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The Whole Dog Journal



A monthly guide to natural dog care and training

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Back to Normal

Chiropractic adjustments save the day.

BY NANCY KERNS

Mokie, the dog formerly known as *mine*, had a health crisis last month. Mokie now lives with my sister and her husband. Pam called me to say that, the night before, Mokie had gone out with her two Jack Russell Terriers for a pre-bedtime pee, and when they came in, Mokie made a beeline for his crate. Usually he sleeps in the bed with Pam and Dean and the two JRTs. Something was wrong. When Pam tried to investigate, Mokie retreated deeper into his crate, and wouldn't come out even to eat. Given his usual appetite for anything resembling food, that was the clincher.

Pam and Dean examined Mokie, but couldn't find anything obvious: no broken bones, bite marks, or swelling. But he was suffering intermittent jolts of pain, as evidenced by the occasional shrieks he let out as he moved or when they touched him.

We suspected the problem was Mokie's back. Pam had mentioned that every so often when she picked him up, Mokie would let out a screech. It was so momentary that we failed to investigate further. There was also his past history as a victim of not one, but *two* raccoon attacks. The most recent occurred last September, when he got ambushed at night in the backyard (and was saved by Pam's JRTs). The raccoon shook him like a rag doll, and though he seemed fine after a week or so of body aches, that was probably the start of Mokie's physical trouble.

If this was the case, I didn't want to take him to a conventional vet. I know from personal experience that the conventional

medical response to back pain is x-rays – which typically reveal nothing – followed by pain medication and rest. Sometimes this relaxes the spasmed muscles enough that the spine can eventually realign. Often, however, it accomplishes nothing, and the animal simply starts moving guardedly in an attempt to prevent his misaligned spine from hurting.

We're lucky; in California we have many complementary practitioners who work on animals. A *very* talented chiropractor with extensive training and experience with animals (and who works with several local vets) is located no more than five miles from Pam and Dean's house, and she was able to fit Mokie into her schedule almost immediately.

Chihuahuas are notorious for biting their doctors, and Mokie was in so much pain, he was not planning on being the exception. I had to put a muzzle on him so I could hold him in place for the chiropractor. She tsk-tsked quietly as she gently palpated his spine and



made numerous small adjustments. Within a minute, Mokie's body went from feeling tense, like coiled steel in my hands, to relaxed (if shaky). His eyes softened and lost their too-wide-open

look. After a few more adjustments, he took a deep breath and licked his nose. Ah!

We've followed up with more chiropractic, arnica, gentle massage, and a full veterinary exam. He's back to his cheery, athletic self. But we aren't likely to ignore early signs of trouble again.

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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Have Dinner In

Thinking about switching your dog to a home-prepared diet? There is a lot of homework you should do, first.

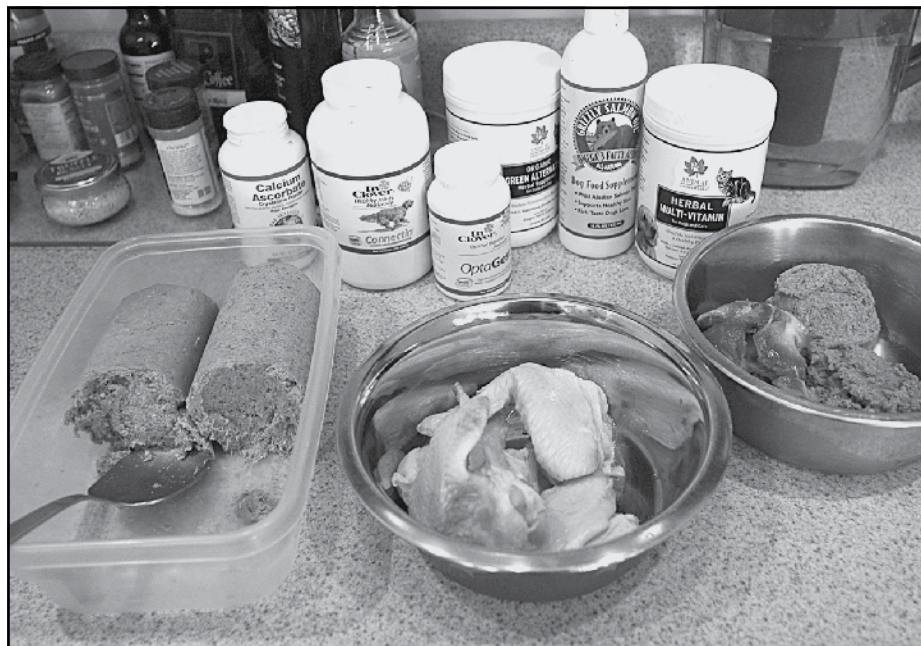
BY MARY STRAUS

For many years, I fed my dogs the finest kibble diets I could find and thought I was doing the best I could for them. Then, in 1997, a seminar at Wolf Park in Indiana changed my life, and my dogs' lives. Watching wolves tear into a whole deer carcass, I was struck by how far we have come from the natural diet that our dogs evolved to eat, and it started me thinking that maybe there was a better way.

After a year of research, I began feeding my dogs a homemade raw diet in December 1998. At the time, I had two dogs who suffered from environmental allergies, and one dog (Piglet) on Rimadyl for arthritis. To my surprise, within three months one of my dogs became completely allergy-free, and Piglet no longer needed Rimadyl for arthritis pain. The third dog improved, but continued to have some problems with allergies.

Not every dog with health problems gets better when switched to a homemade diet, but throughout the years, I've heard many first-hand accounts of dogs with serious conditions who improved or even completely recovered following such a diet change. People whose dogs suffered from seizures, IBD and other digestive disorders, allergies (both food and environmental), skin problems, chronic ear infections, arthritis, and more have seen their dogs' symptoms reduced or eliminated after they began feeding a homemade diet.

At first, it seems counterintuitive that a diet change would affect disorders like environmental allergies, seizures, or arthritis, but there are several factors involved. Poor-quality and overprocessed ingredients, artificial colors and preservatives, hormones, antibiotics, and other chemicals can contribute to overall ill-health and create or increase allergic sensitivity.



In addition to foods found in the grocery store, an array of commercial products are available to help owners home-prepare "complete and balanced" diets for their dogs, including ground meat, bone and organ products, as well as a variety of supplements.

What you can do . . .

- Before feeding your dog a home-prepared diet, read at least one book (preferably more) on the topic.
- Don't feed the same recipe all the time, even if it was provided by a nutritionist. Variety is important, no matter what diet you feed.
- If feeding raw bones to your dog concerns you (or if he gulps them), grind them. If bacteria worries you, cook the food.
- Add fresh foods to the commercial diet you feed, if you're not yet ready to feed a homemade diet.



Carbohydrates that are often 50 percent or more of dry dog foods are harder to digest than animal proteins and can lead to inflammation in the body.

In contrast, homemade diets, particularly those that have few or no grains or starchy carbs, are higher in protein (which supports both the skin and the immune system) and are easier to digest (which can improve the health of the digestive tract and keep the body's immune system from becoming overreactive).

Grains and other carbohydrates may cause problems due to allergic reactions, gluten intolerance, difficulty digesting carbs, or other factors. If your dog is overweight or suffers from any of the ailments listed above, you may want to try feeding a homemade diet without grains or starchy carbs to see if your dog improves.

Healthy dogs also benefit from a home-

made diet. Fresh foods supply nutrients in their natural form, whole and complete. Processing causes foods to lose much of their nutritional value, which must then be added back in synthetic form (that long list of chemicals at the end of dog food ingredient lists). Processed foods can also contain potentially harmful substances, such as oxidized fats and acrylamide, a carcinogen formed when high-carbohydrate foods are cooked at high temperatures. When you prepare your dog's food yourself, you control all of the ingredients, making it easy to avoid any foods your dog may react to, and to adjust the diet as needed based on weight, activity level, health conditions, and any other specific needs your dog may have.

There are many different types of homemade diets, including raw and cooked diets, with or without grains; diets that contain whole, raw, meaty bones or ground raw bone; diets without bone that use a different form of calcium supplement; and diets that add fresh raw or cooked foods to a commercial pre-mix.

While feeding a homemade diet sounds like a good idea, it's not easy to figure out what that entails, or how to ensure that you provide all the nutrition that your dog needs. Despite what some will try to tell

you, there is no one "right" way to feed your dogs. Each dog is an individual, and what works for one may not work for another. The best way to feed your dog may also depend on how much time and effort you are able to devote to putting together a proper diet. While fresh foods are healthier than processed foods, a good commercial diet is better than a poorly designed homemade diet. If you don't feel comfortable preparing a diet yourself, you can still improve the diet you feed by adding fresh foods.

You can consider this article and those that follow in the coming months as a "short course" on preparing your dog's food yourself, but we also suggest that anyone who wants to feed their dogs a homemade diet read at least one book (preferably more) on the subject before beginning, in order to have a better understanding of your dog's nutritional needs and how they are met by the foods we provide.

Don't rely on recipes

One thing we will not do is provide specific recipes for you to follow. It is exceedingly difficult to ensure that your dog gets all the nutrients he needs if you feed the same food all the time. Even following a diet that has been evaluated using a spreadsheet and

compared to the AAFCO (Association of American Feed Control Officials) or NRC (National Research Council) standards does not ensure the diet will be nutritionally complete, for several reasons.

Just as with our own diets, what's considered "good," "optimal," or even "essential" is continually changing. The nutritional levels established by AAFCO are based on older guidelines published by the NRC in 1985, and as yet, have not been updated following the release of newer NRC standards in 2006.

A good example of how these standards can change is the discovery in 1987 that cats were dying of heart failure due to a lack of adequate taurine in cat food. Previously, the NRC did not recognize taurine as an essential nutrient for cats, and no one knew how much cats required. Now, newer research shows that taurine may also be conditionally essential in the dog's diet, though there are as yet no standards requiring it. Ongoing research reveals more all the time, but this is an endless task. There is simply no way to know for certain exactly what nutrients, in what combinations, our dogs need for optimal health.

In 1985, the NRC warned in its introduction to *Nutrient Requirements of Dogs* that "caution is advised in the use of these requirements without demonstration of nutrient availability, because in some cases requirements have been established on the basis of studies in which nutrients were supplied by highly purified ingredients where digestibility and availability were not compromised by the interaction of dietary constituents and effects of processing. Practical diets formulated from commonly used ingredients are not free of such interactions and effects, and therefore may provide less available nutrients than the amounts measured by chemical analysis.

"For this reason, such diets formulated to the chemically assayed nutrient levels expressed in Table 2 [Required Minimum Concentrations of Available Nutrients in Dog Food Formulated for Growth] **may prove inadequate in meeting the nutritional needs of dogs**" (our emphasis).

They add, "Finally, although data are unavailable for the dog, it should be recognized that inclusion of **large amounts of fiber in the diet may adversely affect nutrient availability.**" In the Overview section at the beginning of the 2006 edition, the authors admit, "An extensive amount of new research conducted since

Home-Prepared Success Stories

Zazou is a 4-year-old Basenji who suffered from almost constant bouts of diarrhea and vomiting. "Since switching him to a combination raw and cooked homemade diet, he is so much healthier, and happier, too!" reports his owner, Rachel, in New York. "We've had virtually no upsets in over six months. He is holding his weight and his coat is beautiful."

Sara Nelson of Hastings, Minnesota, has a 10-year-old English Cocker, Smiles, with a history of inflammatory bowel disease (IBD). "Smiles was on prednisone, Flagyl, and an elimination diet, and I was told she would have to remain on pred for the rest of her life," Nelson says. "I switched her to a raw diet with supplements to help heal her gut. It's the best thing that ever happened to her. She's been off medications for six years now and has never been sick again."

