't a good idea (be sure this won't trigger a fight before trying it).

Exercise can increase appetite and, of course, offers other benefits, too. Many picky dogs eat with more interest after a long walk.

Some dogs like variety, and will tire of any food after a few days, weeks, or months. Feeding a variety of different foods is healthier for your dog, so again, there is no harm in rotating between brands, anywhere from daily to every few months, which may also serve to keep your dog interested in his food.

A dog who is consistently picky no matter what you feed him is likely to have some kind of health problem. In this case, a veterinary examination and testing is called for.

Treating the symptoms

Until you can find and eliminate the cause of your dog's inappetence, you can try treating the symptoms with supplements and possibly medications. Purchasing information for all of the nonprescription remedies can be found in "Resources Mentioned in This Article," on page 18.

Slippery elm is an herb available from health food stores that can help with problems related to stomach pain, as it coats and soothes. See "Soothe Stomach Pain With Slippery Elm," next page.

Another option is to use **Phytomucil** from Animals' Apawthecary, a liquid glycerite that contains slippery elm and other herbs that benefit the digestive system. It is sweet-tasting and easy to administer.

Just squeeze a dropperful into your dog's cheek pouch.

L-glutamine is an amino acid that helps to heal the mucosal lining of the intestines, so it may be beneficial if your dog is experiencing diarrhea. Give 500 mg per 25 lbs of body weight daily. Higher doses are also safe.

Seacure (see "Securing Seacure," WDJ April 2003) is a highly nutritious supplement designed to treat malnutrition. Seacure can also help to heal the digestive tract and provide other health benefits. Made of hydrolyzed whitefish, Seacure has a fishy smell. Sprinkled on your dog's food, it helps make the food more attractive to your dog.

Ginger Tummy from Tasha's Herbs, **Ginger-Mint** from Animals' Apawthecary, or **Minty Ginger** from Herbs for Kids can help if inappetence is caused by nausea.

Antacids such as Pepcid (famotidine), Zantac (ranitidine), Tagamet (cimetidine) and Axid (nizatidine) can be tried, with your vet's approval. Antacids are best given at bedtime, to reduce acidity that develops during the night.

Tums, which is calcium carbonate (the same as is found in eggshells), can also be used. The acid-inhibitors Prilosec (omeprazole) and lansoprazole are sometimes prescribed for dogs. Don't give any of these medications without first checking with your vet.

Other medications your vet may prescribe include **Reglan** (metoclopramide), used to stop vomiting and increase gastric motility, and **Carafate** (sucralfate), used to treat gastric ulcers.

A **bland, low-fat diet** may help if the symptoms are caused by digestive disorders. You can make rice congee by boiling one cup of white rice (not Minute Rice) with four cups of water for 20 to 30 minutes. The liquid portion helps soothe the stomach and stop vomiting and diarrhea. Add a little chicken baby food or honey for flavor, if needed. The whole mixture can also be combined with cooked chicken breast or boiled ground beef.

In Nattie's case, Pepcid seemed to help, and I left her on it long term. I stopped it about a year later and oddly enough her appetite improved at that time.

When dealing with inappetence, check with your vet to see if it's safe to try stopping any medications your dog is on. If your dog's appetite returns when the medication is stopped, ask the vet if there is an alternative medication that your dog can be given.

Appetite-stimulating meds

There are a number of medications that can be used to increase appetite if necessary. The decongestant **Benadryl** (diphenhydramine) may help with nausea. **Cyproheptadine** is another antihistamine that has the side effect of stimulating the appetite, though it's used more with cats than with dogs. Other drugs that your vet may prescribe include:

- **Meclizine** (Bonine, Antivert) can help with nausea. One dog I know with advanced kidney disease started eating well and gained more than 10 pounds after being put on this drug.

- **Mirtazapine** (Remeron) is an anti-depressant that has anti-nausea properties and acts as a strong appetite stimulant.

- **Ondansetron** (Zofran) is a human chemotherapy drug that can be used to stop severe vomiting.

- **Corticosteroids** also increase appetite as a side effect. In Nattie's case, after ruling out all the possible causes that we could, my vet put Nattie on a low dose of prednisilone, which was effective in stimulating her appetite.

Foods to tempt your dog

A lot of effort may be required to find foods to entice your dog to eat when he is not feeling well. In most cases, it is more important that your dog eat *something* than that he eat the best foods for his condition (check with your vet to be sure). Don't worry about feeding an incomplete diet in the short term, up to a few weeks. Experiment with different foods and different ways of preparing and serving them to see what appeals to your dog.

When Nattie stopped eating, I was shopping daily at both the grocery store and the pet supply store, trying to find anything that might tempt her to eat. I would bring home a half dozen or so different foods and treats each day, some made for people, some for dogs. She would not eat anything consistently or in large amounts, or mixed together with anything else.

I would offer meals of at least four different foods in small amounts, each separated from each other, two or three times a day. I eliminated foods that she had no interest in, but continued to periodically offer any food that she would eat at least once, even if subsequently she turned it down.

I found that she did best when she was not fed the same food twice in the same day, or two days in a row, though there was one treat she would eat daily. I gradually developed an inventory of foods that she was willing to eat, if prepared just the way she liked them (for example, she would eat scrambled eggs with cheese, but not plain), and not served too frequently. This was a lot of work and a lot of stress, but it kept her from losing too much weight while we continued to search for the cause of her inappetence.

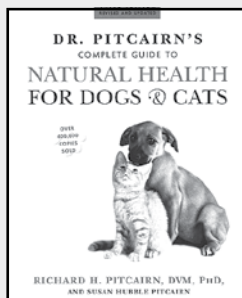
Almost any food can be offered, with the exception of a few foods that are toxic to dogs, such as chocolate, onions, and

Soothe Stomach Pain With Slippery Elm

The following instructions for a slippery elm treatment are from *Dr. Pitcairn's New Complete Guide to Natural Health for Dogs & Cats*, used with permission.

Thoroughly mix 1 slightly rounded teaspoon of slippery elm powder (available in your local health food store) with 1 cup of cold water. Bring to a boil while stirring constantly. Then turn the heat down to simmer and continue to stir for another two to three minutes while the mixture thickens slightly. Remove from the heat, add 1 tablespoon of honey, and stir well.

Cool to room temperature and give ½ to 1 teaspoon to small dogs (up to 40 lbs), 2 teaspoons to 2 tablespoons for medium dogs (40-75 lbs), and 3 to 4 tablespoons for large dogs (more than 75 lbs). Give this dose four times a day, or about every four hours. Cover the mixture and store at room temperature. It will keep for a couple of days.



macadamia nuts. Here are suggestions that have worked for some dogs:

- **Baby food**, especially meats. You can use water, low-sodium broth, or even ice cream to slightly thin baby food and then use a syringe to put it in your dog's cheek a little at a time.
- **Nutri-Cal** and **Nutri-Stat**, high-calorie palatable food supplements designed to provide nutritional support and stimulate appetite.
- **Rebound** and **DogSure**. These are nutritionally complete liquid meal replacement products. Unflavored Pedialyte (made for children) can also be used.
- Try **different brands and types of commercial foods**, including dry food, canned food, dog food rolls, dehydrated foods, premixes such as those made by The Honest Kitchen, commercial raw diets, and even cat food. Try various treats, too.
- **Smelly foods** such as liverwurst and braunschweiger sausage. Chicken or beef

liver braised in butter is another food that appeals to many dogs. Feed foods such as these in small quantities, or add them to other foods to enhance their appeal.

- **Foods from your plate**. Sometimes dogs are more willing to eat if they get the same thing that you're eating. Chicken nuggets, cheeseburgers (no onions), and pizza are also worth a try.
- **Fresh foods**. Experiment to see what your dog may like, such as eggs (try scrambling them with cheese, or hard-boiling), canned fish, canned chicken or ham, seasoned and grilled meats, beef stew with gravy, macaroni and cheese, homemade soup, crab cakes, cheese, cream cheese, cottage cheese, yogurt, deli meats (can be rolled with other food inside), milk shakes and ice cream (avoid chocolate and coffee flavors). Even foods like bread and pizza crusts are better than nothing, if your dog is willing to eat them.
- **Flavor enhancers**, such as gravy, soup, broth, stock, sauces, butter, and drippings may help make other foods more enticing, either when added on top or when cooked

together. (**Note:** We do not recommend the commercial flavor enhancers for squeezing onto dog food; most we have seen contain artificial colors, preservatives, and other unhealthy ingredients.) You can also try sprinkling Parmesan cheese, feta cheese, or a little garlic powder on top.

- **Honey** is a tasty and healthy addition that may entice your dog to eat (see "A Honey of a Cure," September 2007).
- **Bone broth** is nourishing and flavorful, and can be fed alone, or mixed with other foods to make them more appealing. Use any type of meaty bones, such as chicken backs with skin removed. Chop the bones into pieces, if possible. Put them in a stock pot and cover with water. Add a small amount of apple cider vinegar to help leach the minerals from the bones.
You can also add vegetables such as celery, carrots, and potatoes (no onions). Bring to a boil, then simmer anywhere from 12 to 36 hours (or use a pressure cooker to save time). Pour the liquid off and remove the fat after it cools (a little can be left for flavor). Using a blender, liquefy

Resources Mentioned in This Article

SUPPLEMENTS AND FOODS

Animals' Apawthecary Phytomucil and **Ginger Mint**, made by Animals' Apawthecary, (888) 463-7748, animalessentials.com. Also available at shop.robbinspetcare.com

DOGcaps and **CATcaps** Chicken-, Beef-, and Bacon-Flavored Gelatin Capsules, made by Capsuline, (866) 536-2277, capsuline.com

DogSure, made by PetAg, (800) 323-6878, petag.com

Minty Ginger, made by Herbs for Kids, (800) 232-4005, herbsforkids.com. This is a human product that can also be found at health food stores.

Nutri-Cal and **Nutri-Stat**, made by Tomlyn, (800) 267-5707, tomlyn.com. (Nutri-Cal is also sold under the name Evsco; both Tomlyn and Evsco are a part of Vétuquinol)

Pedialyte, (800) 227-5767, pedialyte.com. Also available at drugstores and many grocery stores.

Rebound, Rebound Animal Health, (888) 645-9501, reboundanimalhealth.com

Seacure, made by Proper Nutrition, (800) 247-5656, propernutrition.com

Tasha's Herbs Ginger Tummy, made by Coyote Springs Company, (800) 315-0142. Available from many retailers. We found the best prices from B-Naturals (b-naturals.com, 866-368-2728), who also carries L-glutamine.

The Honest Kitchen, (866) 437-9729, thehonestkitchen.com

BOOKS

Dr. Pitcairn's Complete Guide to Natural Health for Dogs & Cats, by Richard Pitcairn, DVM

RESOURCES FOR SARD-DOG OWNERS

petcarebooks.com/research.htm. Includes information on adrenal exhaustion, which is common in dogs with SARDs (Sudden Acquired Retinal Degeneration)

CHRONIC PAIN RELIEF

dogaware.com/arthritis.html. The author's arthritis Web page with information on treating chronic pain

CANINE CANCER

pets.groups.yahoo.com/group/CanineCancer
E-mail support group for people whose dogs have cancer. See its "Files" section for help when dogs refuse to eat





The author's dog, Nattie, is pictured here at age 15, about 10 months after she developed inappetence. The strategies described in this article were successful in keeping Nattie at a healthy weight – impressive, for a senior dog!

the veggies and meat from the bones (and the bones as well, if they are soft enough), then mix with the liquid and store in the refrigerator or freeze for later use.

