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The Whole



Dog Journal™

A monthly guide to natural dog care and training

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FEATURES

3 Pre-Puppy Preparation

Stop! Set up your puppy for success by thoroughly preparing your home and family before you bring her home.

6 Toxic to Dogs

Watch out for these common food ingredients; they can make dogs sick.

10 Save Yourself in a Dog Attack

How to keep yourself from getting attacked by a vicious dog – or at least, survive the assault.

12 Help for the Home-Along Dog

Finally, owners can buy this effective tool for keeping dogs occupied when they are home alone – and preventing separation anxiety to boot!

16 Building Strong Bones

The skeletal system does much more than provide a “scaffold” for your dog; most importantly, it’s the source of his blood supply.

*Ready when you are . . .
page 3*



*Working us for a living
... page 2*



*Collars for
big dogs . . .
page 23*

ALSO IN THIS ISSUE

- 2 Editor's Note
- 15 Answers From Experts
- 21 Letters and Responses: Kidney Diets
- 24 Product and Expert Resources

Field Study

Dogs in a different type of "natural" habitat.

BY NANCY KERNS

The highlight of my summer vacation (two weeks in Italy and Greece, accompanying my 13-year-old son on a school-related trip) was observing the feral dogs in the ruins of the ancient city of Pompeii. I did learn a *little* history as we strolled through streets that were buried under ash and lava in A.D. 79, and have been progressively excavated since 1748, but I can admit to *you* that mostly I was dog-watching.

As every tourist bus pulls into the lot just outside the visitor's entrance to the city, dogs run to greet the people getting off the bus. There are dogs of every mixture and size, but they share one attribute: they are irrepressibly friendly. WDJ's Training Editor Pat Miller has frequently told us that "dogs do what works for them," and this was crystal clear in Pompeii.

As dogs ran up to the kids and adults in our group, wagging their tails and pressing their heads into our legs, most of the people responded, "Oh! How cute!" (Interestingly, not *one* of the dogs jumped up; they tended to come right to your front and sit or stand politely facing you.) In response, at least half the people hunkered down and wrapped their arms around the dogs, rubbing their ears. The dogs zeroed in on these people, attaching themselves firmly to the most demonstrative – and ignoring the ones who ignored them!

Then, naturally, people started going through their purses and packs, looking for food they could share with their new best friends. When one or two dogs tried

to steal treats that were being handed to other dogs, the justice was lightning-fast, as the top dogs snarled and snapped, and then just as quickly, replaced the snarls on their faces with amiable expressions for our benefit.

A group of about six dogs followed our group for a couple of hours. Then, obviously aware that most of us were out of treats, they vanished. An hour later, on the way out, we saw "our" dogs attached to a new, freshly stocked group of tourists.

Some anthropologists have postulated in recent years that dogs probably "domesticated" humans, rather than the other way around. This hypothesis seemed to me an absolute fact as I watched the dogs in Pompeii. To a person, the humans seemed completely clueless that they were being worked, or fished, quite professionally, for the dogs' daily sustenance. The people instinctively responded emotionally to the dogs' cute and seemingly affectionate overtures, but for the dogs, it was all about survival.

Also fascinating to watch were the interactions among the dogs. The postures, gestures, and vocalizations they used to communicate with each other were much more animated and frequent than those of our household dogs, probably because a lot of normal dog/dog interactions alarm us! It made me realize that we seriously handicap our dogs' ability to communicate with each other by insisting that they "behave" and suppressing their natural expressions. Imagine trying to settle family disputes without being allowed to speak or even gesture.



Like clockwork: "See how cute and good I am?" "Why, yes, and here is some food for you!"

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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Pre-Puppy Preparation

Stop! Don't bring home that adorable pup until you are properly prepared.

BY PAT MILLER

Most people spend months preparing for the arrival of a new baby. They're just as likely, however, to bring a baby dog home on a whim, without any preparation at all. Small wonder they find themselves playing catch-up for weeks, months, years, or even "getting rid of" the dog as they struggle to recover from the mistakes made in the pup's formative months.

For example, a lack of a crate, puppy pen, or baby gates from day one makes houstraining "mistakes" inevitable. This can set back later houstraining efforts by weeks or even months, as the puppy is triggered to eliminate in spots where he smells remnants of his past "accidents."

The wise puppy-owner-to-be puts much thought into pre-puppy preparation. When I was a preteen, my parents had the foresight one Christmas to put a gift certificate and a dog bowl and leash in a wrapped package under the tree rather than rushing out to buy the Collie puppy I'd been asking for as a living holiday gift. That gave us plenty of time to prepare for the new canine baby



"You're NOT taking me home today?" Don't let that adorable little face make you do something rash; you should have everything in place before he comes home. A lack of a crate and baby gates, for example, may set back your houstraining efforts for weeks.

as a family, and to give our new dog a carefully structured introduction to our home.