Deborah Crouser of Canton, Ohio, switched her very itchy, yeasty 7-year-old Bichon, Gadget, to a homecooked, grain-free diet and now says, "She hardly itches at all any more, has lost that discoloration under her eyes, her paws are white instead of purple from licking, her eyes are brighter, and her ear infections have cleared up."

Sammy is a 9-year-old Golden Retriever with epilepsy belonging to Dale Martin of Hamilton, Ontario. "Sammy is one of those dogs who essentially stopped seizing after starting first a homecooked, then a raw diet with no grains," says Martin. "Sam had been seizing about once every two months even with anti-epilepsy drugs until the diet change. Since switching to raw, we have taken Sam off all medications, and she's had only two seizures in over five years." Martin has since adopted and fostered several other epileptic dogs, and has seen seizure frequency and intensity decrease in most of them when switched to a raw diet.

the previous National Research Council publications on dogs and cats was available for the NRC report, yet **several gaps still exist in our knowledge of requirements for specific nutrients.**”

In addition to not knowing for certain what dogs require, we also cannot know *exactly* what nutrients are contained in the foods we feed. A spreadsheet analysis of a diet, even if done by a veterinary nutritionist, does not guarantee that the diet actually supplies exactly those levels of nutrients. The figures in the USDA Nutrient Database that are used to determine nutritional value are averages. The source and handling of foods can have a considerable impact on their nutritional value, based on such factors as whether livestock are fed grains or grass, whether the plants fed to them were grown in soil that was depleted of minerals, how fresh the food is, and whether or not it was frozen.

Many recipes, including those recommended by veterinarians and nutritionists, make no effort to be nutritionally complete and simply tell you to add a “complete and balanced vitamin/mineral supplement,” with no further guidance. Since supplements vary widely, there is no way of knowing whether this would even come close to meeting your dog’s needs.

We simply cannot know enough about nutrition to say with certainty that any single recipe is sufficient to meet all nutritional requirements. Feeding your dog the same recipe every day is equivalent to feeding your child a diet of nothing but Total cereal. If it doesn’t make sense for a child, why would it make sense for our dogs?

Variety is the key

Just as with our own diets, the best way to ensure that our dogs receive all the nutrients they need is to feed a wide variety of fresh, healthy foods in appropriate proportions.

Dr. Mike Richards says on his VetInfo.com website, “I think the major problem with owner-prepared diets is an attempt to satisfy the needs of pets by making one recipe and not varying it. I strongly suspect that if pets were fed a variety of foods that approximates the food triangle suggested for humans, an adequate diet would be obtained. On the other hand, trying to formulate a single recipe that meets the needs of pets long term is very, very difficult to do.”

Variety is important no matter what

Don’t Bite on the Veggie Dog

Even though dogs are not obligate carnivores as cats are, they still require nutrients that can be derived only from animal sources. While it may be possible to feed a vegetarian diet with appropriate supplements, it is not optimal, and it is extremely difficult to ensure that all nutritional needs are met.

Dogs are sometimes called “opportunistic omnivores” due to the fact that they can survive on a wide variety of foods, but they are designed by nature to eat a diet primarily from animal sources. Their teeth and jaws are made to rip and tear off chunks of meat, not to chew and grind plant foods; their saliva does not contain digestive enzymes; and they have the carnivore’s shorter and smoother intestines designed to process proteins and fat, not the longer, pouched digestive tract needed to digest carbohydrates.

A survey of 300 dogs fed a vegetarian diet found a number of health problems, including several deaths. Some of these problems increased the longer the dogs were fed a vegetarian diet. Heart disease, especially dilated cardiomyopathy, is just one of the conditions that can be caused by the nutritional deficiencies of a vegetarian diet.

Even commercial vegetarian diets are not guaranteed to meet your dog’s nutritional needs. Remember that taurine has not yet been classified as essential in the dog’s diet, despite newer research showing that dogs develop heart disease when fed diets containing inadequate amounts of this amino acid, which is found only in meat. While your dog may appear to be healthy when fed a vegetarian diet, you will never know about the damage being done to his heart, or other potential problems, until it is too late.

type of diet you feed. Even if you use commercial foods, it is best to find at least two or three different brands, using different protein sources, and rotate between them, anywhere from daily to every few months.

Also, even “complete and balanced” diets may contain quite different levels of nutrients. If you always feed the same food, any nutritional deficiencies or excesses present in that food will affect your dog over time. The same is true if you feed different varieties made by the same company, since they tend to use the same vitamin/mineral formulations in all of their foods.

Your dog is also more likely to develop food allergies if fed the same food all the time. It takes time for an allergy to develop, typically months to years. Dogs that are fed the same food for extended periods of time will often develop allergies to one or more of the ingredients in that food. Variety is particularly important for puppies, since puppyhood is when the immune system learns which foods are normal and not a cause for reaction.

The only restriction to consider in terms of feeding lots of variety is to reserve at least some of the exotic proteins in case a novel protein is needed to test for or treat food allergies. There’s no need to feed

venison, duck, rabbit, ostrich, buffalo, kangaroo, and beaver to your dog. Save some of them in case they are needed in the future.

Three basic rules

Feeding a homemade diet is not as complicated as it might seem. There are only three rules:

1. Variety
2. Balance over time
3. Calcium

Variety means feeding lots of different foods, such as beef, lamb, chicken, turkey, pork, fish, eggs, and dairy. Vegetables, fruits, and grains can also be added in limited quantities. Variety also means feeding different parts, such as muscle meat, heart, liver, and other organs. Different types of meat and different cuts of meat all have different nutrient profiles, so you provide a wider nutritional range by varying what you feed. It’s fine to use a few staples but you should not feed just one or two foods to the exclusion of everything else.

Balance over time: When you feed a homemade diet, it is not necessary that every meal be “complete and balanced,” as the commercial dog foods are. Just as with our own diets, it’s only important

that the diet be balanced over time, with nutritional needs being met over a period of days to weeks. It is only when you feed the same food every day that you need to be concerned about that food alone supplying everything that your dog needs.

It is imperative that all homemade diets provide the right amount of **calcium**. The bones included in most raw diets will supply all the calcium needed. If you feed a diet that does not include edible bones, you will need to add specific amounts of calcium supplements. Our upcoming article on cooked and raw diets that do not include bone will provide detailed information as to how much calcium you need to add to your dog's home-prepared diet.

Raw feeding myths

Many questions arise when we consider the idea of feeding raw meat, eggs, and bones to our dogs. What about the bacteria in raw meat and eggs? Isn't it dangerous to feed whole bones? Is too much protein harmful? We'll address these issues briefly below; if you like, you can refer to entire articles we have devoted to each topic in the past.

■ Bacteria

Dogs' systems were designed to handle bacteria. It's generally thought that their stomachs contain a stronger concentration of stomach acid than ours, making their digestive systems more efficient at killing most bacteria. Also, in relation to our digestive system, their digestive tracts are shorter and simpler, which helps move food through quickly, without giving bacteria a chance to proliferate.

Consider the fact that, in the wild, wolves eat carrion, and bury food to eat days or weeks later, with no harmful effect. Our own dogs even eat stool without becoming ill. While it is possible for dogs to be affected by bacteria found in raw food and elsewhere, it is unusual.

Many of the bacteria we worry about, such as salmonella and *E. coli*, are commonly found in the intestines of healthy dogs. Dogs who are stressed, ill, or immune-compromised may be more susceptible to problems from bacteria. While many dogs on chemotherapy and with other serious health problems have no problems with raw meat, you may want to cook their food instead. You can also soak raw meat in food-grade hydrogen peroxide, though this will not work for ground meat, which is also likely to have a higher bacterial load.



Bones provide chewing pleasure as well as promoting clean teeth and healthy gums. If you're not comfortable feeding your dog a diet that includes raw meaty bones, you can give recreational bones that supply many of the same benefits.

Keep in mind that commercial foods are also often contaminated with bacteria.

Raw pork, which can be a source of trichinosis and Aujeszky's Disease (pseudorabies), often causes particular anxiety. Both of these diseases, however, have been just about completely eradicated from USDA-inspected products in this country, though they may still be a concern elsewhere, or if you obtain meat from a local farm that has not been inspected. Freezing for three weeks should make the meat safe. Note that trichinosis is also found in carnivorous wild game, including bear and wild boar, and in that case, freezing will not kill it.

Freezing will also kill certain other parasites, such as tapeworms and toxoplasma, but it does not kill bacteria.

See "What Evil Lurks Within?" WDJ August 2000, for information about bacteria and raw diets.

■ Biotin deficiency

Another question that often comes up in discussions about home-prepared canine diets has to do with the avidin in raw egg whites causing a biotin deficiency, but there is no need to worry. Egg yolks contain biotin, which balances out the avidin in the egg whites when you feed whole eggs. Cooking, however, deactivates avidin and may make egg whites more digestible, so it's also fine to feed eggs that are soft- or hard-boiled, or lightly scrambled.

■ Bones

What about bones? Haven't we heard from the time we were children that you should never give chicken bones to dogs? That's true, if you're talking about *cooked* bones. Cooking makes bones hard, dry, and splintery. There is no question that cooked bones are dangerous for dogs.

Raw bones are much softer and more flexible, and are easily digested by most dogs. Those of us who feed our dogs a raw diet commonly feed what are called "raw meaty bones" (RMBs), parts that include edible bone along with at least half meat, and that are fully (or mostly) consumed. In addition to the nutritional value they provide, RMBs are also a source of chewing pleasure and help to keep teeth clean and gums healthy. Examples include chicken necks, backs, and leg quarters; turkey necks; lamb breast and necks; and pork breast (riblets) and necks.

Most dogs do fine with raw meaty bones, but a few may have problems, especially if they try to swallow large chunks. While it is unusual, dogs have been known to choke, especially when fed pieces that are round and meaty. Turkey necks are the parts that most frequently cause choking in large dogs, while chicken necks can cause the same problem in small dogs.

You should always supervise your dogs while they are eating, and it's a good idea to know how to do the Heimlich maneuver on dogs, just in case. Small dogs

are also more susceptible to esophageal damage from bones. There are risks and benefits to feeding whole bones and the decision whether or not to feed them is a personal one. Keep in mind that choking or esophageal damage can also be caused by greenies, tennis balls, rawhides, sticks, and even kibble.

If you're concerned about dangers from whole bones, you can grind the bones or cut them into bite-sized pieces. You can also cook bones to softness in a pressure cooker (the only kind of cooked bones that are safe to feed). You can still give your dogs recreational bones, ones that your dog cannot consume, for chewing pleasure and dental health.

People also worry about dogs breaking teeth on bones. This is more of a concern with recreational bones, particularly those that the dog can fit between his molars and crunch down on, such as marrow bones. These weight-bearing bones are much harder than the RMBs that are consumed. Knuckle bones are less likely to cause tooth damage because dogs can't fit them into their mouths and bite down on them.

Most of the RMBs that are recommended for dogs are soft, at least to a dog's jaws. Beef bones, in contrast, are quite hard. I know of dogs, including my own, who have broken teeth on beef ribs and neck bones. Many people give these to their dogs as recreational bones but large dogs may consume them. Teeth do become

more brittle with age, so you may need to exercise more caution as your dogs age.

For more information about feeding bone in the diet, see "Bones of Contention," September 2000. For information about recreational chew bones, see "Dem Bones," August 2003.

■ Excessive protein

Lastly, there is no danger in feeding a high-protein diet to puppies or senior dogs (see "Diet and the Older Dog," December 2006). Studies have proved that high protein does not cause orthopedic problems in puppies, nor kidney disease in older dogs.