- **The temperature of food** can affect its appeal. Cold food straight from the refrigerator has little odor and may cause an upset stomach. Warming food increases flavor and aroma, making it more enticing. Food can be warmed in a microwave or by immersing the container in a bowl of hot water.

Giving pills

It can be very hard to get dogs who don't want to eat to take pills. I hate to force them down the throat, especially when a dog is not feeling well, and if you try adding them to food, it may make your dog less willing to eat. Try dipping pills in cream cheese, spray cheese, or peanut butter; wrapping them in a bit of soft cheese, braunschweiger, or liverwurst; or inserting them into small pieces of crab cakes or dim sum dumplings (these worked for Nattie).

You can also order chicken-flavored gel caps and combine meds into them. Give only those pills that are needed, skipping any that are optional, such as vitamin supplements. Liquids may be easier to administer, if available. For example, herbal glycerites can be squeezed from a dropper into the cheek pouch, which is simpler and may be more effective than using capsules of dried herbs.

Don't give up

We never determined what caused Nattie to suddenly stop eating. Although her appetite never returned to normal, I was able to get her to eat well by rotating through foods that she liked and preparing them the way she preferred. I weaned her off the prednisone that we had used to stimulate her appetite, though eventually she returned to it to control chronic bronchitis. It was complications of the bronchitis that led to my having to euthanize her two years later at age 16.

Many people warned me that Nattie might be manipulating me to get better food, but there is no question in my mind that was not the case. She had never been manipulative nor a picky eater in the past. When a dog's behavior suddenly changes, especially at age 14, health issues rather than behavior are likely to be the cause.

Fortunately, even though I never knew exactly what went wrong, I learned through a lot of trial and error what meals Nattie would eat willingly, without fuss. And I was lucky enough to be able to share my life with her for two more years, making it all worthwhile. 🐾

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

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Uncommonly Calm

Some dogs are born calm, but a calm dog can also be made!

BY PAT MILLER

Most dog owners are pleased when their dogs are calm – even the owners of high-energy competition and working dogs, when those dogs are “off-duty.”

Some owners may go to great – sometimes misguided – lengths to achieve the coveted calm condition. Humans who understand the appropriate way to help a dog learn to be calm can make the difference between the canine companion who finds a lifelong loving home, and the one who ends up – sometimes several times in his life – gazing sadly out from the chain-link kennels of an animal shelter.

Calm is a highly valued, hard-won, and sometimes transitory state in our own household. With four dogs in the Miller pack, two of them proud representatives of the herding group, calm is something we have to work at. We use the time-honored recipe of exercise, management, and training (and of course, *lots* of love)

to help our canine family members be a peaceable pack.

The “Uncommonly Calm” (UC) Program

You can turn your Bouncing Betty into a Sedate Sally by following a simple program that helps her get rid of excess energy, prevents her from being rewarded for out-of-control behavior, and consistently rewards her for being calm.

■ **Exercise:** The first element in your UC program is to provide your dog with *lots* of exercise. Wise dog trainers and owners know that a tired dog is a well-behaved dog. Often when your dog is at her worst, she is simply brimming with energy bursting to find an escape. Tug-o-war on your pants leg, donuts around the dining room table, and record high-jumps over the back of the sofa are just some of her outlets for that pent-up energy.

What you can do . . .

- Help your dog become Uncommonly Calm by providing exercise, management, training, and love.
- Keep in mind that dogs can learn to “be calm” just like they can be taught any other behavior (such as sit, down, stay, etc.) through a consistent program of positive reinforcement for increasingly longer moments of calm.
- Be sure to tailor your dog’s UC program to match his physical needs and capabilities.



This darling Cocker Spaniel goes everywhere with her owner, even to outdoor cafes. She’s alert and friendly to passers-by but also calm and well-behaved. This is a result of both lots of practice and lots of positive reinforcement.

Mental and physical activities are both vitally important parts of a canine exercise program. For the physical side, schedule at least three tongue-dragging sessions of chase-the-ball per day. Climb to the top of a hill or carpeted staircase (perhaps not for long-backed dogs) and throw the ball down so she has to keep climbing back up to return it to you. Set up an obstacle course with lots of things to climb and jump over. Be careful not to send her into heatstroke, but definitely play until she’s pooped. Keep your exercise program breed-appropriate – an athletic Border Collie will need lots more physical challenges than an English Bulldog.

Don’t think that a walk around the block will do it. A walk on leash, even a long walk, is nothing but an exercise hors d’oeuvre for a young dog. You’re tired when you get home from the walk, but your dog is just getting warmed up! If no one in the family has time to give your dog adequate exercise, arrange for a pet sitter to

come by a couple of times a day and wear her out, or take her to doggie daycare as often as possible. Eight hours of romping with other dogs is guaranteed to take the wind out of her sails! (See “All in a Day’s Care,” WDJ April 2001.)

Caution: Check with your veterinarian prior to starting your dog on a vigorous exercise program. Just as with humans, too much exercise too suddenly can damage canine joints and muscles. Out-of-shape and overweight dogs especially will need to ease into a physical exercise program.

Mental exercise is an often-overlooked but valuable tool in your UC arsenal. Mind games can be every bit as tiring for your dog as running games, and are a good choice in conjunction with physical exercise during inclement weather, and/or as an alternative for dogs with physical limitations. Interactive toys, shaping games, and clicker training are all good mind candy for your overactive canine pal. (See “Mind Games,” October 2004.)

■ **Manage:** The second piece of a successful UC program is management. In addition to regular exercise, you can make other changes in your dog’s routine to manage inappropriate behavior.

If your high-energy dog grabs forbidden objects and races around the house, it’s probably because she’s learned that this triggers a wonderful game of “chase the dog!” This is very fun and rewarding for her – and behaviors that are rewarded increase. The management answer is to keep forbidden objects out of her reach, and avoid falling into her trap of chasing when she grabs something. Instead, walk to your cupboard, take out a tasty treat, and offer to trade for the object. *Then* put it out of her reach. (For much more on managing your dog’s behavior, see “Upper Level Management,” August 2001.)

Another piece of the management puzzle is physically controlling your dog’s behavior through the judicious use of leashes, pens, crates, and tethers. (See “Tethered to Success,” April 2001, and “Crate Training Made Easy,” August 2000.)

■ **Training:** The final important element of your UC program is training. The more training you do with your dog the easier it is to communicate with her. The better she understands your communications, the easier it is for her to follow your instructions and comply with your requests.

Click for calm

Whether you have a baby dog with normal puppy energy, an obstreperous teenager, or an adult dog who has good manners lessons to catch up on, clicker training can be a magically effective and gentle way to convince a dog to calm down. No yelling, no physical punishment; just clicks and treats for any pause in the action.

The biggest challenge with a high energy dog is that the instant you try to praise or reward, she’s bouncing off the walls again. Timing and consistency are key to successful training. If a reward is given more than a second or two beyond the desired behavior, the dog has lost the connection, and believes she’s being rewarded for whatever she’s doing *now*.

It’s nearly impossible to have good timing if it requires delivering the treat to the excitable dog while she’s momentarily calm. By the time you get the treat to her mouth she’s once again doing her Bouncing Betty act. She may well perceive the treat as a reward for her jumping jacks rather than for the sought-after calmness that occurred briefly, several seconds ago.

However, once a dog has learned the

connection between the “click” and a *pending* reward, your timing can be impeccable: an instant of calm elicits a “click” – the treat can arrive several seconds later. An added advantage of the clicker is that most dogs, when they hear the click, pause in anticipation of the coming morsel, drawing out the brief period of relatively calm behavior even longer.

At the same time you’re laying a foundation of exercise and management, you can begin an effective clicker-training program. Don’t procrastinate – you can accomplish this on the first day of your UC program.

Start by “charging the clicker” – officially known in behavior circles as “conditioning the reward marker.” Begin by clicking the clicker in your pocket, to avoid startling your dog with the sharp sound. Click the clicker, feed your dog a treat. Click and treat. Click and treat. As she begins to associate the sound with the treat, bring the clicker out of your pocket and click it in a more natural position at your side or your waist.

Your dog doesn’t have to do anything special to get the click and treat, as long

Naturally Calm

Some dogs are more naturally calm than others. Typically, herding breeds (think Border Collie, Australian Shepherd, Cattle Dog, Kelpie, Corgi) and sporting dogs (Labs, Pointers, Golden Retrievers) tend strongly toward high energy, while the scent hounds (Bloodhound, Bassett, Beagle), giant breeds (St. Bernards, Newfoundlands, Great Danes), and working dogs (Rottweilers, Dobermans, Giant Schnauzers, Bernese Mountain Dogs) lean toward the calmer end of the energy continuum. Terriers can be a mixed bag, from the notoriously energetic Jack (Parson’s) Russells to the easier-going (but still easily aroused) Scotties and Cairns.

One behavior theory has it that heavier-boned animals tend to be more phlegmatic, while fine-boned animals are more high-strung. This is borne out in horses (think Clydesdale draft horses versus Thoroughbred race horses) as well as dogs (English Bulldog versus Chihuahua).



If it’s important to you to have a calm dog, look for a calm adult dog to adopt!

As many dog owners are well aware, puppies and adolescent dogs generally have more energy than mature adults. One might think this was universally known, but the number of adolescent dogs surrendered to shelters across the country suggests that a significant number of humans are unaware – and unprepared for – the exercise and training requirements of an active young dog.

If you’re not prepared for the rigors of an Uncommonly Calm program, consider adopting a dog from one of the naturally calmer breeds, and/or seek out a mature dog rather than an active young pup. There are always too many mature dogs waiting for homes at shelter and rescue groups.

as she isn't doing something unacceptable, like jumping on you or chewing the corner of the coffee table. If necessary, use a leash or tether to keep her out of trouble while you click and treat. Most dogs realize within a half-dozen repetitions that the click means a treat is coming. When your dog's ears perk and her eyes brighten at the sound of the click, you know she's getting it. Now you can use your charged clicker for training.

The goal of clicker training is to get your dog to understand that *she* can make the click happen by offering certain behaviors – in this case, calm. At first, you can't wait for long, leisurely stretches of calm behavior to click; you won't get them! You might begin by giving your dog a click and treat just because all four feet are on the floor at the same instant. Be quick! You want her to understand that the behavior she was rewarded for was pausing with all four feet on the floor, so your timing needs to be sharp; the click needs to happen the instant all four feet are down. If you click late, you may be reinforcing her bouncing around – the exact opposite of what you want!

If your timing is good and you catch her with four-on-the-floor several times in a row you'll see her start to stand still deliberately, in order to *make* the clicker go off. *Light bulb moment!* A door has opened in her brain, and you can now see her thinking. This, to me, is one of the most exciting moments in dog training – when the dog realizes that *she* can control the clicker. A whole new world of communication has just opened to her. You now have a very powerful tool in your little plastic clicker box. You can use it to reinforce any behavior you want, any time it happens, and your dog will quickly start repeating that behavior for you.