Pre-puppy preparations fall into three categories:

- Supplies and equipment
- Service providers
- House rules and routines

Supplies and equipment

There's lots of puppy stuff you'll need to make your puppy comfortable, happy, and successful as he learns to adapt to your alien environment. The following is an abbreviated list from "A Dog Owner's Hope Chest," WDJ February 2002.

- **Crate.** A crate is an indispensable behavior management tool; it facilitates houstraining and prevents puppy misbehavior by keeping your dog safely confined

when you're not there to supervise. It allows you to sleep peacefully at night and enjoy dinner and a movie without worrying about what the pup is destroying. See "Crate Training Made Easy," WDJ August 2000.

- **Puppy pen/exercise pen.** This is another extremely useful management tool, but it expands the "den" concept of a crate to a slightly larger area, giving a pup more room to stretch her legs, yet still keeping her in a safe, confined area. Many people include a "restroom" facility, by using a tarp underneath the pen and newspapers on top of that at one end.

- **Tether.** This is a short (about four feet in length) plastic-coated cable with sturdy snaps at both ends. Tethers are intended to temporarily restrain a dog for relatively short periods of time *in your presence*, as an aid in a puppy supervision and houstraining program, and as a time-out to settle

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WHAT YOU CAN DO . . .

- **Get your family to help prepare the house for your pup's arrival to keep them excited about getting a dog, yet aware of the huge responsibility it is.**
- **Reduce sticker-shock by shopping for dog-care basics in the months before the pup's arrival.**
- **Look for a holistic vet before you get your new puppy, to prevent her from being overvaccinated by the first vet you consult!**

unruly behavior. They should not be used as punishment, or to restrain a dog for long periods in your absence. See *"Tethered to Success,"* April 2001.

- **Collar, ID tag, leash, and harness.**

- **Seat belt.** Use a car restraint that fastens to your car's seat belts and your dog's harness (never a collar) to keep her safe, and safely away from the driver. See *"(Seat) Belt Your Dog,"* February 2004.

- **Clicker.** Properly used as a reward marker, a clicker significantly enhances your communication with your furry friend and speeds up the training process. See *"Pickin' Clickers,"* March 2001.

- **Treats.** A clicker, of course, is nothing without an accompanying reward. We use treats as the primary reward to pair with the clicker because most dogs can be motivated by food, and because they can quickly eat a small tidbit and get back to the training fun.

- **Long line.** A lightweight, strong, extra-long leash (10 to 50 feet), the long line is an ideal tool to help your dog learn to come reliably when called regardless of where we are or what other exciting things are happening. *WDJ* reviewed long lines in *"Know Your Lines"* and *"A Few We Missed,"* November 2001. We discussed training your dog to come with a long line in *"Long Distance Information,"* February 2001.

- **Kong toys.** If we could buy only one toy for our dog, it would be a Kong, a chew-resistant (not chew-proof) rubber, beehive-shaped toy with a hollow center. A Kong can be used "plain" as a toy, but makes an irresistible treat for any dog when stuffed with kibble or treats that are held in place with something healthy and edible like peanut butter, cream cheese, or yogurt. See *"King Kong,"* October 2000.

- **Balls, interactive toys, fetch toys.** See *"Gotta Lotta Balls,"* August 2001, *"Toys to Keep 'Em Busy,"* May 2004, *"Terrific New Toys,"* June 2001, and *"Play (and Train) by Tugging,"* March 1999.

- **Grooming tools.** Choose combs and brushes appropriate for your dog's type of coat (ask a groomer or vet), shampoo and conditioner, scissors, nail clippers, cotton balls, and toothbrushes. Start using these tools on your puppy early, pairing the ex-

perience with tasty treats so she forms a positive association with the task.

- **House cleaning tools.** See *"Pees on Earth,"* January 1999; *"Don't Shed on Me,"* April 2004, and *"Straight Poop on Bags,"* June 2005.

Service providers

It's never too soon to start researching the corps of professionals who will help you raise your puppy right. That list will include her **veterinarian** (or veterinarians, including an emergency hospital, holistic vet, and "regular" vet), **training instructor**, and perhaps a **groomer**, **pet sitter/walker**, **doggie daycare provider**, and **boarding kennel**. Grab your phone book, make a separate list for each category, and check them out.

Start with a telephone call. If the provider can't be bothered to be pleasant on the phone, chances are they won't be nice in person either. Cross them off.

If they pass the phone attitude test, inquire whether you can visit, ask a few questions, and watch them at work. Then visit. Do they handle canine and human clients gently, and with respect? Are the dogs enjoying themselves, or do they at least appear comfortable? Are the facilities clean, without offensive odor? If the answers to these questions are yes, they stay on the list. If not, cross them off. Make notes next to each of the finalists on your list to remind you whom you liked best and why.

Finally, ask for references. Call the references and ask if they've been satisfied with the provider, if they seem reliable and consistently dog-friendly. Then pick your favorite animal care professionals, and let them know you'd like to become a client when your pup arrives. After you've made your final decisions, make a list of names, addresses and phone numbers to post on your refrigerator along with the phone numbers and locations of your local animal shelters – in case your precious pup should ever get lost.