Protein is highly beneficial; it supports the immune system and the central nervous system, contributes to healthy skin and coat and to wound healing, and helps to maintain lean body mass while lowering the percentage of body fat. Dogs fed a high-protein diet are often calmer and less hyper than dogs fed on high-carb diets. Higher protein is one of the major benefits of feeding a homemade diet to dogs, though you can also increase the protein level by adding fresh, high-protein foods to a commercial diet.

Adding fresh food to a commercial diet

If you are not ready to make the switch to a homemade diet, you can still improve your dog's diet by adding fresh foods to his

dry or canned food. Despite the warnings from pet food manufacturers, you will not unbalance the diet by adding a moderate percentage of fresh foods – you should be able to replace about 25 percent of the diet with fresh foods without concern. When you start to feed more than that, it becomes more important to feed variety and proper proportions. If you want to feed 50 percent or more as fresh food, then you should add organs along with other foods, and you should consider adding calcium if you are not feeding bones. The more fresh food you feed, the greater the importance of variety and proportions, as well as calcium, becomes. More information will be provided in future articles.

Good foods to add to a commercial diet include eggs and meat (raw or cooked), canned fish with bones (jack mackerel, salmon, sardines), yogurt or kefir, cottage cheese, and healthy leftovers. Raw meaty bones can also be fed, though it's best if they're not combined with kibble in the same meal. You can add veggies and fruit in small amounts, but remember that commercial foods are already high in carbohydrates, so there is little benefit in adding more. I would not recommend adding grains to a commercial diet at all.

Puppies and seniors will benefit from the addition of high-quality fresh foods as much or more than younger adult dogs will. A high-protein diet is good for almost all dogs and will not cause harm.

Commercial Food Pre-Mixes

There are a number of dog food pre-mixes on the market that are designed to be added to meat, eggs, and other healthy foods to create a complete diet (see "Mixing It Up," July 2004). Others are nutritionally "complete and balanced" alone, but are formulated to permit the inclusion of fresh foods.

Super-premium examples of the latter are **The Honest Kitchen's** dehydrated diets, several of which are grain-free. Though these diets are complete, The Honest Kitchen recommends (and offers detailed directions for) mixing ½ to 1 cup of fresh food to each cup of rehydrated mix.

Solid Gold's Holistique Blendz "was created to be used as the nutritionally balanced base, to which additional raw (or cooked) meat, vegetables, Buckaroo Beef (the company's freeze-dried beef patties), or canned food can be added."

Other companies who offer pre-mixes include **Timberwolf Organic's Black Forest Canid Formula**, **Urban Wolf** (grain-free), **Essex Cottage Farms**, and **Sojourner Farms** (offers a grain-free variety). **PHD** sells **Wendy Volhard's NDF** (Natural Diet Foundation) that "supplies the supplements and grains of her original homemade Natural Diet in a dehydrated version," to which you add meat, yogurt, and vegetables. As with every

diet, variety is better than feeding the same pre-mix, or the same added foods, all the time.

Essex Cottage Farms
efarms.cc, (866) 530-0322

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

Sojourner Farms
sojos.com, (888) 867-6567

Solid Gold's Holistique Blendz
solidgoldhealth.com
(800) 364-4863

Timberwolf Organic's Black Forest Canid Formula
timberwolforganics.com, (407) 877-8779

Urban Wolf
urbanwolf.cc

Wendy Volhard's NDF from PHD Products
phdproducts.com, (800) 743-1502



Norma Crawley of Ardmore, Oklahoma, reports, "Since I began incorporating raw with kibble, our three dogs do everything short of tucking their napkins in and clicking their silverware together at dinnertime. They dine as if they are at "21." They seem happier, healthier, and

they are my constant shadows from late afternoon through the evening. It's made such a positive difference in three canine lives, and mine too. I've always fed a high quality kibble through the years, but who knew this raw business could be so much fun, and so good for them?" 🐾

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 15-year-old Chinese Shar-Pei.

Home-Prepared Diet Resources

RECOMMENDED BOOKS: DIETS BASED ON RAW MEATY BONES

Give Your Dog a Bone; Grow Your Pup With Bones; and The BARF Diet, by Dr. Ian Billinghurst

Ian Billinghurst, an Australian veterinarian, was the first to popularize diets that include raw meaty bones. While Billinghurst's books are not as simple as many of the other books on raw feeding, they're also more detailed, and the ones I refer to most often when I'm looking for specific nutritional information. The last book is the most concise and easier to follow than the first two books.

Raw Dog Food: Make It Easy for You and Your Dog,

by Carina Beth MacDonald

A good beginner's book on raw diets.

Switching to Raw, by Susan Johnson

Another good beginner's book, based on the Billinghurst diet.

Available only from switchingtoraw.com.

Natural Nutrition for Dogs and Cats: The Ultimate Diet,

by Kymthy Schultze, CCN, AHJ

One of the earlier books, fairly simple and easy to follow, but restrictive, as Schultze does not believe in feeding grains, dairy products, or certain supplemental foods.

See Spot Live Longer, by Steve Brown and Beth Taylor

This is a well-referenced book on the value of feeding a homemade diet, but is not a how-to book.

Raw Meaty Bones Promote Health, by Tom Lonsdale

This book is mostly a history of Dr. Lonsdale's fight with the pet food and veterinary industries over feeding a more natural diet. It is not a how-to book.

BOOKS ON COOKED AND RAW DIETS WITHOUT BONE

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

by Richard Pitcairn, DVM

Dr. Pitcairn uses raw meat in his diets, but no bones. The meat can be cooked, if preferred. His diets are heavy on grain, but you can substitute pureed or steamed vegetables in place of some or all of the grain. This book is easy to follow and contains a lot of useful information, including help for dogs with certain health problems. It's useful for those who

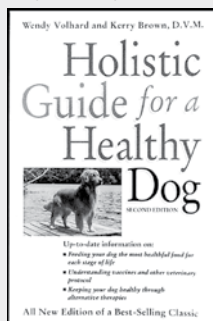
want to feed a cooked or raw diet that does not include bones. There is a new edition published in 2005.

Holistic Guide for a Healthy Dog,

by Wendy Volhard and Kerry Brown, DVM

Another diet that mixes raw meat with cooked grains and other foods. A new edition was published in 2000. These recipes are fairly complicated, unless you use Wendy Volhard's NDF pre-mix. There is also an e-mail group for people who feed this diet:

pets.groups.yahoo.com/group/Volhard/



Home Prepared Dog & Cat Diets, by Donald Strombeck, DVM

This book covers cooked diets for healthy dogs, as well as special diets for a number of medical conditions. Unfortunately, all of these diets are heavily grain based, though again, you can substitute pureed or steamed vegetables for some or all of the grains. These recipes pretty much translate commercial foods into a homemade diet, so they are higher in carbohydrates and lower in protein than some think is optimal. Dr. Strombeck also uses soy in some recipes, which can be problematic for dogs, since it provides incomplete protein. We would not recommend using his vegetarian diets, which pre-date more recent knowledge about taurine requirements and other factors that make these diets incomplete.

OTHER RESOURCES FOR FURTHER STUDY

Animal CPR and Heimlich Maneuver instructions

thamesmedical.com/vetarticles/animalcpr.html

Aujeszký's Disease (pseudorabies), and Trichinosis

aasv.org/news/story.php?id=1280

trichinella.org/index_epid_summary.htm

cdc.gov/ncidod/dpd/parasites/trichinosis/factsht_trichinosis.htm

Bacterial dangers

vetmed.wisc.edu/pbs/zoonoses/Glk9fel/salmonella.html

vetmed.ucdavis.edu/CAH/Update08-2/upd8-2_intestinal.html

vin.com/VINDBPub/SearchPB/Proceedings/PR05000/PR00126.htm

vetinfo.com/dbacterial.html

antechdiagnostics.com/clients/antechNews/1997/9-97.htm

Dietary protein

vetsci.psu.edu/coursedesc/vsc497a/13protein.htm

merckvetmanual.com/mvm/index.jsp?cfile=htm/bc/182902.htm

Dogaware.com

More information on home feeding books, websites and e-mail groups, commercial raw diets, local raw food co-ops and groups, supplements, and tips on adding fresh food to a commercial diet. [Editor's note: This is author Mary Straus' website.] dogaware.com/dogfeeding.html

Nutrient Requirements of Dogs, 1985, National Research Council

The hardcover version costs more than \$250, but the content of the book is available on the National Research Council's website at: books.nap.edu/openbook.php?record_id=15

Nutrient Requirements of Dogs and Cats, 2006,

National Research Council. The introduction of this book is available at: books.nap.edu/openbook.php?record_id=10668

"The Pet Food Primer," by Susan Wynn, DVM

A good article that talks about the value of rotating between and adding fresh foods to commercial diets. altvetmed.org/articles/petfood.html

Taurine

vetmed.ucdavis.edu/CAH/Update06-2/6-2_Taurine.html

Wolf Park (North American Wildlife Park Foundation, Inc.), Battle Ground, IN. wolfpark.org

Fear Itself

How to reduce your dogs's fears, anxieties, and phobias.

BY PAT MILLER

President Franklin D. Roosevelt, speaking about the Great Depression, said, "We have nothing to fear but fear itself." If only it were that simple when dealing with dog behavior!

Fear-related behaviors can be debilitating to the inappropriately fearful dog. They are heartbreaking, frustrating, even sometimes dangerous for the human trying to deal with her dog's strong emotional responses, and for the dog who may injure himself or others in his desperate efforts to escape or protect himself from the fear-causing stimulus. Fortunately, there *are* steps an educated owner can take to decrease the intensity or frequency of her dog's debilitating fright.

Three faces of fear

The complex of fear-related behaviors includes fears, anxieties, and phobias. While they are closely related emotional responses, they differ significantly in several ways, including the presence or absence of a physical trigger, the intensity of the dog's response, and the ease with which the emotional response and related behaviors can be modified. In general, these three conditions can be among the most difficult of behavioral problems to treat.

There is a strong genetic component to fear-related behaviors. Whereas once we tended to place a lot of the blame on owners for their perceived role in creating fearful dogs, today we recognize that a genetic *propensity* toward fearfulness is a significant factor in the actual manifestation of fear-related behaviors.

While environment – especially lack of socialization – can play a critically important role in bringing these behaviors to fruition, genes explain why two dogs with similar upbringing and socialization can react so differently in the presence of a potentially fear-causing stimulus, and why even a well-socialized dog can suddenly develop phobic behaviors.

Fear is defined as a feeling of apprehension associated with the *presence or proximity* of an object, individual, or social situation. It's a valuable, adaptive emotion, necessary for survival and appropriate in many situations. It's good to be afraid of grizzly bears, tornados, and semi-trucks skidding out of control on icy highways. Your dog is wise to fear the flashing heels of a galloping horse, strong waves crashing on an ocean beach, the spinning wheels of a passing car. People and animals who feel no fear are destined to live short lives.

Of course, overly fearful dogs may

What you can do . . .

- Super-socialize your pup!
- Manage your dog's environment to the extent possible to avoid exposing him to extremely intense stimuli. If you do find him becoming fearful, remove him from the stressor as soon as possible to prevent increasing sensitization.
- Implement a program of counter-conditioning and desensitization to help your dog overcome his fears; every little bit helps.



lead short lives as well. Fear-related aggression is a significant risk to a dog's long and happy life. A fearful dog's first choice is usually to escape, but he may bite defensively if cornered or trapped, and dogs who bite are often euthanized. In addition, a constant emotional state of fear makes for a poor quality of life for a



The poorly socialized, fearful dog on the right is frightened by the overenthusiastic overtures of the dog on the left. She cowers behind her owner's legs, tense, with tail tucked.