Okay, back to calm. How does “pausing briefly on all four feet” translate into a calm dog? Very gradually. You are going to “shape” the pause into longer and longer periods of stillness, by extending the time, in milliseconds at first, that you wait as she is standing still before you click and treat. If you err and she starts to jump around again, just wait. Eventually, there will be another pause that you can click, and then start the shaping again.

As she gets better at being calm for longer and longer periods, be sure to reinforce randomly – sometimes for shorter pauses, sometimes longer. If you just keep making it harder and harder – longer and

longer – she may get frustrated and quit playing the game.

Each training session should be relatively short, to avoid frustration for both of you, but you can do several in a day. You'll have the most success, at least at first, if you practice clicking calm right *after* one of her exercise sessions when she's tired anyway. As she gets the idea that “calm” is a very rewardable behavior, it will work even when she has more energy.

When your dog is holding still for several seconds at a time, add the verbal cue of your choice – something like “Easy!”, that you will be able to use (eventually) to cue her into calmness. Over time, you'll be able to phase out the click and treat for calm behavior and use other rewards such as calm praise, a gentle massage, or an invitation to lie quietly next to you on the sofa.

Go to your place

You can use your management tether and your clicker to teach your dog a very useful calming exercise, called “go to your place.” Fix up her tether station so it's very comfortable, with a soft bed, really good chew toys, and unspillable water. Toss a treat onto the bed and say “go to your place.”

When she gets there and is about to snatch up the treat, click your clicker. Repeat several times, clicking and treating each time, until she goes to her spot easily. Then attach the tether to her collar. Sit in a chair nearby but out of her reach, and read a book.

If she fusses, ignore her. When she's quiet, click, and toss her a treat. This is “positive reinforcement” – her good behavior makes something good happen – she gets a click and treat. Occasionally when she's being calm, get up, go over to her bed and quietly pet and praise her. This is also positive reinforcement. If she starts to get excited when you're with her, go back to your chair and sit down again. This is “negative punishment” – her inappropriate behavior makes something good go away – you leave. Negative punishment is considered effective and humane by most positive trainers.

When she's calm on her tether for long stretches – up to 5 or 10 minutes with occasional treats and visits – you can remove the tether and continue to reward her for lying calmly on her bed. If she revs up again, re-tether her and practice more calm.

You'll also want to practice this when

you have visitors. First, give your dog an extra tiring play-session before your guests arrive so she can be on her best behavior. Have her on her bed, tethered if necessary, and wait until she's calm to allow guests to greet her. When she's relaxed, untether her so she can mingle with the visitors politely. If she gets carried away, she can do another session on her tether.

Self control

Dogs who have a great deal of trouble with the concept of calm are often dogs who have difficulty with impulse control. The “wait” exercise can be a very useful part of your UC program, especially for dogs who are short on impulse control. I teach the wait behavior using my dogs' food bowls, and at doorways. Since they get two meals a day and I let them in and out several times in any given 24-hour period, we have countless built-in opportunities to practice this important self-control skill. Once they learn it, the self-control “wait” easily generalizes to other situations.

Here's how I teach them:

■ **Wait for food:** With your dog sitting at your side, tell her to “wait.” Hold the food bowl (with food in it, topped with tasty treats) at your chest, then move it toward the floor 4 to 6 inches. If your dog stays sitting, click and feed her a treat from the bowl. If your dog gets up, say “Oops!” and ask her to sit again. If she remains sitting, lower the bowl 4 to 6 inches again, click and treat. Repeat this step several times until she consistently remains sitting as you lower the bowl.

Gradually move the bowl closer to the floor with succeeding repetitions until you can place it on the floor without your dog trying to get up or eat it. Finally, place the bowl on the floor and tell her to eat. After she's had a few bites, lift the bowl up and try again, lowering the bowl a little farther this time. Repeat these steps until you can place the bowl on the floor and she doesn't move until you tell her she can.

Any time your dog starts to get up as you move the bowl toward the floor, use the “oops” no-reward marker to let her know getting up makes the good stuff go away, and raise the bowl out of her reach. Have her sit and try again. If she gets up several times in a row, you are asking for too much too soon; move the bowl in smaller increments.

Caution: If your dog guards valuable resources such as her food bowl, consult

with a qualified positive behavior professional before trying this exercise.

■ **Wait at the door:** With your dog sitting at your side, tell her to “wait.” Reach for the doorknob. If she doesn’t move, click and treat. Repeat this step several times. Then jiggle the door knob. Click and reward her for not moving. Repeat this step several times. Slowly open the door a crack. Again, click and treat if she doesn’t move, and repeat. Gradually open the door farther, an inch or two at a time. Do several repetitions at each step, with clicks and treats each time.

Eventually you’ll be able to walk all the way through the door, stop, and face your dog, without having her move. Wait a few seconds, click, then return and give her a tasty treat. Of course, sometimes you’ll actually give her the okay to go out the door – she has to go out *sometime!*

If you have multiple dogs, teach them each to wait at the door, and then you can really have fun! Using a little body-blocking as necessary – stepping in front of the dog(s) you’re *not* releasing – invite them out the door one at a time by name. This is very useful for those times when you really do only want one or two – not all – your dogs to go with you to the outside world.

UC in the Miller household

As I write this, our dogs are, indeed, calm. Lucy, a high-energy Cardigan Corgi (who has difficulty with impulse control), is in the living room watching a football game on the recliner with my husband Paul. Missy, an older but still active Australian Shepherd, is snoozing in her crate in the living room, while Dubhy the Scottie is sound asleep on the other recliner. Bonnie, a young Corgi/Scottie mix, is curled up in her crate under the table in my office. There’s no movement from any of them.

This doesn’t happen by accident. Most mornings we’re up and out to the barn to feed horses by 5:30 am, dogs at our heels. Their first hour of the day is spent chasing dog toys (and each other) up and down the barn aisle, playing “king of the hay bales,” scavenging for dropped bits of grain, and pretending to herd horses as we lead them out to their pastures. This uses up enough energy that the pack can spend a quiet morning in the house with me while I’m on the computer.

Later on, weather permitting, we share lunch in the backyard. Lucy retrieves toys

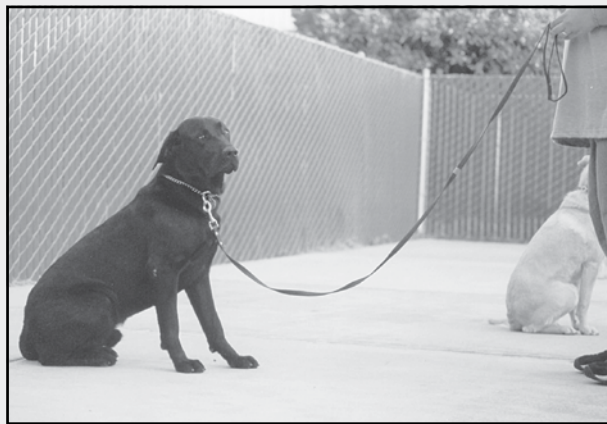
Shut Down Is *Not* the Same as Calm

Some dog owners and handlers, particularly those who use coercive training methods, fall into the trap of mistaking a “shut-down” dog for one who is calm. On the surface, calm dogs and shut-down dogs can appear behaviorally similar. Appearances can be deceiving; there is a world of difference.

A calm dog is relaxed, content, and happy. A calm dog trained with positive methods is ready, willing, and eager to do old stuff and try new stuff. Like my canine companions, he leaps to his feet at the suggestion of more fun activities, and can’t wait to figure out what you might want him to do next.

A shut-down dog has learned that the safest thing to do is nothing. Behavioral scientists call this *learned helplessness*. A dog trained with force and punishment learns that if he steps out of line, bad things will happen. Rather than being willing to make a mistake and suffer the consequences, he waits with trepidation to be told exactly what to do.

There are a number of dog training shows on TV. Try watching them with the sound turned down so you can focus on the dogs’ body language. See if you can identify the dogs who are shut down, where the little behavior they offer is appeasement behavior, with body tension, little or no eye contact, and avoidance of the humans who interact with them. And look for dogs who are truly calm, with relaxed body postures, soft eyes, softly wagging tails, welcoming human interaction).



This young dog, in a compulsion-based training class, is being “obedient.” But he’s also clearly scared and displaying learned helplessness.

that I toss for her while I eat, and Bonnie retrieves Lucy. Missy and Dubhy, older and less energetic, watch calmly.

There are a variety of other activities we might incorporate into our day, including training sessions, and games with interactive toys. Lucy is especially taken with the new generation of puzzle toys, such as ZooActive’s Dog Tornado. **[Editor’s note:** Pat will be reviewing the entire line of ZooActive’s interactive puzzles for dogs, from Pawlickers.com, in an upcoming issue.]

Sometimes one or more of the dogs is called into service as a neutral dog for a dog-reactive private client, or a canine play-partner for a soft or undersocialized dog who doesn’t engage well with others during group class playtime. On a really good day we set aside time for a dog-pack hike around our 80-acre farm. This is, without a doubt, the Miller dogs’ favorite activity. And, of course, we always prac-

tice wait for food bowls and at doors.

None of this wears them out completely. The instant I roll my chair away from my desk, three sets of girlie dog-paws leap into action and three pairs of canine eyes light up at the prospect of the next activity. (Dubhy, the true sloth of the group, conserves energy, happy to lie in his crate until he’s convinced there’s something exciting in the offing – for sure.) What the Miller UC program *does* do is give our dogs enough exercise, management, training – and love – to allow them to be relaxed and calm when I need them to be. 🐾

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

More Approved Dry Foods

Products we missed, were late, or were somehow incomplete!

This is absolutely not an excuse, but do us a favor and look at the incredible accumulation of minute facts about dog foods that appeared in the February issue and in this one; it may have been inevitable that we made a few small mistakes. We apologize for any inconvenience we have caused through the following errors and/or oversights:

■ The section on **Wellness** should have mentioned both Wellness and Wellness Simple Food Solutions; both lines of food are on our “approved dry dog food” list. We also listed Wellness’s physical and website addresses incorrectly; the company is in Tewksbury, Massachusetts, and the website is wellnesspetfood.com.

■ **Solid Gold** sent us their materials too late for us to include their products in our “approved dry dog foods” list in the February issue; their product information appears here now.

■ Due to an editing error, we failed to include the information sent to us by **Pet Chef Express** in the same “approved foods” list; their product information is also included here now.

■ We meant to note that a major feature of **SmartPak’s LiveSmart** food is its unique packaging and direct-shipping option. If desired, SmartPak will seal your dog’s food in individually customized daily portion packages; this is for an additional monthly fee of \$6.95 (shipping is free). This way, the food is “just-opened” fresh every day! It also makes it easy to keep your dog on a diet, especially if portion control is a problem with the people who feed the dog in your house.