But as soon as the dog on the left turns away to investigate the third dog, the fearful dog erupts in classic fear-based aggressive behavior, lunging and barking.

dog, and for humans who are stressed by their fearful dog's behavior.

Debates about anthropomorphism aside, most biologists agree that human and nonhuman mammals experience fear similarly. Recall one of your own heart-stopping, adrenalin-pumping life experiences. Perhaps you were approached by a menacing stranger in an alley on a dark night, threatened by a large predator on a camping trip, cornered by an angry bull in a pasture, or just missed rear-ending a car in front of you when a moment of inattention caused you to miss the warning flash of taillights. Remember how helpless, vulnerable, and terrified you felt? You can empathize with your dog when you see him trembling in the presence of a stimulus that elicits a similar response in his canine brain and body.

Anxiety is the distress or uneasiness of mind caused by apprehensive *anticipation* of *future* danger or misfortune, real

or imagined. Anxious dogs appear tense, braced for a threat they can't adequately predict, sometimes one that doesn't actually even exist. Anxiety can be a chronic condition, one that significantly impairs a dog's (and owner's) quality of life, and one that can be more challenging to modify than the fear of a real and present danger.

Separation distress is perhaps the most widely discussed anxiety-related behavior in dogs, but owner absence is not the only cause for canine apprehension. Many dogs are anxious on car rides – anticipating, perhaps, a visit to the vet's office, or some other "bad" place. A dog who has been attacked by a loose dog while walking on leash may become anxious about going for walks, constantly stressed, scanning the neighborhood for another potential attacker.

Again, human anxieties are similar to canine. If you've been mugged in a dark alley, you are likely to experience some

degree of stress anytime you find yourself walking down an alley in the dark. Some people experience extreme anxiety over taking exams, even when their past successes show that they pass tests with flying colors. Barbra Streisand, successful singer that she is, suffers from extreme performance anxiety, still becoming physically ill every time she's about to walk on stage. The danger or misfortune may be imagined, but the anxiety is very real.

Phobias are persistent, extreme, inappropriate fear or anxiety responses, far out of proportion to the level or nature of threat presented. They are stubbornly resistant to modification through habituation or desensitization – repeated low-level exposure to the stimulus that causes the extreme response. While inappropriate in degree, a phobic response is not totally irrational – it is usually directed toward something that *could* be harmful. Common human phobias are related to snakes,

The Face of Fear

Most people, even non-dog owners, can identify a dog who is in abject fear – trembling, drooling, crouched low, tail tucked, pupils dilated, perhaps even losing control of bladder and bowels. It's much easier to miss the more subtle early-warning signs indicating the early onset of fear. Yet, as with all undesirable behaviors, fear is easier to deal with sooner, rather than later, so there is real value in being able to determine when a dog is slightly fearful and take prompt steps to alleviate the fear, either by removing the fear-causing stimulus and/or implementing a program of counter-conditioning and desensitization.

Ignorance of subtle fear signals is one of the primary reasons a purportedly "child-friendly" dog mauls the unsuspecting toddler. Because the dog never exhibited overt aggression to the child – growling, lunging, snapping – the owner assumed the dog was kid-friendly. Instead, the dog may have always felt threatened by the presence of children – their high-pitched voices, sudden movements, and sometimes inappropriate behaviors toward the dog.

Misinterpretation of fear-signals can also be the cause of inappropriate owner behavior – punishing the dog or forcing

the dog to confront the threat – both of which can worsen a dog's fears and trigger an aggressive response.

To avoid exacerbating your dog's fear, or perhaps turning a fear into a phobia, watch for the following early warning signs and be prepared to protect your dog from the perceived threat:

- Makes an effort to leave
- Hides behind you
- Averts eyes
- Panting – increase in respiratory rate
- Sweaty paws – leaving footprints on concrete
- Reluctance or refusal to take/eat treats
- Ducking the head
- Licking, yawning, blinking

An excellent resource to help you better understand your dog's body language is the 2006 DVD *"The Language of Dogs,"* by Sarah Kalnajs, Blue Dog Training and Behavior. It's a bargain for \$40 for two-plus hours of relevant viewing.



A fearful dog plants himself, panting, by the door; he's ready to leave.



He turns to face a trainer with resignation and trepidation.



Now on leash, he's too stressed to take treats; he'd rather leave.



The dog and the object of her phobia are too close together, if this was early in the counter-conditioning process.



If the dog declines to take treats, it's a sign that she is too stressed. Decrease the stimuli's proximity and intensity.



This is the goal: The dog ignores the formerly fear-provoking stimuli, and instead looks eagerly for more treats.

spiders, high places, flying – all things that have the *potential* to be life-threatening. In reality, the majority of snakes and spiders are relatively harmless, it's rare for humans to accidentally nosedive off a skyscraper, and only a tiny percentage of airplanes ever crash. Common canine phobias include extreme reactions to thunderstorms and other sounds, fear of humans, and inappropriate response to novel stimuli (anything new and different).

Lucy and the parade

When we adopted Lucy, our Cardigan Corgi in June 2004, one of the things that appealed to me was her obvious self-confidence. This was a dog, I thought, who could travel with me to seminars, appear in public, perhaps even compete in Rally or Agility, or both. I worked on socialization, taking her places with me whenever I could. She took it all in stride, just as I anticipated – until I made the mistake of taking her on the Humane Society of Washington County's Halloween Parade float. I thought she was old enough at nine months to handle the parade environment. I was wrong.

The parade is the pride of Hagerstown, Maryland – an all-afternoon and evening affair as floats and marchers get lined up and ready to move through the center of town. Lucy was enjoying the commotion, eating yummy treats as we strolled past stationary floats, greeting people and practicing socialization and good manners behaviors. With the signal that it was time for the parade to begin we hustled back to the float, loaded up, and settled in our seats along with a half-dozen other dogs and their handlers.

Lucy continued to enjoy the attention as we rolled along the spectator-lined street. People of all sorts walked up to the slow-

moving float and petted her. Her ears were up, her eyes bright, and her tail wagging merrily. Then she heard the drums.

I hadn't realized our street would merge with the marching band street. I watched helplessly as my confident Corgi melted down before my eyes. Her ears flattened back against her head. Her tail went down, her eyes lost their shine, and she began to tremble, rapidly losing her enthusiasm for the treats she had been happily enjoying.

Then I made my second big mistake. We should have bailed out of the parade at that point and arranged for someone to come back and collect us after the festivities were over. Instead, I opted to stick it out, hoping to use my higher-value treats to counter-condition and desensitize her fear response to the drums.

Unwittingly, I achieved the exact opposite result; the constant exposure to the too-intense stimulus effectively *sensitized* her to loud noises, *increasing* her fear response. That sensitization caused her to be intensely sound-phobic, which has since generalized to thunderstorms, the banging of our horses in their stalls in the barn, and worse luck, cheering and applause.

Getting brave

Whether you're working with fears, anxieties or phobias, the solution to an inappropriate emotional response is counter-conditioning and desensitization (CC&D) to *change* your dog's emotional response to the stimulus or situation. In *The Cautious Canine*, author and behaviorist Dr. Patricia McConnell calls counter-conditioning a "universally effective treatment for fear-based behavior problems." Think of it as training your dog's emotions rather than training his actions. Behavior change will follow

emotional change.

Counter-conditioning involves changing your dog's association with a scary stimulus from negative to positive. The easiest way to give most dogs a positive association is with very high-value, really yummy treats. I like to use chicken – canned, baked, or boiled, since most dogs love chicken and it's a low-fat, low-calorie food. Perhaps your dog is afraid of your vacuum cleaner. Here's how the CC&D process works:

1. Determine the distance at which your dog can look at the non-running, stationary vacuum cleaner, and be alert and wary but not extremely fearful. This is called the *threshold distance*.
2. With you holding your dog on leash, have a helper present the non-running vacuum at threshold distance X. The instant your dog sees the vacuum, start feeding bits of chicken, nonstop.
3. After several seconds, have the helper remove the vacuum, and stop feeding chicken.
4. Keep repeating steps 1-3 until the presentation of the vacuum at that distance consistently causes your dog to look at you with a happy smile and a "Yay! Where's my chicken?" expression. This is a *conditioned emotional response* (CER); your dog's association with a non-running vacuum at threshold distance X is now positive instead of negative.
5. Now you need to increase the intensity of the stimulus. You can do that by decreasing – in tiny increments – the distance between X and your dog, by increasing the movement of the vacuum at distance X, or

by turning the vacuum on. I'd suggest decreasing distance first in small increments by moving the dog closer to the location where the vacuum will appear, achieving the desired CER at each new distance, until your dog is happy to be right next to the non-running, non-moving vacuum, perhaps even sniffing or targeting to it.

6. Then return to distance X and add movement of your non-running vacuum, gradually decreasing distance and attaining the desired CERs along the way, until your dog is delighted to have the non-running, moving vacuum in close proximity.

7. Now, back to distance X, with no movement. Have your helper briefly turn on the vacuum; you feed the dog treats in that instant. Turn off the vacuum and immediately stop the treats.

8. Repeat until you have the desired CER,

and then gradually increase the length of time you leave the vacuum running, until your dog is happy to have the vacuum on continuously.

9. Begin decreasing the distance between the dog and the vacuum in small increments, moving the dog closer to the vacuum, obtaining your CER consistently at each new distance.

10. When your dog is comfortable and happy to have the running, stationary vacuum close to him, you're ready for the final phase. Return to distance X and obtain the desired CER there, with a running, moving vacuum.

Then – *gradually!* – decrease the distance between the vacuum and your dog until he is happy to be in the presence of the running, moving vacuum. He now thinks the vacuum is a *very good* thing, as a reliable predictor of very yummy treats.

The above example concerns a fairly simple fear behavior. The more complex the stimulus and the more intense the response, the more challenging the behavior is to modify. Anxieties and phobias generally require a greater commitment to a longer term and more in-depth modification program, and often beg the intervention of a good, positive behavior professional.

What about medication?

I used to be strongly opposed to using drugs in behavior modification except as a very last resort. That was years ago, at a time when the most widely used drugs were valium and acepromazine. Those drugs have a strong sedative effect – creating a “groggy doggie” who is still very aware of the fear-causing stimulus, he's just too drugged to do anything about it. Still inappropriately prescribed by some vets today for behavior modification,

The Importance of Socialization

Socialization means giving your pup *positive* exposures to the world while he's young enough to be forming his world view. Early socialization is your best immunization against fear-related behaviors. The *most* important period is from the age of four weeks to four months. After that, the window of opportunity starts to close. Dogs who miss their early socialization never totally recover, and are much more likely to fall victim to fearfulness. Ongoing socialization is important throughout a dog's life.

Lots of early socialization will help your puppy grow into a confident, friendly, outgoing canine companion. Failure to socialize creates shy, fearful dogs who can never enjoy the world, and are at high risk for biting someone, sometime. Dogs who bite tend to have short, unhappy lives.

A dog's adult personality comes from nature (genetics), *and* nurture (environmental influences). If your pup is genetically confident he'll still need *some* socialization to become a well-adjusted adult. If he's genetically shy or timid, he'll need *tons* of socialization to become a normal dog. The best way to prevent the development of fearful, biting adult dogs is to socialize the heck out of *all* puppies.

Note the importance of *positive* experiences. Protect your pup from painful or frightening experiences. Don't expose him to excessively loud noises or extreme visual stimuli – like your town's 4th of July fireworks display – or Halloween parade! Supervise interactions with children so they can't tease and torment him or encourage inappropriate puppy biting and

chasing. Instead, have them feed him tasty treats for sitting politely – kids love to learn how to train dogs! Make puppy experiences like trips to the vet for vaccinations as positive as possible – lots of treats in the waiting room, lots of treats while he gets the shot, lots of treats from the vet and clinic staff. In fact, make it a point to visit your vet's waiting room when you *don't* have an appointment, so going to the hospital doesn't always mean being poked and prodded.



Keep socialization experiences short and positive for the puppy, or you may actually increase his fear of strangers.

See a pattern? Using tasty treats generously to give your pup a positive association with many potentially aversive stimuli and experiences is called *classical conditioning*.

Present any aversive stimulus at a low intensity at first – far away, low volume – and associate it with yummy stuff. Every time the scary thing appears, feed your pup tasty treats – lots!

As long as he can see the scary thing, feed tidbits. When the thing leaves, stop feeding. When your pup realizes that the thing *makes* good stuff happen, he'll *want* the scary thing to appear. Then you can increase the

intensity – closer, louder – and keep feeding treats, until the pup is completely happy about the sight or sound.

Do this with things that are neutral, making sure your pup has a positive association with those things, too. Children are the most common victims of dog bites. Start creating your pup's positive association with kids the first time he sees them by feeding treats *whenever* young humans are around – don't wait to find out if he is afraid.

they are quite likely to make fear-related behaviors *worse*, not better.

These days, I'm much more likely to suggest consulting with a behavior-educated vet sooner, rather than later, about the use of behavior modification drugs.

I'm not a vet, so I can't prescribe drugs; in fact, it would be inappropriate for me to even suggest to a client that a specific drug might be just what her dog needs.

What I *can* do is tell her that based on the behavioral history form she has filled out for me, my observations of the dog, and our subsequent discussions regarding the success of our behavioral modification program, it's appropriate to talk to a veterinarian about the possibility of adding pharmaceuticals to our modification program. I am most likely to suggest this in cases where dog's and owner's quality of life are significantly impacted by a dog's fearful and/or aggressive behaviors.

Today's classes of psychotropic drugs are a far cry from the sedatives of the past. They are designed to help repair brain chemistry that's out of kilter – to open a window in the dog's brain that will enable ongoing behavior modification to be more successful. Admittedly, it's a little experimental; most of the drugs were designed for use in humans, and use in canines is an off-label application – more reason to work closely with a veterinarian who is very knowledgeable about canine behavior.

People tend to have a knee-jerk "cringe" reaction when someone suggests "drugging" their dog. I understand and applaud a dog owner's caution; behavior modifica-

tion drugs are not benign, and they need to be used with care. There is potential for adverse reactions, and the dog needs to be monitored closely to determine if the drug's impact is beneficial, neutral, or harmful to the dog.

That's why I believe that any canine candidate for behavior-modifying drugs needs to have an observant owner, a knowledgeable behavior professional, and a behavior-educated veterinarian on his team. So don't automatically say "No!" to drugs; just use them wisely, and with care and assistance from your animal behavior professionals.

For more information about the medications most frequently prescribed for fear and anxiety in dogs, see "Chill Pills," July 2006.

The damage done

I frequently chastise myself for taking Lucy to the parade. In my defense, I didn't realize we would meet up with loud drums – and plenty of dogs without a genetic predisposition for sound-phobia would have been fine with the noise. In fact, because of the genetic influence, there's high likelihood that Lucy's noise phobia would have been triggered sooner or later anyway, perhaps by a very intense thunderstorm.

The good news is that my husband and I have made some progress with Lucy's sound-phobia. Loud television programs offer ideal opportunities for counter-conditioning and desensitization, as do recordings of thunderstorms and applause, where the intensity of stimulus (volume)

can be controlled.

Real thunderstorms are another story, however. They inevitably are super-threshold – occurring at an intensity that triggers a strong emotional response, trembling and shutting down to a degree where she can no longer accept high-value treats. For those, we've added melatonin, a snug T-shirt (the economy version of an Anxiety Wrap™, a product that operates on the concept of "swaddling" as a comforting device), a Comfort Zone® plug-in "dog appeasing pheromone" diffuser, and the use of an anti-anxiety drug (Alprazolam) obtained through consultation with our behavior-knowledgeable veterinarian.

We're considering the purchase of a Storm Defender™ cape (a coat that neutralizes the static charge that accompanies thunderstorms) to see if it might be even more effective than the snug T-shirt, and we may use a Calming Cap™ (a mask that reduces the dog's vision and thus reduces his visual stimulus) to reduce the intensity of stimulus of lightning flashes. We're encouraged by Lucy's improvement, and hope for the day when she's no longer traumatized by storms and applause. We might even make it to the Rally ring one day. 🐾

Pat Miller, CPDT, is WDJ's Training Editor. Miller lives in Hagerstown, Maryland, site of her Peaceable Paws training center. She is also the author of The Power of Positive Dog Training and Positive Perspectives: Love Your Dog, Train Your Dog. For book purchasing or contact information, see "Resources," page 24.

Resources Mentioned in This Article

BOOKS

There are several excellent books that address fear-related behaviors in dogs. For a more in-depth exploration of the topic, consider the following, all available from Dogwise.com (dogwise.com, 800-776-2665)

- **The Cautious Canine: How to Help Dogs Conquer Their Fears**, by Patricia McConnell, Ph.D., Dog's Best Friend Ltd., 1998. Softcover, 30 pages, \$7. This concise but information-packed booklet is a gold mine of information on managing and modifying your dog's fearful behaviors.
- **Help for Your Fearful Dog: A Step-by-Step Guide to Helping Your Dog Conquer His Fears**, by Nicole Wilde, Phantom Publishing, 2006. Softcover, 141 pages, \$25. This in-depth volume contains detailed information on fear-related behaviors as well as specific modification instructions for helping your dog get comfortable with a wide variety of fear-causing stimuli.
- **I'll Be Home Soon: How to Prevent and Treat Separation Anxiety**, by Patricia McConnell, Ph.D., Dog's Best Friend Ltd., 2000. Softcover, 36 pages, \$8. An exceptionally useful booklet to guide you in modifying and managing your dog's separation anxiety.

- **For the Love of a Dog: Understanding Emotion in You and Your Best Friend**, by Patricia McConnell, Ph.D., Ballantine Books, 2005/2006. Hardcover, 332 pages, \$25. While not specific to fear-based behaviors, this ground-breaking new book by Dr. McConnell explores emotions in dogs including the emotion of fear.

PRODUCTS

Anxiety Wrap

(877) 652-1266, anxietywrap.com

Calming Cap

(888) 640-8840, premier.com/pages.cfm?id=188

Comfort Zone

farnampet.com/behavior_info/caninetalk_dap.php
Available at pet supply stores

Melatonin

Available at health food stores

Storm Defender

(513) 931-2175, stormdefender.com

It's the Balm!

Lemon balm is the Herb of the Year for you and your dog.

BY CJ PUOTINEN

Next month, on May 6, the first day of National Herb Week, lemon balm (*Melissa officinalis*) becomes Herb of the Year for 2007. A dog-friendly plant with a distinctive lemon-mint fragrance and flavor, lemon balm is best known as a nervine, a calming herb that soothes and relaxes. It's also a digestive aid that neutralizes gas in the stomach and intestines. Add its muscle-relaxing, deodorizing, disinfecting, and insect-repelling benefits, and you can see why lemon balm belongs in your garden, window box, or patio planter.

Native to the Middle East, lemon balm traveled through all of Europe. Charlemagne ordered his subjects to plant it, Benedictine monks put it in their monastery gardens, and Thomas Jefferson grew it at Monticello. Today the plant is grown commercially as an ingredient in cosmetics, skin care products, and furniture polish.

Lemon balm's key constituents include volatile oils, tannins, flavonoids, terpenes, and eugenol. Its terpenes are relaxing, the tannins have antiviral effects, and eugenol calms muscle spasms, kills bacteria, and has an analgesic (pain-relieving) effect. In recent years, lemon balm has made headlines for its ability to treat cold sores and other breakouts caused by the herpes simplex virus and as a treatment for Alzheimer's Disease.

Its strong performance in the Alzheimer's studies and its safety make it a compelling candidate for a trial with senior dogs suffering from cognitive dysfunction, or to reduce the depression and agitation that dogs with cognitive dysfunction can display.

People whose dogs' flatulence drives them out of the room may especially appreciate lemon balm's ability to reduce gas.

Long considered a "universal remedy," lemon balm is an herb that can be used for

What you can do . . .

- Plant lemon balm in your garden, window box, or in pots.
- Add fresh lemon balm to your dog's food.
- Add lemon balm tea to food and drinking water, and use it as a rinse after bathing.
- Brush your dog with fresh lemon balm to help repel insects.



almost any ailment but is perhaps most strongly indicated in dogs with digestive problems, separation anxiety, sleep disorders, stress, and irritability. It is also an effective topical treatment for ringworm.

Easy to grow

Like all members of the mint family, lemon balm has square-shaped stems and spreads more through its roots than through seeds. Under the right conditions, it grows like a weed and often is one, taking over entire gardens. Its small white blossoms are so sweet that they attract bees, hence the plant's scientific name. *Melissa* is Greek for honey bee.

Lemon balm is easy to grow in full sun to partial shade. It doesn't need fertilizer – in fact, fertilizing the plant reduces its medicinal benefits. Lemon balm is happiest in poor, sandy soil. Its seeds need several weeks of exposure to light and moisture before sprouting. Many nurseries sell lemon balm seedlings, and once plants are established, they care easily propagated by dividing the roots.

Lemon balm is a thirsty plant, so water it during dry weather. However, too much



Lemon balm is particularly useful for older dogs who show signs of age-related confusion, dementia, or anxiety. Puppies may appreciate its ability to settle the stomach and reduce digestive gas.

rain or moisture can produce mildew, so good drainage is vital.

Unlike most herbs, lemon balm is best harvested in the afternoon, when its essential oils are strongest. For maximum yield, cut lemon balm before flowers bloom. The more it's trimmed, the more leaves it produces.

Use the fresh herb

Finely mince or chop lemon balm leaves and add them to your dog's food at the rate of 1 teaspoon per 15 pounds of body weight. This is approximately 1 tablespoon for a dog weighing 45 to 50 pounds.

Fresh minced lemon balm can also be used as a poultice or wound dressing. Mash leaves or pulverize them in a blender, apply to the affected area, and hold in place with a bandage.

Lemon balm can be used straight from the garden to keep your dog smelling fresh. Simply pick a few stems, crush the leaves, and run them over your dog's coat. In addition, lemon balm's citronella-like fragrance is said to repel mosquitoes and other insects. If you can convince your dog to chew on a lemon balm leaf, her breath will smell wonderful.

Brew a tea

To make a medicinal-strength lemon balm tea, pour 1 cup of boiling water over 2 tablespoons coarsely chopped fresh leaves. If using dried lemon balm, the amount to use depends on the quality of the dried leaves, which usually declines during drying and storage. Most teas made from dried herbs are brewed with half the amount recommended for fresh herbs, but to produce a medicinal-strength lemon balm tea, you may need 2 tablespoons dried herb per cup of water, or even more. Don't worry about exact measurements as this is a very forgiving and nontoxic herb. Cover the brewing tea and let stand until it cools to room temperature.

Add the tea to your dog's food and/or drinking water, starting with small amounts while your dog becomes accustomed to the taste and fragrance. Add up to 1 tablespoon tea per 20 pounds of body weight twice or three times daily, and if treating a specific condition, such as indigestion or anxiety, double that amount. If your dog is ill or dehydrated, serve plain instead of herb-flavored water or encourage him to drink more by adding broth (instead of herbal tea) as a flavor enhancer to his water bowl.