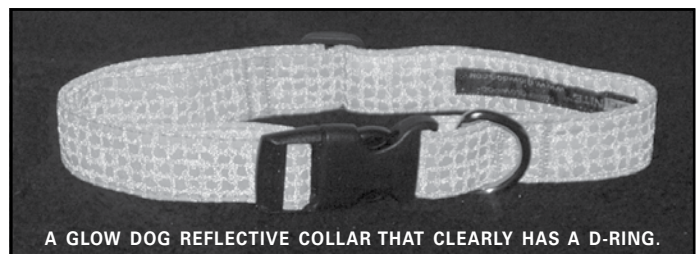
■ This one was *totally* not our fault! **“Light Up the Night”** – a review of nighttime visibility products in the January issue contained an inaccuracy in the description of our top pick in reflective collars. Glow Dog, based in Ashland, Massachusetts, makes the most amazing reflective products for dogs and their handlers. The products look normal in daylight, but reflect *very* brightly when headlights are trained on them.

Our only criticism of Glow Dog’s products noted that its reflective collar lacked a D-ring for a leash attachment, an oversight we didn’t understand. Glow Dog responded that *of course* its collars had D-rings, and they sent us some more collars as proof. But the one we received as a sample *really* didn’t! Apparently it was a dud, sent to us in error. Glow Dog says, “We stand behind our 100% satisfaction guarantee!”

If you receive a Glow Dog product that doesn’t seem right, contact the company at (888) 456-9364 for a refund or a replacement. Glow Dog website (glowdog.com) is currently under construction; products can be purchased through nite-gear.com. 🐾

Solid Gold Health Products for Pets, Inc. El Cajon, CA (800) 364-4863 solidgoldhealth.com	Solid Gold’s dry dog foods are made by Diamond Pet Products in Lathrop, CA and Meta, MO
MMillennia Beef and Barley Adult contains: Beef, beef meal, cracked pearled barley, brown rice, millet, rice bran, canola oil, ocean fish meal . . .	
GA: 22% protein; 12% fat; 4% fiber; 10% moisture	ON THE LABEL: Best by date; website, address EXTRA NUTRIENTS ON GA: DHA
Company statement: For more than 30 years, Solid Gold has been devoted to developing and producing the healthiest food for your dogs. Using only wholesome, natural ingredients, we have dramatically expanded our dry foods line so that we now have a food perfectly suited for all dogs, from the smallest lap dog to the largest working dog. Our raw ingredients and finished foods undergo rigorous testing at our manufacturing plant and independent laboratories. We are committed to safety and quality for the protection of your pets as well as our own. WDJ-approved foods include MMillennia, Hund-n-Flocken, Holistique Blendz, Just a Wee Bit, and WolfKing.	

Pet Chef Express, Inc. New Westminster, BC (604) 916-2433 petchefexpress.ca	Pet Chef Express dry dog foods are made by Champion Pet Foods, Ltd. in Morinville, Alberta, Canada
Salmon & Potato contains: Salmon meal, oats, millet, hullless barley, canola oil, salmon oil, carrots, potatoes . . .	
GA: 25% protein; 10% fat; 3% fiber; 10% moisture	ON THE LABEL: Best by date; address; phone; website EXTRA NUTRIENTS ON GA: Omega 3, 6
Company statement: Pet Chef Express dry dog foods is committed to making the best pet food in Canada, with all ingredients sourced within Canada and the US. We are different from regular pet foods by both what we include and what we exclude. Our Salmon & Potato blend features wild Pacific salmon meal that accounts for 25% of the recipe, fortified with barley, oats, millet, salmon oil, carrots, potatoes, garlic, flax and eggs to ensure balanced nutrition. We exclude high allergens like wheat and corn, and never use artificial flavours, colors, preservatives, by-products or questionable non-descriptive ingredients like “meat” or “natural flavors.” Please check our website to learn more: www.petchefexpress.ca (note: NOT .com!).	



Going Against Grain

Grain-free kibble represents an increasingly popular choice of foods.

BY NANCY KERNS

Last month's issue contained our annual review of dry dog foods, but with an exception from our usual format: This year, we decided to break out grain-free dry dog foods from the increasingly populated and competitive pack of terrific kibbled products on the market. We did not review them in the February issue, but will discuss grain-free foods at length here.

In 2005, Natura Pet Products was the first pet food company to manufacture and market a grain-free kibble, which was initially called Innova Evo (and is now called simply Evo). The success of the product, in the market and with many of the dogs fed the diet, sparked a proliferation of grain-free foods. We were able to find more than a dozen companies that currently offer one or more grain-free foods that meet our selection criteria.

Grain-free dry foods are still new enough that many dog owners wonder



There has been an explosion of grain-free dry dog foods in the market. While these products can be highly beneficial for many dogs, be aware that they vary significantly and should be selected to meet each dog's unique nutritional needs.

What you can do . . .

- Consider a grain-free diet for any dog you suspect may have an intolerance of or allergy to grains; it's worth a several-month trial!
- Scrutinize the levels of protein, fat, calories, calcium, and phosphorus and select a food that is most appropriate for your dog's age, weight, and energy needs.
- Portion control is particularly important when feeding nutrient-dense foods. Carefully measure the amount of grain-free food you give your dog.



whether grain-free products are healthy for dogs – and how it's even possible to make a dry dog food without grain.

Early pet food manufacturers used grain and grain by-products cast off by the human food manufacturing industry because they were readily available, relatively inexpensive, and functional. The choice wasn't made because dogs needed grain, but because dogs *could* utilize them.

Dogs have no dietary requirement for grains, and are physically not well suited to harvest, chew, and digest them. Biologists who study wild canines argue vociferously about the importance of the grains that are consumed by the dog's prey and are in turn taken in by the dog through consumption of his prey's digestive tract – but most agree that the percentage of grain in the dog's evolutionary diet is tiny.

The fact that the dog will eat grains and can derive benefits from them is less indicative of the suitability of dietary grain

for canines and more of a testament to the dog's long evolutionary history of eating *anything* and benefiting from it.

Plus, laboratory studies have proven that dogs have no dietary requirement for carbohydrates whatsoever; dogs can survive and thrive on diets containing only animal protein and fat.

The last – but not least – impetus for creating grain-free dog foods is the fact that *some* dogs are intolerant of or allergic to cereal grains. For these animals, grain-free foods often produce amazing results, as chronic symptoms of intolerance or allergy go away, and the dogs begin to thrive – perhaps for the first time in their lives.

Features of grain-free foods

When manufacturing grain-free kibble, whether baked, extruded, or dehydrated, most pet food companies replace grains with other carbohydrate sources; “grain-free” does not mean “carb-free.”

To calculate the percentage of carbohydrates in a food, start with 100, and subtract the percentages of protein, fat, moisture, and ash. The remainder is the carbohydrate content.

The role that carbohydrates play in grain-free dry dog foods varies quite a bit. Some companies have produced foods that are very high in protein and fat, with low levels of carbohydrates. Others have taken a more moderate approach, creating products that are higher in carbohydrates, and with protein and fat levels that more closely resemble the levels found in conventional, grain-filled dry dog foods. A dog owner who is considering a grain-free food has to look at the following to determine which of the products would be most appropriate for her dog:

■ **Amount of protein.** High-protein diets are generally suggested for dogs with high-stress, high-activity lifestyles. Recent studies have suggested that a high-protein, low-carbohydrate diet helps fat dogs lose weight more efficiently than higher-carb diets that contain fewer calories. Diets with more moderate levels of high-quality protein are suggested for dogs with kidney disease.

■ **Amount of fat.** Some of these foods contain very high levels of fat. High-fat foods are most appropriate for hard-working dogs, dogs in extremely cold environments, breeding animals, dogs with cancer (who benefit from low-carbohydrate diets), and

“hard keepers” – dogs who are chronically thin. High-fat diets are not appropriate for overweight dogs.

■ **Amount of carbohydrates.** If an owner is trying to feed a moderate protein, low-fat food, the diet will necessarily contain higher levels of carbs. This is a perfectly fine formula for many dogs. Just keep in mind that high-carb diets cause blood sugar fluctuations and insulin resistance – bad for dogs with or prone to diabetes. And dogs with cancer should eat high-fat, low- or no-carb diets (canine cancer cells utilize carbohydrates for growth).

■ **Calcium and phosphorus levels.** Some grain-free diets are very high in these minerals. Generally, the higher the product’s protein – that is, its meat inclusion – the higher its calcium and phosphorus will be. These minerals are among those with AAFCO-recommended maximum levels; high dietary calcium and phosphorus can lower the digestibility of a diet, may create or exacerbate bone abnormalities (especially in puppies and most critically, in large-breed puppies), and potentially inhibit zinc absorption over the long term. We’d recommend avoiding the products with the highest levels of calcium and phosphorus for any puppies.

■ **Ash level.** Ash is essentially what is left over if the food is burned in an incinerator. It is largely comprised of minerals, especially potassium and phosphorus,

with smaller amounts of calcium, iron, magnesium, sodium, and zinc. High ash levels indicate a high mineral content; high phosphorus levels are especially damaging to dogs with kidney disease (but will not harm the kidneys of a healthy dog).

■ **Calories.** Some grain-free diets are very calorie-dense. Large- and giant-breed puppies, in particular, should not be fed high-calorie diets. And portion control is critical when feeding a high-calorie diet to a dog of any age.

Choices

On the following pages, we’ve highlighted some grain-free dry dog foods that meet our selection criteria for a top-quality food. On pages 16-17, we have identified 12 pet food makers with top-quality grain-free offerings, and we’ve highlighted the ingredients of one food from each company. The foods are presented in alphabetical order of their makers.

On pages 18-19, we delve deeper into the nutrient content of each highlighted food, including the amounts of protein, fat, carbs, calcium, and phosphorus (as well as other nutrients, as you’ll see).

Though each of these products meets our selection criteria, as we have just explained, only you can select the grain-free food that’s appropriate for your dog, using the nutrient values on our charts.

Keep in mind that these foods are not perfect for every dog; some dogs do better on a diet that contains grain!

WDJ’s Grain-Free Dry Dog Food Selection Criteria

Our selection techniques are not secret or beyond any dog owner’s abilities. We didn’t conduct laboratory testing, feeding trials, or even taste tests! To generate the list of top-quality foods that appears on the following pages, we examined the ingredients listed on the product labels.

■ **We look for foods that contain a lot of high-quality animal proteins.** We’d love manufacturers to disclose the percentage of meat, poultry, or fish in their food, but they rarely do, so we look for foods that appear to have lots of animal protein. Ingredients are listed by weight, so ideally a food will have one or two animal proteins in the first few ingredients.

■ **We reject any food containing meat by-products or poultry by-products.**

■ **We reject foods containing fat or protein not identified by species.** “Animal fat” is a euphemism for a low-quality, low-priced mix of fats of uncertain origin. “Meat meal” could be practically anything.

■ **We look for whole food ingredients.** That said, some fruits, vegetables, legumes, tubers, and other foods have valuable constituents that accomplish specific tasks in a dog food formula. We don’t get too upset about one or two food fragments on the ingredients panel. Our tolerance diminishes in direct proportion to the number of fragments and by-products contained in a food and their position on an ingredients label (the higher an ingredient appears on the ingredients list, the more of it – by weight – there is in the food).