Herb of the Year

Since 1995, the International Herb Association has announced its Herb of the Year during National Herb Week in May, raising public awareness about herbs that are easy to grow, attractive, and well known for their medicinal or culinary properties.

Lemon balm (*Melissa officinalis*) now joins fennel, bee balm, thyme, mint, lavender, rosemary, sage, echinacea, basil, garlic, oregano, and geranium on that exalted list.

The IHA's 2007 Herb of the Year information packet provides a comprehensive review of lemon balm's history, chemistry, varieties, traditional and modern uses, growing tips, and recipes. See page 16 for contact information.



Lemon balm tea is a disinfecting rinse for cuts and other wounds. To make the rinse even more effective, add 2 teaspoons unrefined sea salt to each cup of tea and stir to dissolve. Simply pour cold or room-temperature tea over the injury.

To use lemon balm tea as a compress, soak a wash cloth, cotton dressing, or tissue in cold tea, apply, and hold the compress in place for several minutes. To keep the area cold, soak the compress again and reapply. Cold compresses are recommended for recent or acute injuries.

To help treat chronic conditions like arthritis, hip or elbow dysplasia, or old sports injuries, use hot lemon balm tea as a fomentation or hot compress.

Lemon balm has mild muscle-relaxing and antispasmodic properties. Soak a wash cloth in comfortably hot tea, wring just enough to stop dripping, test the temperature on your inner wrist to be sure it isn't too hot, then apply to the affected area and hold it in place for several minutes. Soak the compress again and reapply as needed to keep the area warm for 10 to 15 minutes.

After bathing your dog (except for dogs with white or very light colored coats), pour lemon balm tea all over as a final rinse.

Fill a spray bottle with lemon balm tea and use it as an air freshener.

Store leftover tea in the refrigerator. For best results, use within three or four days.

Make an herbal honey

Coarsely chop enough lemon balm to fill a glass jar. Next, fill the jar with honey, completely covering the chopped herb. The more lemon balm you put in the jar, the more medicinal the result. If the honey is too thick to pour easily, warm it by placing the honey jar in hot water.

Seal the jar of lemon balm and honey and leave it in a warm location, such as a sunny window, for at least two weeks. Alternatively, heat honey in a saucepan and pour it over the herbs. For a double-strength herbal honey, wait four to six weeks, then fill another glass jar with lemon balm and pour the contents of the first jar into the second jar. Before using the herbal honey, filter it through cheesecloth or a fine-mesh strainer and store at room temperature.

Consider making two lemon balm honeys, one from raw, unfiltered honey with its nutritional benefits intact and one from pasteurized, filtered honey. Use the thick raw honey for internal use and the pasteurized honey for topical application. Raw honey often crystallizes, creating sharp points that can damage burned or injured skin, unlike honey that has been heated and filtered.

When applied as a first-aid dressing, honey creates a protective barrier that seals the skin, absorbs moisture from oozing wounds, and speeds healing. Honey also releases hydrogen peroxide, which kills germs. Because honey doesn't stick

to bandages, it makes dressings easy to remove and change. Some honeys, such as manuka honey from Australia, have proven antibacterial properties, including the successful treatment of drug-resistant *E. coli* and staph infections. Honey infused with lemon balm can be even more potent. Lemon balm honey is an effective dressing for cuts, surgical wounds, burns, lick granulomas, abrasions, hot spots, and infected wounds. Most dogs will want to lick it off, so protect the wound with a bandage or cervical collar.

Lemon balm honey can be used to prevent infection from viruses or bacteria, soothe a sore throat, help an anxious dog relax, improve sleep, and speed recovery from illness. Added to food, lemon balm honey helps reduce gas and other symptoms of indigestion.

Aromatherapy

Lemon balm's essential oil, usually labeled melissa oil, is so expensive that it's often misrepresented. Much of what is sold as steam-distilled Melissa oil is really a blend of citronella and lemon grass. True Melissa oil costs up to \$1 per drop. That's because it takes 3 to 5 tons of fresh lemon balm to produce a single pound of essential oil. Fortunately, Melissa hydrosol, the "flower water" byproduct of steam distillation, is far less expensive and has the same healing benefits.

In her book *Hydrosols: The Next Aromatherapy*, Suzanne Catty recommends

taking Melissa hydrosol during flu and allergy seasons as a prophylactic because of its immune-stimulating, infection-fighting, and antiviral properties. It also aids digestion and has a calming, emotionally uplifting effect.

For pet use, Catty recommends adding ¼ teaspoon hydrosol per cup of drinking water. Full-strength hydrosol can be added to food at the rate of 1 drop per pound of body weight per day, which is ½ teaspoon for a 30-pound dog and 1 teaspoon for a 60-pound dog.

"For a health maintenance regimen, this works well," she explains. "You can treat chronic conditions with 2 drops per pound on a three-weeks-on, one-week-off cycle. This way the body has a week to assimilate the changes and healing process. Then the treatment can be adjusted as necessary. For acute conditions, give 2 drops per pound per day."

With their sensitive noses, dogs may at first avoid water to which Melissa hydrosol has been added. Introducing it in small amounts, starting with just a few drops in the water bowl, can make it more palatable. As noted earlier, if your dog is ill or dehydrated, serve plain water or



water containing broth as a flavor enhancer to encourage drinking. Most dogs accept the addition of hydrosols to food without a problem, but if yours has a picky appetite, try starting with tiny amounts. Alternatively, use an eye dropper to fill an empty two-part gelatin capsule with hydrosol and hide it in a favorite food.

Spray full-strength Melissa hydrosol in the air and directly on your dog's coat to deodorize, disinfect, improve coat quality, reduce anxiety, and treat skin allergy problems, fungal infections, rashes, irritations, and hot spots.

Lemon balm's safety

The only contraindication listed for lemon balm in most herbal references is its ability to interfere with the body's assimilation of iodine, thus affecting the thyroid. In human herbal

medicine, lemon balm is sometimes used in the treatment of hyperthyroidism, or overactive thyroid. However, it is not sufficiently thyroid-suppressing to be used as a stand-alone therapy, and in the amounts mentioned here, it is unlikely to contribute to hypothyroidism in dogs.

Susan Wynn, DVM, co-author of the recently published reference book *Veterinary Herbal Medicine* and founder of the Veterinary Botanical Medicine Association, describes lemon balm as one of the world's safest herbs. "I would not hesitate to give it to most dogs, including those with underactive thyroid function if the herb is potentially useful for the patient," she says.

Like all mints, lemon balm is said to counteract the effects of homeopathic remedies. If a veterinary homeopath prescribes a remedy and warns against combining it with peppermint, it's a good idea to avoid lemon balm as well. 🐾

A long-time contributor to WDJ and author of The Encyclopedia of Natural Pet Care, Natural Remedies for Dogs & Cats, and other books, CJ Puotinen lives in New York with her husband, a Labrador, and a tabby cat.

Lemon Balm Resources

Lemon Balm, Herb of the Year information packet. \$9.50 (includes postage). International Herb Association, PO Box 5667, Jacksonville, FL 32247-5667, (904) 399-3241, iherb.org

Lemon balm seeds and plants (organic)

Richters Herb Specialists, Goodwood, Canada. (905) 640-6677, richters.com

Lemon balm tea (dried leaves, organic)

Jeans' Greens, Schodack, NY. (518) 479-0471, jeansgreens.com

Melissa hydrosol (organic)

Nature's Gift, Madison, TN. (615) 612-4270, naturesgift.com

Manuka honey

Manuka Honey, USA, Orlando, FL. (800) 395-2196, manukahoneyusa.com

Hydrosols: The Next Aromatherapy, by Suzanne Catty. Healing Arts Press, 2001. Available from acqua-vita.com and most booksellers.

Veterinary Herbal Medicine, by Susan G. Wynn, DVM, and Barbara Fougere, BVSc. Elsevier, 2007.

Veterinary Botanical Medicine Association, 1785 Poplar Drive, Kennesaw, GA 30144, vbma.org

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Time to Brush, Flossie!

Clean teeth and healthy gums are critical for your dog's overall health.

BY NANCY KERNS

Some dogs have sparkling white teeth (or at least, whitish teeth that are free of tartar) throughout their lifetimes, with absolutely no thought or effort required of their owners. Those are the lucky ones – the owners, I mean – because more than 80 percent of dogs develop gum disease by the age of just three years, according to the American Veterinary Dental Society. The owners of those dogs – that is, most of us – should be brushing our dogs' teeth regularly to prevent the accumulation of plaque and tartar that precipitates gum disease.

Proponents of raw diets for dogs believe that the mechanical action of chewing raw meat and bones and the superior nutrition provided by the diets help maintain healthy teeth. That may be true, but for dogs on more conventional diets, regular brushing is the most effective method of keeping a dog's teeth free of tartar and plaque. It's also far less costly than semiannual trips to the vet for professional cleaning, and poses

none of the risks of the general anesthesia required for the veterinary dental hygienist to do a thorough job.

The procedure isn't fun; that's true. It's not particularly comfortable for you or your dog. But it doesn't have to be torturous, either, especially if you use the positive behavior modification methods you are familiar with from WDJ's training articles.

Daily habits

If every puppy had her teeth brushed every day, from the time she *had* teeth, the job would be far simpler. The fact is, most of us aren't aware that we *should* be brushing Flossie's teeth until that "well dog" visit when our vet gives us a \$500 estimate for Flossie's appointment with the aforementioned hygienist. The earlier you start paying attention to and messing around with your dog's mouth, the easier it will be – and you may even prevent that \$500 vet bill.

What you can do . . .

- Brush your dog's teeth frequently.
- Keep the sessions short and positive. Quit when your dog has complied for even just a few moments, and slowly increase the length of your sessions. Reward her richly for her cooperation!
- Press a canine toothpaste (never a human product) into the bristles of the brush.



Introduce your dog to the concept gradually. Start by lifting her lips at least a few times a day, and visually examining her teeth for gradually increasingly longer



This position works well for brushing the front teeth. You can put your small dog on your lap, with his back to you.



Make sure that the brush you use has soft bristles. Angle the bristles up toward the gums, to brush under the gum line. If you can condition your dog to enjoy them, electric toothbrushes are excellent at making this job go faster.

moments. Keep some yummy treats on hand – more than just ordinary kibble. Use something really scrumptious, like meat or cheese. Reward her richly for sessions in which she cooperates, even if her compliance is fleeting at first. If the experience is consistently rewarding, and not fraught with physical “corrections,” forcible restraint, or verbal warnings, she’ll participate more and more willingly. Remember, dogs do what works for them. If the discomfort of the exercise outweighs the value – *to the dog* – of the reward, she’s quite reasonably going to vote against. Keep the sessions short and rewarding, and give her plenty of verbal encouragement.

When you can lift her lips and visually examine her teeth without muss or fuss, start rubbing her gums and touching her teeth with a wet forefinger. Again, keep it short and positive, and make sure she associates this experience with something *extra* delicious afterward, whether it’s some fresh roast beef or a session with her favorite toy.

When you can reliably and comfortably examine and touch your dog’s teeth and gums with your wet fingers, start using a bit of clean, wet gauze wrapped around your finger to perform rudimentary toothbrushing. As before, keep these sessions short, happy, and frequent. As with all training, the more frequently you practice, the more quickly your dog will progress.

The first few times you introduce your dog to a soft-bristled toothbrush, put

something yummy on the bristles and let her lick it off. Then perform your usual exam, gum rubbing, and tooth touching, with a bit of brushing with the brush added in. Lavishly reward your dog’s cooperation.

Special gear?