■ **We eliminate all foods with artificial colors, flavors, or preservatives** listed on their ingredients panels. A healthy product full of top-quality ingredients shouldn’t need non-nutritive additives to make it look or taste better. And plenty of good natural preservatives (such as rosemary extract and vitamins E and C) can be used instead.

■ **We eliminate all foods with added sweeteners.** Dogs, like people, enjoy sweet foods. Like people, they can develop a taste for these nutritionally empty calories.

WDJ'S 2008 APPROVED GRAIN-FREE DRY DOG FOODS

Artemis Pet Foods North Hollywood, CA (800) 282-5876 artemiscompany.com	Grain-free food is Maximal Dog
First 15 ingredients: Chicken meal, potatoes, chicken fat, chicken, natural chicken flavor, tomato pomace, choline chloride, dried chicory root, kelp, carrots, peas, apples, tomatoes, blueberries, spinach . . .	
WDJ's comments: A high-protein, high-fat, relatively low-ash food with relatively high calcium and phosphorus levels.	

Champion Pet Foods Morinville, Alberta (780) 939-6888 championpetfoods.com	Grain-free foods include a whole line of Orijen foods, including Puppy, Puppy Large Breed, Adult (highlighted here), Orijen 6 Fresh Fish, and Senior varieties
First 15 ingredients: Deboned chicken, chicken meal, turkey meal, russet potato, lake whitefish, chicken fat, sweet potato, whole eggs, turkey, salmon meal, salmon and anchovy oils, salmon, natural chicken flavour, sunflower oil, sun-cured alfalfa . . .	
WDJ's comments: High in protein, moderately high in fat. Relatively high calcium and phosphorus, and relatively high ash.	

Dick Van Patten's Natural Balance Pacoima, CA (800) 829-4493 naturalbalanceinc.com	Grain-free foods include Potato & Duck (highlighted), Sweet Potato & Fish , and Sweet Potato & Venison
First 15 ingredients: Potatoes, duck meal, duck, canola oil, potato fiber, natural flavor, salmon oil, flaxseed, potassium chloride, choline chloride, taurine, lysine, l-carnitine, yucca schidigera, vitamin E supplement . . .	
WDJ's comments: A "limited ingredient" food with conventional levels of protein, fat, and ash, and high carb content (for this category of foods).	

Solid Gold Health Products for Pets, Inc. El Cajon, CA (800) 364-4863 solidgoldhealth.com	Grain-free food is Barking at the Moon
First 15 ingredients: Salmon meal, beef, potatoes, potato protein, canola oil, tomato pomace, natural flavor, salmon oil, choline chloride, taurine, dried chicory root, parsley flakes, pumpkin meal, almond oil, sesame oil . . .	
WDJ's comments: High protein and fat. High calcium and phosphorus; calcium is over AAFCO maximum. Moderate ash.	



Petcurean Pet Nutrition Chilliwack, British Columbia (866) 864-6112 petcurean.com	Grain-free foods include three varieties of Now! (Puppy, Senior, and Adult, highlighted here), and Go! Natural Grain-Free
First 15 ingredients: Deboned turkey, potato flour, peas, apples, whole dried egg, pea fiber, tomatoes, potatoes, flaxseed, canola oil, natural flavors, deboned salmon, deboned duck, sun dried alfalfa, coconut oil . . .	
WDJ's comments: Moderate protein and fat. Calcium and phosphorus are moderate; ash is relatively low. All animal proteins in Now! are fresh, not rendered. The Go! Natural Grain-Free food is a high-protein, high-fat food that contains turkey, chicken, duck, and salmon meals.	

Canine Caviar Pet Foods Costa Mesa, CA (800) 392-7898 caninecaviar.com	Grain-free food is Venison & Split Pea Adult Dinner
First 15 ingredients: Venison meal, split peas, canola oil, dried pumpkin, whole ground flaxseed, sun-cured alfalfa, venison tripe, dried beet pulp, coconut oil, borage oil, primrose oil, sun-cured kelp, sodium chloride, lecithin, whole clove garlic . . .	
WDJ's comments: A high-protein, high-fat food. Calcium and phosphorus levels are at AAFCO maximums. Ash is relatively low.	

Diamond Pet Products Meta, MO (800) 658-0624 tasteofthewildpetfood.com	Grain-free foods include three varieties of Taste of the Wild , including "High Prairie" (bison and venison, highlighted here), "Pacific Stream" (fish), and "Wetlands" (quail, duck, and turkey).
First 15 ingredients: Bison, venison, lamb meal, chicken meal, egg product, sweet potatoes, peas, potatoes, canola oil, roasted bison, roasted venison, natural flavor, tomato pomace, ocean fish meal, choline chloride . . .	
WDJ's comments: High protein and fat, and high levels of calcium and phosphorus. Moderate carb level and ash content, too. Pacific Stream formula has lower protein and fat levels.	

Natura Pet Products Santa Clara, CA (800) 532-7261 naturapet.com	Grain-free foods include Evo (available in large and small "bites" and highlighted here), Evo Red Meat (available in large and "bites"), and Evo Reduced Fat
First 15 ingredients: Turkey, chicken, turkey meal, chicken meal, potato, duck, herring meal, chicken fat, natural flavors, eggs, apples, tomatoes, potassium chloride, carrots, vitamins . . .	
WDJ's comments: High in protein and fat, moderate level of carbohydrates. Calcium and phosphorus are above AAFCO's suggested maximums. Ash is moderately high. "Red Meat" varieties are lower in calcium and phosphorus.	

Nature's Variety Lincoln, NE (888) 519-7387 naturesvariety.com	Grain-free foods include three varieties of Instinct (Chicken Meal Formula, Rabbit Meal Formula, and Duck Meal & Turkey Meal Formula, highlighted here)
First 15 ingredients: Duck meal, turkey meal, salmon meal, canola oil, tapioca, tomato pomace, pumpkin seeds, herring meal, alfalfa meal, montmorillonite clay, natural flavor, potassium chloride, brewers yeast, vitamins, peas . . .	
WDJ's comments: High in protein and fat. Calcium and phosphorus are high; their ratio is at AAFCO's maximum level. (The Rabbit Formula has lower calcium and phosphorus levels.) Ash is moderately high.	



Taplow Feeds North Vancouver, BC (800) 658-1166 firstmate.com	Grain-free foods include FirstMate Potato & Fish , FirstMate Potato & Fish With Blueberries (highlighted here)
First 15 ingredients: Potato flakes, chicken meal, chicken fat, whole blueberries, dicalcium phosphate, choline chloride, salt, calcium propionate, vitamin C, yucca plant extract, vitamin A, vitamin D, vitamin E, vitamin K, thiamin . . .	
WDJ's comments: A very simple limited formula with moderate protein and fat, conventional levels of calcium and phosphorus. Conventional carb level and high ash.	

The Honest Kitchen San Diego, CA (619) 544-0018 thehonestkitchen.com	Grain-free foods include Force (highlighted here) and Embark
First 15 ingredients: Chicken, organic flaxseed, potatoes, celery, sweet potatoes, apples, alfalfa, organic kelp, honey, zucchini, green beans, cabbage, bananas, papayas, yogurt . . .	
WDJ's comments: This is an unconventional food with conventional levels of protein, fat, and a relatively (for this category) high level of carbohydrates. This is not a baked or extruded food, but a dehydrated product, made in a human food manufacturing facility (and we've been there!). Force has moderate levels of calcium and phosphorus, and low ash.	

Wellness/ Old Mother Hubbard Tewksbury, MA (800) 225-0904 wellnesspetfood.com	Grain-free foods include CORE , available in three varieties, including "CORE Original," "CORE Reduced Fat," and "CORE Ocean Formula" (highlighted here)
First 15 ingredients: Whitefish, whitefish meal, salmon meal, menhaden fish meal, potatoes, dried ground potato, canola oil, pea fiber, tomato pomace, natural fish flavor, flaxseed, carrots, sweet potatoes, kale, broccoli . . .	
WDJ's comments: High protein, and moderate amounts of fat, carbs, calcium, phosphorus, and ash.	



An In-Depth Look at Typical Nutrient Levels in Commercial Dog Foods

On the previous pages and above, we've highlighted grain-free foods from 12 companies. Given a smaller field of foods than we feature in our review of conventional dry dog foods (which appears in each February's issue), and given the fact that these companies have taken such disparate approaches to formulating their grain-free products, we decided that now would be a perfect time to discuss the variations in nutrient levels found in pet foods.

As we discussed in detail in "Take it With a Block of Salt," (February 2007), it comes as a surprise to many dog owners that foods that are labeled as "complete and balanced" can actually contain a wide range of nutrient levels. While they *probably* contain at least a minimum of nutrients your dog needs, various "complete and balanced" foods do not provide equal amounts of essential nutrients!

On the following pages, we've charted the nutrient levels contained in each of the products highlighted on the previous pages. Take a look at how different they are – and let this information guide your selection of a product that's most appropriate for your dog.

Why these nutrients?

In order to sell its products as "complete and balanced" for dogs, pet food makers have to ensure that the products meet certain requirements. The first way they can accomplish this is to formulate the candidate product so that the nutrients it contains fall within parameters developed by a quasi-governmental industry group, the Association of American Feed Control Officials (AAFCO).

AAFCO is not an enforcement or regulatory agency. Rather, it is comprised

of feed control officials from each state, who get together to research, discuss, and develop model feed control policies (which are generally adopted, with some exceptions, by the individual states).

Over the decades, AAFCO members have mined facts and conclusions from nutritional studies conducted by industry and university researchers. Their goal has been the ongoing development and refinement of a set of recommendations: the AAFCO Dog and Cat Food Nutrient Profiles. The profiles include values for each of the nutrients currently understood to be essential for maintaining dogs or cats. For most of the nutrients, only a minimum value is offered; maximum "safe" values are known for only a small number of nutrients (mostly minerals, as well as vitamins A, D, and E).

The AAFCO Dog Food Nutrient Profiles include values for the following nutrients:

- **Crude protein**, as well as the **10 amino acids** known to be essential for maintaining canine health. (Many studies suggest that dogs would benefit from the addition of a minimum requirement for taurine, but this is still controversial among nutrition experts. Many dog food makers add taurine to their products anyway.)

- **Crude fat**, as well as **linoleic acid**, an Omega 6 fatty acid.

- **Twelve minerals**, including the two most important ones – calcium and phosphorus – which must be present in a specified range of ratios to each other.

- **Eleven vitamins**. (A case can be made for the need to add minimum levels of vi-

tamin K and biotin to the AAFCO profiles. Again, this is still controversial. Many dog food makers add vitamin K and/or biotin to their products.)

The AAFCO nutrient profiles (and our chart on the following pages) are expressed on what's called a "dry matter" (DM) basis, making it possible to accurately compare foods that contain varying amounts of moisture.

Most pet food labels express their contents on an "as fed" basis, which includes the moisture present in the food. To convert an "as fed" value from the label of a dog food bag, divide the value listed by the percentage of the food that is not moisture. For example, say a label reports that a food contains 28% protein and 10% moisture. Divide 28 by 90 (the percentage of the food that is not moisture) and you get 31 – the percentage of protein in the food on a DM basis.

Other paths to adequacy

A company can also make a claim of nutritional adequacy for its candidate product based on **feeding trials** of the food that are conducted according to AAFCO protocols. In this case, the label will reference this, not the nutrient levels of the food.

Be aware that foods that have met the "feeding trials" standard may *not* meet all of the AAFCO nutrient profiles, and that foods that met the "nutrient levels" standard were not required to pass a feeding trial.

Try not to think about the third method of achieving a "complete and balanced" status. It won't be hard, because you won't see any mention of it on a product label. Referred to as the "family member" rule, it allows a manufacturer to use the "feeding



With this sort of food, it pays to read the fine print. Some grain-free foods contain very high levels of protein, fat, or minerals, which could prove problematic for certain dogs.

trial” claim if the maker can demonstrate that a new product bears a “nutritional similarity” to one of its products that has already passed a feeding trial.

For each of the foods we’ve highlighted as “top grain-free dry dog foods,” we’ve charted the values (right) for each of the nutrients in the AAFCO profiles. We’ve noted at the bottom of the columns which foods met the “complete and balanced” nutritional adequacy requirements via the “nutrient levels” standard, and which met the “feeding trials” standard. You may notice that when you see values that lie outside (or close to the edges of) the AAFCO profiles, you’re almost always looking at a food that met the feeding trials standard.

By the way, we gathered the data for this table from the food makers themselves. Any food company ought to be able to produce this information to interested consumers in a snap, though we were dismayed to discover that some companies seemed to have trouble fulfilling our request. This is troubling, because their foods should be *frequently* tested to make sure their formulas are consistently producing the intended nutrient levels.

In contrast, we *hugely* appreciate and applaud companies like Natura Pet Products (maker of Evo), which keeps the complete typical nutrient analysis for each of its foods published on its website.

Why switching foods is a good idea

We’ve always found it fascinating that many otherwise knowledgeable dog owners and industry professionals (including veterinarians and long-time breeders) are unaware of the fact that different “complete and balanced” dog foods may display *widely* divergent amounts of the nutrients that are essential for their pets’ health.

Most foods have some nutrient levels that are relatively low and others that may be a bit high. Imagine that a dog is given a lifetime diet that is a bit low in some nutrients and a bit high in others. Over time, fed a diet solely comprised of that food, the dog’s body will become a figurative model of those nutrient levels, for better or worse. This is exactly why humans are told to eat a variety of healthy foods – to prevent this very scenario! Now, why would such a feeding plan make sense for canines, but not humans? It doesn’t!

We consider all of the foods mentioned here to be of very high quality – but we wouldn’t want a dog to eat only one of any of these (or any other) food for the rest of his life! 🐾

NUTRIENT	AAFCO DOG FOOD NUTRIENT PROFILES (RECOMMENDED MINIMUMS, MAXIMUMS, EXPRESSED AS DM)	
PROTEIN	18% MIN	
ARGININE	0.51% MIN	
HISTIDINE	0.18% MIN	
ISOLEUCINE	0.37% MIN	
LEUCINE	0.59% MIN	
LYSINE	0.63% MIN	
METHIONINE-CYSTINE	0.43% MIN	
PHENYLALANINE-TYROSINE	0.73% MIN	
THREONINE	0.48% MIN	
TRYPTOPHAN	0.16% MIN	
VALINE	0.39% MIN	
FAT	5.0% MIN	
LINOLEIC ACID	1.0% MIN	
CALCIUM	0.6% MIN; 2.5% MAX	
PHOSPHORUS	0.5% MIN; 1.6% MAX	
CA:PHOS RATIO	1:1 MIN; 2:1 MAX	
POTASSIUM	0.6% MIN	
SODIUM	0.06% MIN	
CHLORIDE	0.09% MIN	
MAGNESIUM	.04% MIN; 0.3% MAX	
IRON	80 MG/KG MIN; 3,000 MG/KG MAX	
COPPER	7.3 MG/KG MIN; 250 MG/KG MAX	
MANGANESE	5.0 MG/KG MIN	
ZINC	120 MG/KG MIN; 1,000 MG/KG MAX	
IODINE	1.5 MG/KG MIN; 50 MG/KG MAX	
SELENIUM	0.11 MG/KG MIN; 2.0 MG/KG MAX	
VITAMIN A	5,000 IU/KG MIN; 250,000 IU/KG MAX	
VITAMIN D	500 IU/KG MIN; 5,000 IU/KG MAX	
VITAMIN E	50 IU/KG MIN; 1,000 IU/KG MAX	
THIAMINE (B1)	1.0 MG/KG MIN	
RIBOFLAVIN (B2)	2.2 MG/KG MIN	
PANTOTHENIC ACID (B5)	10.0 MG/KG MIN	
NIACIN (B3)	11.4 MG/KG MIN	
PYRIDOXINE (B6)	1.0 MG/KG MIN	
FOLIC ACID	0.18 MG/KG MIN	
CYANOCOBALAMIN (B12)	22.0 MICROGRAMS/KG MIN	
CHOLINE	1.2 GRAMS/KG MIN	
CARBS	(NO AAFCO REQUIREMENT)	
ASH	(NO AAFCO REQUIREMENT)	
FEEDING TRIAL OR NUTRIENT LEVELS?		

	Artemis' Maximal Dog	Canine Cavalier	Champion's Orijen Adult	Diamond's Taste of the Wild, High Prairie	Dick Van Patten's Natural Balance	Natura's Evo	Nature's Variety's Instinct, Duck	Petcarean's Now! Adult	Solid Gold's Barking at the Moon	Taplow's FirstMate Potato, Chicken	The Honest Kitchen's Force	Wellness' CORE Ocean
	47.1	41.3	46.7	36.7	23.3	48.0	38.9	28.8	45.1	25.0	21.9	38.2
	2.70	2.60	3.56	2.11	0.94	3.52	2.64	1.27	2.59	1.60	1.37	2.40
	1.00	0.95	1.22	0.81	0.48	0.94	0.87	0.52	1.00	0.48	0.52	0.84
	1.70	1.34	2.00	1.32	0.71	1.91	1.36	1.17	1.61	0.85	0.80	1.58
	3.30	2.35	2.22	2.57	1.46	3.32	1.60	1.98	3.15	1.59	2.00	2.61
	2.20	1.67	2.00	1.74	0.99	3.18	2.40	1.55	2.13	1.32	1.19	2.73
	1.70	0.83	1.67	1.30	0.96	1.54	1.21	0.75	1.59	0.88	0.77	1.31
	3.10	1.29	1.78	2.42	0.82	3.43	2.43	1.17	2.97	0.96	1.41	2.81
	1.70	2.43	1.96	1.34	0.78	1.94	1.56	1.13	1.65	0.87	1.04	1.56
	0.40	0.26	1.96	0.32	0.22	0.47	0.20	0.31	0.40	0.23	0.21	0.43
	2.10	1.67	2.22	1.66	0.86	2.31	1.77	1.34	2.03	1.10	0.87	1.96
	24.0	21.7	17.8	19.7	11.1	24.7	24.4	17.6	22.3	15.0	14.6	16.5
	3.2	4.6	2.2	2.8	2.1	4.7	3.4	3.0	3.8	2.9	2.1	2.4
	2.0	2.7	2.0	2.3	1.5	3.4	2.5	1.4	2.6	1.0	1.8	2.0
	1.3	1.7	1.6	1.5	1.0	2.0	1.3	0.9	1.7	0.6	1.1	1.4
	1.5:1	1.6:1	1.3:1	1.5:1	1.5:1	1.7:1	1.9:1	1.5:1	1.5:1	1.7:1	1.6:1	1.4:1
	0.7	0.8	0.8	0.9	1.2	0.9	1.0	0.7	0.9	0.5	2.8	0.9
	0.24	0.41	0.28	0.31	0.23	0.42	0.54	0.43	0.26	0.12	0.28	0.54
	0.44	0.85	0.67	0.49	0.57	0.74	1.27	0.89	0.49	0.22	0.09	0.37
	0.13	0.47	0.10	0.15	0.11	0.12	0.12	0.12	0.21	0.13	0.11	0.17
	175	261	267	175	112	262	320	478	175	221	133	310
	16.0	18.1	25.6	16.4	11.3	20.0	30.2	23.9	16.0	14.2	7.7	22.5
	27.0	68.5	28.9	27.3	34.5	23.3	21.7	29.4	27.0	20.9	83.2	26.3
	175	280	250	175	224	251	245	163	175	157	122	250
	2.7	6.0	5.6	2.7	2.1	4.2	20.9	5.4	2.7	1.6	1.5	3.0
	0.44	0.80	0.42	0.44	0.36	1.00	0.83	0.22	0.44	0.41	0.18	0.30
	18,033	25,093	44,444	18,033	14,328	26,968	25,863	15,217	16,393	5,455	72,530	39,779
	874	1,928	2,111	874	1,222	2,629	2,831	1,630	874	545	573	2,036
	328	95	500	328	116	333	173	239	328	60	60	683
	34.0	8.7	72.2	33.9	4.0	5.7	25.2	13.0	34.0	4.3	2.5	3.4
	6.6	10.0	57.8	6.6	5.7	5.7	15.1	10.9	6.6	8.1	4.1	6.9
	20.8	19.5	50.0	20.8	23.5	24.4	32.1	26.1	20.8	17.8	16.0	28.9
	55.0	68.6	261.1	54.6	24.8	44.4	124.8	59.8	55.0	51.8	76.7	48.5
	10.9	4.8	40.0	10.9	2.7	5.7	7.4	8.7	10.9	1.0	8.7	6.0
	1.60	0.62	3.89	1.64	0.34	0.89	1.01	2.7	1.60	0.25	29.45	0.67
	120	201	44	120	33	11	7.4	140	120	94	60	50
	2.6	3.7	4.4	2.6	2.2	4.6	4.2	2.0	2.6	2.9	1.6	2.2
	17.9%	26.1%	24.4%	30.5%	53.9%	16.1%	22.8%	42.1%	19.5%	40.0%	52.8%	29.1%
	8%	7%	7.8%	10%	8.3%	12.2%	13.9.%	8%	11%	16%	5%	9%
	FT	NL	NL	NL	FT	NL	NL	NL	FT	NL	NL	NL

Chiropractors for Canines

This hands-on healing modality improves more than just joint health.

BY CJ PUOTINEN

Everyone knows that chiropractors are bone and joint doctors. They help alleviate back pain and other aches by making adjustments that improve skeletal alignment and musculoskeletal function. In recent years, chiropractic adjustments have become popular for dogs, especially those recovering from accidents or injuries.

But did you know that chiropractic care can improve a dog's digestion; speed healing after illness or surgery; treat behavior or mood changes; help alleviate ear infections, urinary incontinence, and allergies; and even correct neurological imbalances?

Cheryl Morris, DC (Doctor of Chiropractic), a chiropractor for humans in Congers, New York, knew something was wrong with Stanley Queue, her five-year-old Scottie. He vomited spontaneously three or four times a day several times a week, and when she palpated his abdomen, his diaphragm felt tight.

Stanley's digestive problems were her main concern, but he also limped because



Stanley Queue suffered chronic digestive problems, but it was a limp that prompted his owner to take him to Sue Ann Lesser, DVM, for chiropractic. Both his limp and his digestion improved with chiropractic treatments.

of hind leg weakness. Five months ago, she took him to chiropractic veterinarian Sue Ann Lesser, DVM. Dr. Lesser conducts monthly animal chiropractic clinics in New York, New Jersey, Pennsylvania, Connecticut, and Maryland.