There are a number of toothpastes made especially for dogs on the market; you’ll find a variety in any pet supply store. It’s not critical that you use one, but it is important that you *don’t* use human toothpaste, even one intended for babies. Most human toothpastes contain xylitol, which is toxic to dogs. Plus, human toothpastes are invariably mint-flavored, which dogs don’t generally enjoy. Pet toothpastes, in contrast, come in flavors like “poultry” and “filet mignon” – yum!

The truth is, you don’t actually need to use toothpaste at all. Many dogs object more to the introduction of a new taste in their mouths than to the brush, anyway. Just keep the bristles wet, perhaps by swishing the brush in a cup of water every half-minute or so as you work.

As you progress, gradually replace more and more of the gum rubbing and tooth touching with more and more brushing. Always use a wet, soft-bristled brush,



Tartar accumulates at a faster rate on the back molars, close to the salivary glands. To reach this area, you’ll need to approach your dog from the front, and may need a helper to prevent the dog from backing away.

and brush gently in small circles, with the bristles angled toward the gums. If you have any questions about brushing technique, ask your veterinarian or the vet’s staff to demonstrate.

The long-handled brush will permit you to reach farther and farther back in your dog’s mouth. Take care to ensure you don’t poke her gums or gag her as you work toward the molars, but *do* try to reach all the back teeth. This is the most common site of tartar accumulation and periodontal disease, as well as the site of the teeth dogs use most for chewing their food.

Your dog’s gums may bleed a little bit when you first start getting in the habit of brushing them. This should cease with regular brushing, but consult your veterinarian if it persists.

Use the Right Stuff

There is absolutely nothing wrong with using a human toothbrush on your dog’s teeth, as long as it is a soft-bristled brush. But there are many cleverly and specially designed brushes and brushing kits on the market for canine use, and they can make the job easier.

There are also a number of electric dog toothbrushes on the market today. These certainly *can* be a boon, making the job go faster, *if* you can successfully condition your dog to tolerating a whirring, jiggly thing in his mouth. Remember, it’s more important that your dog have a positive association with the whole process than to do a perfect job of brushing. If he hates the experience, he’ll make it more difficult for you to do it – and you’ll end up doing it less and less.



The Complete Pet Dental Kit (left) by Keep It Clean (U.S. 866-305-2559, Canada 843-849-3704) comes with three types of brushes and pet toothpaste. Hartz makes electric pet toothbrushes, available in most pet supply stores.

Things to look for

Make sure that you visually inspect your dog’s gums and teeth as you work. Keep an eye out for swollen or reddened gums; broken, fractured, or loose teeth; particularly sensitive areas; and especially foul breath. Any of these should be investigated by a veterinarian as soon as possible. Untreated, dental problems can quickly lead to systemic infection and even serious heart disease, as the oral bacteria enter the bloodstream via the blood vessels in the gums. In fact, many chronic (and seemingly unrelated) health problems are due to periodontal disease.

If your dog’s teeth and gums are already in bad shape, see your veterinarian right away. It’s much easier to maintain healthy teeth after a professional cleaning. 🐾

Nancy Kerns is Editor of WDJ.

Help Rover Get Over It

More treatments for canine injuries from springtime overactivity.

BY CJ PUOTINEN

Strained muscles, pulled ligaments, sprains, and bruises . . . these are common canine injuries in the spring, when the weather invites us all outside and even seems to encourage our dogs to overdo it. Enthusiastic, rigorous exercise that follows several months of relative inactivity is a prescription for injury.

Last month, we discussed the “doctor’s orders” for first aid and immediate treatment of canine sports injuries (“When Fido Overdoes It”). The following are additional home treatments and professional interventions that will help Rover get over his body aches and strains.

Aromatherapy

Many essential oils and hydrosols (the “flower waters” produced by steam distillation) have anti-inflammatory and pain-relieving properties. They can be used in massage oils and compresses to help the patient feel more comfortable, increase blood flow to the area, and speed healing. In addition, soothing essential oils such as lavender or chamomile can be dispersed into the air with an electric nebulizer or diffuser or simply dropped on a cotton ball placed near the dog’s crate



Dogs tend to overdo it when the weather gets nice; don’t we all? Exuberant exercise following a layoff can cause pulled muscles, spinal misalignments, and strained ligaments and tendons – which can, in turn, fail to support the joints properly.

or bedding to help keep the animal calm and relaxed. Hydrosols, such as lavender or chamomile, can be spritzed around the room and directly on the dog for the same purpose.

In her book, *Holistic Aromatherapy for Animals*, Kristen Leigh Bell interviewed several veterinarians who routinely use essential oils. One is Stephen R. Blake, DVM, in San Diego. He diffuses frankincense essential oil in his exam room and gives canine patients a light massage for a few seconds after rubbing a drop of frankincense essential oil into both hands. “I like frankincense because it’s grounding,” he says. “It helps calm both patient and caregiver, and it has disinfecting properties as well.”

For patients with a possible joint or cruciate ligament injury, Dr. Blake has the owner massage a blend of 1 drop lemongrass essential oil diluted in 1 teaspoon sweet almond oil to the area twice per day.

Dr. Blake uses a diluted blend of four essential oils (spruce, frankincense, rose-

wood, and blue tansy) as what he calls a “chiropractor in a bottle” for musculoskeletal cases. He instructs caregivers to apply 1 drop of the massage oil blend to each paw pad on all four feet, massaging the pads well.

Dr. Blake recommends doing this on a bed, couch, or table, then placing the dog back on the floor. “Immediately,” he says, “the dog will shake off and in doing so, adjust himself. If the dog doesn’t shake from head to tail the way he does after a swim or when coming out of the rain, repeat the procedure. Since the massage and the oils stimulate all of the acupuncture meridians, this combination of massage, essential oils, self-adjusting, and acupuncture point stimulation really speeds the healing process. I suggest doing this from one to four times a day, depending on the patient’s response to each treatment. Once the patient is stable, I reduce the frequency of treatments.”

Kristen Leigh Bell’s favorite massage oil blend for dogs is 3 drops black pepper (*Piper nigrum*), 4 drops peppermint

What you can do . . .

- Prevent injuries with warm-ups, cool-downs, and conditioning exercise.
- Help your overweight dog lose pounds to reduce injury risk.
- Use supplements to help your canine athlete maintain a healthy weight and muscle condition.



(*Mentha piperita*), 3 drops spearmint (*Mentha spicata*), and 4 drops juniper berry (*Juniperus communis*) essential oils mixed with ½ fluid ounce (1 tablespoon) hazelnut, sweet almond, or other carrier oil. “This is excellent for animals with muscle soreness, arthritis, hip dysplasia, or sprains,” she explains. “Combined with simple massage techniques, it helps stimulate circulation to the injured area, greatly speeding the healing process. I have plenty of clients who also use this blend on themselves, including one who is an avid runner who applies the blend to her shin splints. Use 2 to 4 drops at a time and try to get the blend as close to the animal’s skin as possible. This can be tricky when your dog has a dense coat, but do your best.”

Because this blend’s essential oils can potentially cause slight skin irritation, Bell recommends doing a patch test by applying 1 drop of the blend on the skin of the dog’s “armpit” and checking 24 hours later for any redness or irritation. “I have yet to see irritation in any dog,” she says, “but it can never hurt to err on the side of safety.”

Marge Clark at Nature’s Gift in Madison, Tennessee, recommends the same massage oil for dogs that she blends for humans, a combination of lavandin (*Lavandula hybrida*) for soothing and pain relief, black pepper for warming and stimulating blood flow in the extremities, and helichrysum (*Helichrysum italicum*) from Corsica, which she calls “the best anti-inflammatory and bruise healer I know of,” in a base of jojoba oil.

“I use equal parts of each of these essential oils in a 1-percent solution for small or medium-sized dogs and a 2.5- to 3-percent solution for large dogs,” she says. To create a 1-percent solution, add 1 drop of each of the three essential oils to 1 tablespoon jojoba; to create a 3-percent solution, add 6 drops essential oil in 1 tablespoon jojoba.

Like its essential oil, helichrysum’s hydrosol or flower water is an effective anti-inflammatory treatment for bruises, sprains, and other injuries. Simply spray full-strength or diluted hydrosol to soak the skin or apply as a compress. For more about hydrosols, see “Canines in a Mist,” WDJ April 2005.

It’s magnetic

Seven years ago, Erin Kavanagh, a resident of Wales, suffered a stroke just before giving birth. Semi-paralyzed on her left side, she was told she would never regain

full mobility, be able to drive a car with a manual transmission, or type with both hands. That’s when she tried a Bioflow magnetic wrist band. “The pain subsided immediately,” she says, “and gradually the use of my paralyzed limbs came back. The neurologist discharged me six months after I started to use magnetotherapy and I have never looked back.”

Four years ago, Kavanagh’s Border Collie, Celyn, competed in obedience, agility, and flyball. In addition to practicing daily, they trained four times a week, and Celyn worked as a demonstration dog when Kavanagh taught obedience classes.

However, Celyn had been hit by a car as a two-year-old, and the injury often caused him to limp. One day, when he was five years old, he was too lame to work. His left hip was inflamed, he could bunny-hop but not walk, and he couldn’t lie down comfortably.

“I borrowed a Bioflow dog collar from the same distributor who sold me the wrist band, and a few hours after I put it on Celyn, he seemed so restless and was drinking so much water that I took it off,” says Kavanagh. “The second day I left it on for longer, and although he still drank a lot of water, he seemed calmer. The third day he was happy with it on all day and night. On the fourth day, he ran outside and cleared a five-barred gate! The next week he was back at work and I signed up as a Bioflow distributor.”

Celyn is now nine years old and retired from competition. “Last year he was diagnosed with congestive heart failure and was supposed to die by September,” she says. “Despite Vetmedin (a heart medication) and Frusimide (a diuretic widely used in the U.K.), he was thin, choking, had blue gums, and was utterly miserable. He even stopped barking at the postman. I put a magnetic dog coat on him and within 48 hours he started barking again. A week later his need for Frusimide dropped by half a tablet a day and his visible deterioration ceased. He still overdoes it because that’s his nature, but he no longer suffers an attack afterwards, and when I take his coat off at night all my cats make a bee-line to go sleep on the magnets.”

Bioflow dog collars, cat collars, dog coats, and bed pads contain a patented Central Reverse Polarity (CRP) magnetic

module that mimics the pulsating electro-magnetotherapy used by physiotherapists in National Health Service hospitals in the U.K. to treat ligament injuries, sprains, and broken bones in humans. “The collar rests directly over the dog’s jugular vein,” says Kavanagh, “so treated blood is able to carry more oxygen and nutrients to all parts of the body as well as remove toxins and waste materials more efficiently. Most patients show significant benefits within a week or two, certainly within 90 days, and most sports injuries heal twice as fast as they would otherwise.”

Bioflow dog coats, which come in five sizes, are recommended for use before exercise to increase blood flow to muscles,

enhancing warm-ups, and after exercise to help maintain muscle condition and improve tissue repair.

Small dogs usually wear the Bioflow cat collar, and giant breeds wear two dog collars linked together. According to Kavanagh, dogs can safely

wear as many magnets as they require for as long as needed. “I know of one dog who only wears a collar in winter when the cold and damp cause him problems,” she says, “and a flyball team carries collars as a first-aid measure in case of injury. Celyn, my Collie, now wears a dog coat during the day plus two dog collars 24/7.”



A collar and a coat containing therapeutic magnets helped Celyn recover from injuries as well as chronic heart trouble.

Favorite remedies

Long-time WDJ readers know that nutritional supplements can make a huge difference in the treatment of injuries.

Enzyme products like NZymes and Wobenzym speed healing by breaking down inflammation throughout the body. In systemic oral enzyme therapy, digestive enzymes are taken between meals on an empty stomach so that instead of dealing with food, they are carried through the bloodstream to affected areas. Wobenzym, NZymes, and similar products help older dogs by reducing arthritis symptoms, and they help dogs of all ages recover from bruising, soreness, and swelling.

Most dogs respond well to 1 Wobenzym tablet per 10 pounds of body weight (up to

a maximum of 5 tablets at a time) given every 1 or 2 hours until improvement is seen, and that dose is continued for several days or as needed. Once recovery is under way, a typical maintenance dose is up to 5 tablets at a time twice or three times per day. See "Digest These Benefits" (October 2005) for detailed instructions.

Willard Water concentrate is a catalyst-altered water (described in "Willard Water," June 2006) that can be added to a dog's drinking water at the rate of 1½ teaspoons per quart, or 2 tablespoons (1 fluid ounce) per gallon. Treated drinking water can be added to food in any amount.

The most frequently received report from consumers whose arthritic dogs receive Willard Water is an improvement in gait, leg strength, and range of motion. Dogs with chronic and acute sports injuries sometimes experience similar improvements, and a maintenance dose of Willard Water (1 tablespoon concentrate per gallon of water) can help keep any canine athlete in good shape.

Adding 2 teaspoons Willard Water concentrate to a quart (or ½ teaspoon per

cup) of water, herbal tea, aromatherapy hydrosol, diluted herbal tincture, or vinegar wash improves its topical application, helping the liquid penetrate and speeding the healing of sprains, bruises, and inflammation.

High-quality protein is essential for injury healing and for the repair of damaged tissue. Seacure, the deep-sea fermented whitefish powder described in "Securing Seacure" (April 2003), is predigested so that its amino acids and peptides, the body's building blocks, are immediately absorbed and utilized. The product is available as a pet powder for adding to food and in chewable dog-treat tabs and 500 mg capsules.

To help dogs recover from trauma wounds, sprains, muscle strains, and other sports injuries, give at least twice the label's recommended maintenance dose of 1 capsule, 1 tablet, or ¼ teaspoon powder per 10 pounds of body weight for as long as needed.

Colostrum, the "first milk" produced by mammals after giving birth, has become a popular supplement because of its immune-boosting and injury-repairing properties. Dr. Blake recommends offering colostrum powder by itself on an empty stomach half an hour or more before a meal. To help speed the healing of sports injuries, he suggests giving twice to three times the recommended maintenance dose of one 500-mg capsule or ½ teaspoon powder per 25 pounds of body weight per day. For an injured 50-pound dog, this would be 4 to 6 capsules or between 1 and 2 teaspoons powder per day.

Reduce the risk

Prevention is always better than treatment, and the name of the prevention game is conditioning. Keep in mind that young dogs should not jump higher than elbow height until their bone growth is complete, at about 12 to 14 months of age, and overweight, arthritic, or injured dogs should start slowly and increase exercise gradually.

Conditioning programs involve both strength and endurance exercises. For example, short runs up steep hills and short retrieves are examples of strength

training. Because muscles need about 48 hours to recover from this type of workout, it's recommended to use this sort of workout only every other day. Long walks, runs, or swims are examples of endurance training, which builds stamina by strengthening the heart and lungs.

Interval training combines short bursts of demanding exercise with longer periods of easy exercise, such as alternating periods of running and walking. Interval training is fun for dogs, and it reduces the risk of injury.

Every workout should begin with a warm-up period and end with a cool-down. According to Carol J. Helfer, DVM, at Canine Peak Performance Sports Medicine & Physical Rehabilitation Center in Portland, Oregon, the best warm-ups for healthy dogs incorporate the same muscle groups that will be used in their events. Going from a walk to a trot to short sprints is appropriate for most dogs, along with low hurdles for dogs who will be jumping.

Amy Snow, who teaches canine acupressure through the Tallgrass Animal Acupressure Institute in Larkspur, Colorado, gives similar advice, plus she incorporates acupressure into every phase of conditioning. As she observes, "Dogs' muscles and tendons, like our own, are not designed for dashing over hurdles, pouncing on a box, catching a ball, spinning around, and frantically running back over the hurdles of a flyball course, or racing through an agility course, without an appropriate warm-up."

Many trainers encourage their dogs to stretch before a workout, but Dr. Helfer disagrees. "Stretches should never be done without some warm-up or prior activity because stretching cold muscles can lead to injury," she says.

"There are many opinions about stretching, but I prefer to save it for the after-exercise cool-down routine. Stretches should never be painful but should produce a noticeable tension in the muscles being stretched, and the longer the stretches can be held, the more effective they are, assuming that they are appropriate for the dog and the sport. For example, a dog competing in disc likely needs more flexibility than one competing in mushing."

A cool-down promotes recovery and returns the body to its pre-exercise, pre-workout state by removing lactic acid from muscles and reducing soreness. Slow your dog from a moderate trot to a walk, do some stretches, and keep him moving



Don't allow your dog to stop and drop immediately after hard exercise. Take him for a slow walk for at least 10 minutes (or even more) before putting him into a crate or car.

until he stops panting and his breathing returns to normal.

"The cool-down is often neglected," says Snow. "I see far too many people just put their dogs into a crate after an agility trial. It hurts me to watch it, and I always want to warn them about what they're doing. The next day, when the dog starts to limp or gets hurt, they probably never make the connection."

Overweight dogs are at such a high risk of injury that the only sensible approach to getting them in shape is a change of diet combined with gradually increasing low-impact exercise. Switching him from grain-based kibble to a high-protein food, or preparing a low-carb food for him, should make weight loss easier.

"The single most important thing you can do to lengthen the career of your canine athlete," says Dr. Helfer, "is to keep your dog lean. The ribs should be easily felt and subcutaneous fat around the ribs should be barely detectable. When you look down on your dog from above, he should have a definite 'waist,' and when viewed from the side, there should be a 'tuck' from the ribs to the hips."

Another effective way to prevent injury is to emphasize variety in conditioning exercise. Repetitive motion injuries are

as common in dogs as in people, and they come not so much from over-exercising certain muscles as from under-exercising others. Develop a cross-training exercise program that includes many different kinds of motion. Instead of walking or jogging on sidewalks or a level track, switch to grass, bare earth, hills, and valleys. If your hike takes you to a lake or pond where your dog can swim, or if you have a pool or live near the beach, even better.

"An important and often ignored component to cross-training," says Dr. Helfer, "is balance work and core body strength training. Both are important in injury prevention, especially in events that require quick changes of direction. In sports like agility and disc, the ability to respond quickly not only helps prevent injury, but also improves performance."

Rehabilitation therapy

Over the years, veterinary chiropractors, acupuncturists, massage therapists, and body workers have helped dogs of every description heal from injuries, accidents, surgery, and illness. Many competition dogs have monthly appointments for routine maintenance, to catch and correct minor problems before they progress.

Now, in response to the explosive

growth of canine sports, rehabilitation medicine is becoming a popular veterinary specialty. At Top Dog Canine Rehabilitation and Fitness in Hamden, Connecticut, Jill Bruno-Sarno, CVT, and other therapists treat dogs for arthritis, hip and elbow problems, spinal injuries, stifle injuries, degenerative myelopathy, wobbler's syndrome, joint injuries, tendonitis, bursitis, and soft-tissue injuries with the help of an underwater treadmill, massage therapy, electrical stimulation, low-level ultrasound, and therapeutic exercise.

These treatments decrease pain, increase the rate of healing, reduce the risk of further injury, and re-establish strength, endurance, and range of motion.

"It's great to be able to help increase the quality of a pet's life through non-invasive techniques," says Dr. Bruno-Sarno. "In addition, we offer sports conditioning for the working dog. We get quite a few canine athletes who are getting ready for a big show or trial, and when they win, we know we played a part in helping them shave a few seconds off a round or look their best in the show ring." 🐾

WDJ contributor CJ Puotinen lives with her husband, Joel, and Labrador Retriever, Chloe, in New York.

Resources Mentioned in This Article

BOOKS

Holistic Aromatherapy for Animals, by Kristen Leigh Bell.

Physical Therapy for the Canine Athlete, by Suzanne Clothier and Sue Ann Lesser, DVM.

Books available from DogWise, (800) 776-2665, dogwise.com

PRODUCTS

Colostrum from New Zealand pasture-fed cattle available from Sedona Labs, Cottonwood, AZ. (888) 816-8804, sedonalabs.com

Bioflow magnetic products for dogs available from Magnetise, Wales, UK. Orders from the US accepted through PayPal; 90-day guarantee. For a one-time 15-percent discount, use code 412070457 (expires December 2007). Erin Kavanagh, magnet-healing.co.uk

NZymes (nutritional enzyme supplement) available from Biopet, Las Vegas, NV. (877) 816-6500, nzymes.com

Seacure® available from Proper Nutrition, Reading, PA. Mention WDJ for discount and free shipping. (800) 555-8868, propernutrition.com

Therapeutic-quality essential oils including Valiant, a blend of frankincense, spruce, blue tansy, and rosewood (dilute for pet use), AromaTherapeutix, Los Alamitos, CA. (714) 886-1586, aromatherapeutix.com

Therapeutic-quality essential oils and hydrosols available from Nature's Gift, Madison, TN. Marge Clark, (615) 612-4270, naturesgift.com

Willard Water available from Nutrition Coalition, Fargo, ND. Mention WDJ for free samples. (800) 447-4793 or (218) 236-9783, willardswater.com

Wobenzym and **Fido Wobenzym** available from Mr. Green Genes, Las Vegas, NV. (800) 588-8139, buywobenzym.com

OTHER RESOURCES

Canine Peak Performance Sports Medicine & Physical Rehabilitation Therapy clinic and **Carol Helfer, DVM**, Portland, OR. (503) 291-7400, caninepeakperformance.com

Pet Whisperer Veterinary Services, San Diego, CA. Stephen Blake, DVM, thepetwhisperer.com

Tallgrass Animal Acupressure Institute, Larkspur, CO. Amy Snow and Nancy Zidonis, (888) 841-7211, animalacupressure.com

Tellington TTouch, Santa Fe, NM. (866) 488-6824, tteam-ttouch.com

Top Dog Canine Rehabilitation and Fitness, Hamden, CT. Jill Bruno-Sarno, CVT, (203) 848-3203, topdoghealth.com

RESOURCES

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. Call her at (301) 582-9420 or see peaceablepaws.com

Sandi Thompson, CPDT, Berkeley, CA. Private lessons, behavior consultations, and dog training, Bravo! Dog Training, (510) 282-1601. For group puppy classes, call Sirius Puppy Training, (510) 658-8588.

The Association of Pet Dog Trainers (APDT) has references to member trainers in your area. Call (800) 738-3647 or see apdt.com.

Please note: APDT encourages (but does not require) its members to use training methods that use reinforcement and rewards, not punishment, to achieve desired behavior.

BOOKS

WDJ Training Editor Pat Miller is author of two books: *The Power of Positive Dog Training* and *Positive Perspectives: Love Your Dog, Train Your Dog*. Both 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

WHAT'S AHEAD

Calcium, Phosphorus, Protein, Oh My!

Don't freak out! Despite what the pet food companies would have you think, formulating a home-prepared diet for your dog is well within your abilities.

Go to the Top of Your Class

How to get the most out of a dog or puppy training class.

Truly Essential Fatty Acids

A guide to the best sources of these nutrients, which can vastly improve the condition of your dog's skin and coat.

Make No Mistakes

The most common pitfalls of positive training – and how to avoid them easily.

The Word On Her Lipomas

*Many dogs, especially older dogs, develop fatty tumors. Most of the time, they cause no harm. Here's how to know when you **should** deal with them, and how.*



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