"After that first adjustment," says Dr. Morris, "Stanley's tail was up for the first time in months, he walked normally, and he went for an entire week without throwing up. Even after his vomiting returned, it happened less often and was less intense."

Dr. Lesser suggested a change of diet, so Dr. Morris switched dog food brands and protein sources. "That made a big difference," she says. "At his second appointment, his thoracic lumbar junction needed adjustment, and after that he kept improving. So far Stanley has had five adjustments, and he keeps getting better."

In another chiropractic success story, Cassie, a spayed female Shepherd mix, suffered from urinary incontinence until chiropractic veterinarian Cindy Maro, DVM, adjusted her fifth lumbar vertebrae, sacral apex, and the base of her sacral bone. As soon as she did so, Cassie's urinary leakage and long-term bowel and anal gland problems disappeared. (We discussed this case in more detail in "Not Just for Sore Backs," WDJ October 2003.)

Some breeders coping with reproductive problems consider chiropractic a fertility treatment because so many of their dogs conceived after being adjusted.

Even hot spots and lick granulomas may respond to chiropractic adjustments. Last summer my Labrador Retriever, Chloe, developed a lick granuloma on her right front paw. At her monthly appointment, Dr. Lesser said, "I'm not surprised. Her toes were jammed." After a quick toe-freeing adjustment, Chloe forgot about chewing her foot.

Chloe's problem had a mechanical cause, but dozens of conditions that have no obvious connection to the skeleton

What you can do . . .

- Consult our resources to find a certified animal chiropractor or chiropractic veterinarian.
- Share your dog's veterinary exam results, lab tests, and x-rays with your chiropractic practitioner.
- Keep notes so you can accurately report injuries and symptoms.
- Consider making regular chiropractic appointments for improved overall health and problem prevention – for both you and your dog!



and its alignment respond to chiropractic treatment. As the American Veterinary Chiropractic Association (AVCA) website explains, all of the body's organs are connected to nerves that run between vertebrae, and adjustments in these areas can change or influence nervous system input and blood flow as well as hormones and neurotransmitter levels directly affecting organs, glands, skin, and joints.

"Every dog is an individual," Dr. Lesser says, "and responses vary, but I truly can't think of a medical condition that won't be helped in some way by chiropractic adjustments. I'm never surprised when dogs respond to chiropractic treatment, even for conditions like infections, skin and coat problems, digestive disorders, behavioral problems, and recovery from the use of anesthesia. This doesn't mean that chiropractic care is a stand-alone treatment that replaces conventional veterinary care. Chiropractic is a complementary or support therapy. A thorough veterinary exam

should always precede any chiropractic evaluation.”

To help determine whether your dog will benefit from chiropractic treatment, see “Biomechanical Evaluation” by Randy Kidd, DVM, PhD (August 2002 WDJ). Dr. Kidd’s descriptions and checklists will help you see your dog from a new perspective, keep accurate health records, and make more informed decisions about your dog’s care.

America’s veterinary chiropractors

The formal training of veterinary chiropractors in the U.S. began in 1989 with a 100-hour post-graduate course developed and taught by Sharon Willoughby, DVM, DC, in which veterinarians and chiropractors were trained side by side. In programs approved by the AVCA, that practice continues today. Veterinarians receive a foundation of chiropractic theory and technique, while chiropractors study common animal diseases, comparative anatomy, and animal-handling techniques. Adjustments are taught with both dogs and horses.

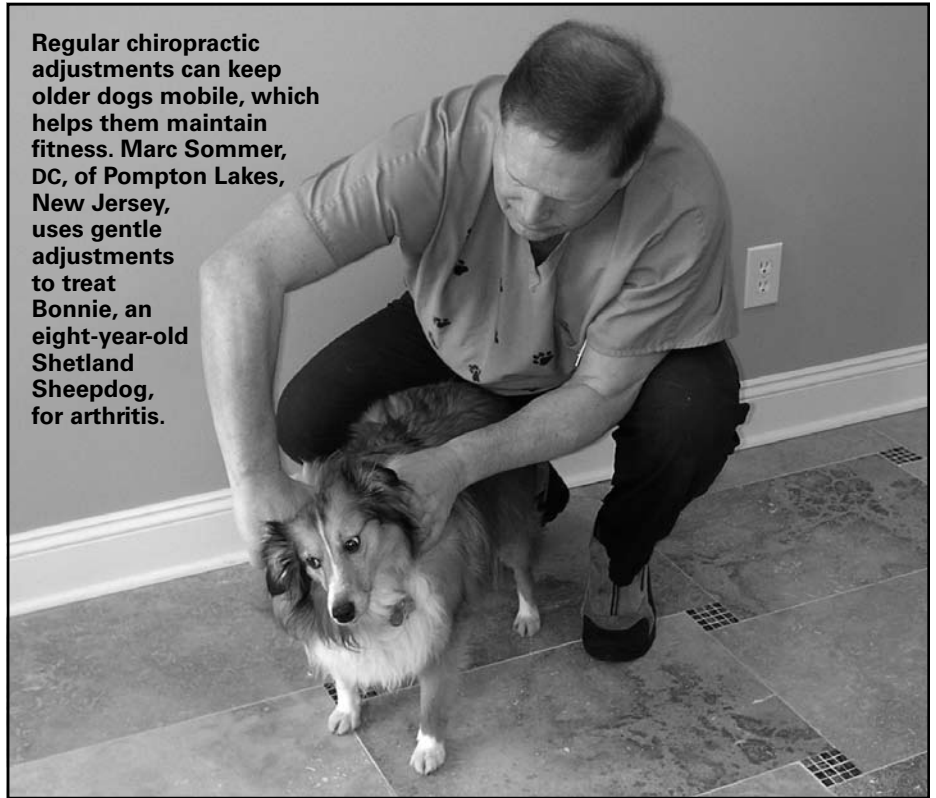
Licensing regulations vary by state. In New York, where Dr. Morris adjusts human patients, chiropractic treatment can be given to dogs and other animals only by licensed veterinarians. Even if she studied veterinary chiropractic, Dr. Morris could not legally treat animal patients in New York State. Across the border in New Jersey, Dr. Morris could practice on animals with a veterinarian’s referral. Currently no states allow chiropractors to work on animals without a veterinarian’s referral or, as in California, a vet’s supervision.

Are the approaches of veterinarians who learn chiropractic techniques and chiropractors who learn about veterinary medicine different? Because of their training, chiropractors are likely to have a better understanding of the actual adjustment technique, while veterinarians are more familiar with animal anatomy, handling methods, and specific illnesses.

But it’s more likely that personality traits, interests, experience, and other factors will determine which veterinary chiropractor will best help your dog. The same is true when choosing a chiropractor or healthcare practitioner for yourself.

The AVCA defines a chiropractic adjustment as “a short-lever, high-velocity controlled thrust by hand or instrument that is directed at specific articulations to correct vertebral subluxations.”

Regular chiropractic adjustments can keep older dogs mobile, which helps them maintain fitness. Marc Sommer, DC, of Pompton Lakes, New Jersey, uses gentle adjustments to treat Bonnie, an eight-year-old Shetland Sheepdog, for arthritis.



“Subluxation” describes the misalignment of vertebrae resulting in a disturbance of normal function. Subluxations may cause animals and people to compensate for resulting pain with changes in posture or movement, such as shifting weight or avoiding certain motions. Secondary subluxations can occur in other parts of the spine as a result, creating complications.

When a vertebral subluxation is diagnosed, the chiropractor re-establishes normal motion with an adjustment. When properly performed, this thrust mobilizes or frees the vertebrae and restores normal function in that spinal segment. As a result, spinal adjustments may reverse a variety of nerve, muscle, and motion problems.

Subluxations can cause abnormal or uneasy posture while standing or sitting, a refusal or unwillingness to go over jumps, the development of unusual behavior patterns such as biting or growling, unusual sensitivity to touch, a lack of coordination or gait abnormality, stiffness on rising, stiffness in lateral movements of the back or neck, muscle atrophy, lameness in hindquarters, abnormal biting or chewing of the coat or tail, increased sensitivity to heat or cold, and limited range of motion.

“The problems that subluxations cause might be visible and obvious, or they may still be developing,” says animal chiropractor Marc L. Sommer, DC, of

Pompton Lakes, New Jersey. “We think of the subluxation as the problem, its adjustment as the cure, and the improvement of symptoms as a desired side-effect. Most animals show significant improvement after one to four adjustments.”

In chiropractic examinations, major muscle groups are checked for atrophy, hypertrophy, tone, symmetry, heat, tenderness, and pain. In addition, the spine is palpated and examined for abnormal protuberances, restricted motion, and other unusual features.

Some veterinary chiropractors use only their hands while others employ a small spring-loaded impacting device called an activator to provide mechanical-force, manually assisted adjustments. Both methods have their proponents, and individual preferences vary. (All of the practitioners mentioned here use their bare hands.)

Large and unwieldy devices like mallets or hammers are not needed to adjust even the largest animals, says Dr. Sommer, and they can create more acute and serious conditions. Other procedures that he warns against include the use of excessive force and jerking on the legs or tail. “These practices do not constitute a chiropractic adjustment, and they may exacerbate an already existing injury,” he says. “Remember that skill, not extreme force, is the key to successful adjustments.”

Typical patients

Trauma injuries remain the number one reason for bringing a dog to a veterinary chiropractor.

“When a dog is hurt, it’s important to deal with fractures and internal injuries first,” says Dr. Lesser, “but after that, chiropractic care speeds recovery from any injury, including being hit by a large object like a car, bus, train, or another dog of equal or greater size. Dogs often injure themselves by body slamming, playing bump-and-run, and other canine games. Or they hit a large immovable object such as a wall while playing ‘magic carpet ride,’ or they fall off the porch, deck, bed, or dog walk, or down a flight of stairs.”

Among medical maladies, she says, chiropractic adjustments speed recovery from surgery and the use of general anesthesia as well as chronic ear infections, especially those that occur in only one ear, and a host of structural problems.

For example, dogs with hip dysplasia often feel better when adjusted. “While chiropractic cannot *cure* the bilaterally dysplastic dog, they are more comfortable when the rest of the body moves properly,” says Dr. Lesser. “Dogs with unilateral hip dysplasia in the absence of trauma have sacral-pelvic misalignments that biomechanically stretch the ligaments and joint capsule of the hip. Straightening the dog’s hind end and specifically conditioning the dog will often eliminate unilateral hip dysplasia.”

Chiropractic adjustments can be used to treat persistent lameness, including lameness that does not respond to anti-inflammatory therapy and chronic lameness that is secondary to long-term orthopedic treatment like cruciate ligament surgery. “It might not be the surgically treated elbow or knee that is bugging the dog,” Dr. Lesser explains. “The problem may be the compensations that his body has made since the knee or elbow was injured.”

Disc disease at any spinal level or severity, she cautions, should be treated only in conjunction with conventional or holistic veterinary care. Acupuncture combined with chiropractic care may improve the outcome.

Dogs with arthritis usually respond well to chiropractic adjustments in conjunction with acupuncture and medical therapy, including the use of nutritional supplements such as Glycoflex or Cosequin, says Dr. Lesser. “These treatments can provide the arthritic dog with a better quality of life.



Chiropractic isn’t just for the spine; every joint should move smoothly, and every joint can become impinged. Here, Sue Ann Lesser, DVM, adjusts a dog’s shoulder and elbow joints.

Interestingly, dogs with significant arthritic changes seen in their x-rays usually have good mobility in their joints, while older dogs with ‘clean’ x-rays usually have a reduced range of motion.”

Another of Dr. Lesser’s risk categories is what she calls “occupational hazards.”

“Here we have dogs who were playing or working and then became acutely lame. Their lameness usually improves with minimal conventional treatment, but after that the dog is never ‘quite right.’ The category includes all competition dogs at all levels. Any decrease in performance is a symptom, such as a competition dog who isn’t placing or scoring as high as previously, won’t hold a sit/stay, won’t ‘stack’ (hold a pose in the conformation show ring) without shifting, is suddenly slow to retrieve, or simply doesn’t work as well or as enthusiastically as previously.”

Dr. Lesser lists poor leash manners as the number-one cause of cervical (neck) problems, followed by inappropriate leash corrections as the number-two cause. “And then there are all the problems that come with always heeling on only one side in both breed and obedience,” she adds. “Any unilateral activity creates muscle imbalances that can profoundly affect the dog’s gait. For every five minutes that a dog heels on the left, he should heel on the right. Dogs do not have difficulty switching sides; people do. In addition, dogs who routinely turn in one direction while racing

out the kitchen door to chase squirrels will exhibit much the same subluxation patterns as dogs who heel only on the left side.”

Dr. Lesser’s final risk category is something she calls “dogs are dogs.” Here she includes any American-bred German Shepherd Dog more than four years of age; dogs who vigorously play ball, Frisbee, and fetch games; dogs who chase squirrels, cats, and other creatures; dogs whose notion of fun is a flying leap into space; dogs who play actively in deep snow, especially those who bound, porpoise, plow, or tunnel; and any dog who has way too much fun.

“While subtle at first,” she says, “over time minor injuries associated with these activities accumulate and your exuberant playmate becomes an ‘old arthritic dog’ well before his time. Then he won’t jump onto the couch or bed, won’t go up or down stairs, won’t jump in or out of the car, and is slow to stand up or lie down.”

To this list of conditions and symptoms that respond to chiropractic adjustments, the AVCA adds old age, any chronic health problems that do not resolve as expected, and seizures or neurological problems.

Chiropractic assessment

What do veterinary chiropractors look for when they first see a patient? Dr. Lesser observes the dog’s posture, as well as his level of alertness when he initially enters the treatment area. Then she has the patient walk with his handler away from and toward her while she checks his tail position, gait, and overall appearance.

“The dog may show a personality change by seeming not as active or happy as usual,” she explains. “He may start snapping or look like he has a headache or an anxious facial expression. The tail might not wag symmetrically, or it may be clamped or held straight out from the body. I look for a rolling motion through the back, which might not be there or it may stop at one point. When I touch the dog, there might be a lumpy or bumpy feeling through the spine, especially near the back of the rib cage. In severe cases, the back may look like a tent. I notice whether the dog’s head is tilted or the dog has trouble turning his head in one direction, including up or down.

“The dog might scuff one foot while gaing, the hind legs may look stilted, or there can be a lack of symmetry from limb to limb. Most commonly there is a catch or rattle through the shoulder or hock, or

differences in muscling. The skin on one area of the back may move or wiggle when touched. One side of the dog's croup may be higher than the other."

In contrast, Dr. Lesser explains, "Correctly aligned dogs have a certain presence and glow about them, and they're so balanced that your eye isn't drawn to any particular part of the body. If your eye is drawn to the back, pelvis, head, or other part, it's because something there isn't moving correctly. Any dog whose appearance invites meticulous analysis of gait should be chiropractically examined."

Most dogs accept their chiropractic examination and treatment without significant discomfort, and practitioners are trained to use gentle techniques to reduce pain before delivering adjustments. Patients typically show immediate improvement, though adjustments are often followed by 24 to 48 hours of fatigue, and some dogs require several sessions to resolve acute pain and re-establish and maintain normal function of the joints and nervous system.

For your dog's best treatment response, the AVCA recommends sharing information about her medical history and treatment from all healthcare providers, including diet, supplements, and medications. In addition, be sure you understand the animal chiropractor's recommendations regarding post-adjustment exercise and home therapy.

Trends in canine chiropractic

One of the biggest trends in today's chiropractic care for animals is the scheduling of monthly appointments for routine maintenance, especially for competition dogs.

"Among performance people," says Dr.



Many chiropractic patients find instant relief from pain. This Corgi displays his gratefulness to Suzanne Guyton, DC, of Santa Rosa, California.

Lesser, "it's becoming routine to get their dogs adjusted. They have observed that their dogs perform better, stay sounder, have fewer injuries, and in general are 'healthier' as a result. My clients have repeatedly commented that their dogs are living longer and with better quality of life in their golden years. Whether that's due strictly to chiropractic or a combination of chiropractic and better awareness of nutrition, conditioning, and training, I can't say for sure, but I always feel that I'm part of the team that helps Rover feel better and do better."

Dr. Lesser, who has taken so many workshops that she calls herself a chiropractic education junkie, recently completed a Master's Degree in Advanced Neurology of Veterinary Spinal Manipulative Therapy (VSMT), a post-graduate program offered by the Healing Oasis Wellness Center in Sturtevant, Wisconsin.

"My first research paper for this course," she says, "evaluated whether dogs improve their appearance after an adjustment. According to my panel of experts (two conformation judges and an expert

on canine structure) and my professional colleagues in the advanced class, an adjustment does definitely improve the posture and therefore the appearance of dogs.

"My second paper is titled 'Why Dogs Should Dance: The Neurobiology of Music and Canine Freestyle.' I have observed through the years that the highest-level freestyle dogs are the most superb athletes in my five-state practice. So I asked the question, 'Why is that?' One hundred seventy pages later, I think I found the answer. In a very small way, it's the canine version of *This Is Your Brain on Music*, by Daniel J. Levitin, or *Musophilia*, by Oliver Sacks." (For ordering information, see "Resources Mentioned in This Article," below.)

What is her most interesting or exciting discovery about canine chiropractic? "This question makes me laugh," she says, "because fellow VSMT practitioners and I are always exclaiming, 'Hey, this stuff really works!' Seventeen years ago I took the training to become certified in veterinary chiropractic and was amazed that by mobilizing the joints to move as they should, many positive things happened to the dog's body.

"Now I'm amazed even more by the changes that result from receptor-based therapy, which is the manipulation of the nervous system through chiropractic adjustments and specific challenges to the senses, such as vision, hearing, smell, proprioceptors, etc. Yes, this neuro stuff really works. The wonderful thing about doing the new receptor-based therapy work, which I consider the cutting edge of canine chiropractic, is that the owners are intimately involved with the therapy homework. If they follow through with the prescribed exercises, incredibly positive changes can and do occur."

Will your dog benefit from chiropractic? The growing number of qualified practitioners, satisfied clients, and well-adjusted dogs suggest that this hands-on approach to health and healing may improve almost any dog's quality of life. 🐾

CJ Puotinen is author of The Encyclopedia of Natural Pet Care, Natural Remedies for Dogs and Cats, and other books (see "Resources," page 24 for purchasing information). She lives in New York with her husband, a Labrador, and a tabby cat.

Resources Mentioned in This Article

American Veterinary Chiropractic Association (AVCA), information and referrals. Bluejacket, OK. (918) 784-2231, animalchiropractic.org

Healing Oasis Wellness Center, Veterinary Spinal Manipulative Therapy (VSMT) information and referrals. Sturtevant, WI. (262) 878-9549, thehealingoasis.com

Sue Ann Lesser, DVM, South Huntington, NY. (631) 423-9223, AR18AR180@msn.com

Marc Sommer, DC, DAAPM, CAC. Little Critters Chiropractic Services, Pompton Lakes, NJ. (973) 838-2106, drbones98@yahoo.com

Why Dogs Should Dance: The Neurobiology of Music and Canine Freestyle, by Sue Ann Lesser, DVM. \$25 plus postage. To order, contact Michael at berecka@msn.com

RESOURCES

BOOKS

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

The Encyclopedia of Natural Pet Care and *Natural Remedies for Dogs and Cats*, by WDJ contributor CJ Puotinen, are available from DogWise, (800) 776-2665 or dogwise.com. Puotinen is also author of several books about human health, including *Natural Relief from Aches and Pains*, available from your favorite bookseller.

HOLISTIC VETERINARIANS

American Holistic Veterinary Medical Association (AHVMA), 2214 Old Emmorton Road, Bel Air, MD 21015. (410) 569-0795. Send a self-addressed, stamped envelope for a list of holistic veterinarians in your area, or search ahvma.org

TRAINING AND INSTRUCTION

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

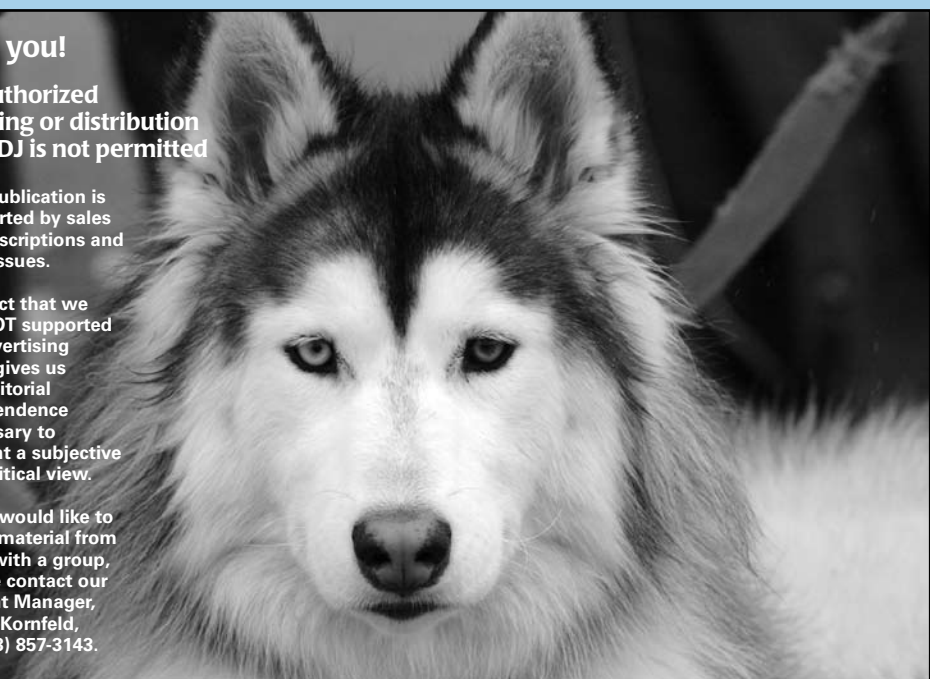
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