Editor's note: We can't stress enough the importance of finding a good holistic veterinarian as soon as possible. These practitioners tend to have a more conservative approach to vaccinations than conventional veterinarians – important if you want to prevent the mid- to late-life health problems that some experts believe are related to a lifetime of overvaccination (see *"Hot Shots,"* June 2005).

You'll also want a reliable holistic practitioner in your corner if your dog is

diagnosed with a serious condition. We receive innumerable calls from people who are frantically seeking an immediate referral to a holistic veterinarian to treat their dog for cancer and other diseases that took a long time to develop. The problem is, it's not easy to find someone who practices the type of medicine you feel most comfortable with, and certainly almost impossible in an emergency situation.

House rules and routines

Rules and routines are especially important if there's more than one human in the house, to encourage consistency, an important element of successful puppy-raising. When your pup joins your family, she'll experiment with different behaviors to try to figure out how the world works, and how to make good stuff happen – a dog's main mission in life. The more consistent everyone is, the quicker she'll figure it all out.

Your rules and routines will reflect your dog-raising and -training philosophies. To develop a relationship with your dog based on mutual trust, respect, and cooperation, implement nonviolent management and training techniques, and avoid methods that require harsh verbal correction and physical punishment. The better you are at keeping your pup out of trouble and reinforcing desirable behaviors, the less you'll be upset with her and the sooner she'll develop good habits. (See *"Secrets of a Happy Relationship,"* August 2002.)

Here are some issues for your family to discuss and agree on:

- **Where will your puppy sleep?** We suggest in a crate in someone's bedroom until the pup's at least a year old and fully housetrained and house trustworthy; then her own bed or someone's bed (or wherever else she wants) is okay.

- **Will she be allowed on the furniture?** We're okay with dogs on the furniture within reason – not the kitchen table, of course – as long as it's not creating any aggression or other behavior problems. We like our dogs to ask permission first if we're on the sofa and they want to join us. (See *"Is Your Dog Spoiled?"* May 2003.)

- **Where will she be during the day?** The best answer is with you, if you have the luxury of working at home or taking her to the office with you, under direct supervision or leashed and crated, with potty breaks every hour on the hour, at first. If you're

not home, she should be indoors, crated – if you can arrange for adequate potty breaks – or in an exercise pen.

■ **What games will she be allowed to play?** There are games, and then there are games! Good games like “Tug” and “Fetch” reinforce desirable behaviors. Inappropriate games like “Body-Slam the Human” and “Jump Up and Bite Skin and Clothing” reinforce undesirable behaviors. Be sure everyone in the family is on board with teaching appropriate games, and playing by the rules.

If family members *insist* on an inappropriate game like “Jump Up” (biting is *never* to be encouraged), get them to agree to teach polite behavior first, then teach “Jump Up” on a very specific cue – and allow it only on cue. (See “Fun and Games,” June 2003; “Games Puppies Play,” December 2003; “Mind Games,” October 2004; “Tug: Play It by the Rules,” October 2004.)

■ **Who will feed her; when, and what?** Your pup should be able to depend on regu-

lar and high-quality meals from a clean bowl in a quiet place. If you choose to make it a child’s responsibility, you must supervise to be sure the dog is fed properly. Don’t allow anyone to pester her while eating. Rather, have family members walk by and drop extra-special treats in her bowl while she eats, to help prevent resource guarding. (See “Bowl Games,” August 2005 and “Thanks for Sharing,” September 2001.)

■ **Who will train her, how, and for what?** We urge you to train using positive reinforcement methods, starting with housetraining (see “Minding Your Pees and Cues,” December 2001) all the way through the most advanced training you choose to pursue (see “Higher Education,” April 2004). You can have a “primary” trainer, and then encourage the whole family to participate in training activities; they’ll all be living with the pup, and they can all learn to communicate consistently and effectively in a language she understands (see “The Value of Training the Kids,” January 2002.)

Make a vocabulary list of terms your dog learns and post it on the refrigerator, so everyone uses the same behavior cues. Add to the list as she learns new behaviors. Remember that your dog is never too young (or old) to learn. Check out basic and advanced good manners training, agility, rally obedience, tricks, flyball, scent detection, musical freestyle . . . the possibilities are endless.

■ **How will you correct her for making mistakes?** Positive does *not* mean permissive. If your pup is well supervised she shouldn’t have the opportunity to make many mistakes, but they will happen. When they do, calmly interrupt the pup’s behavior with a cheerful “Oops!” and redirect her to something more appropriate. Make a mental note to ramp up your management or training to prevent the situation from happening again.

Puppies develop lifelong habits during the first several months of their lives. Extra management effort early on can save you years of headaches later. If you don’t give your pup the opportunity to learn that chewing sofa cushions is fun and feels good on sore gums, she’ll earn house freedom much sooner than a confirmed cushion shredder. When you see her heading for cushions or the coffee table leg, offer her a stuffed Kong instead, or engage her in a game of tug.

If she’s driving you crazy, grabbing your pants legs, and biting your hands, say “Oops! Time out!” and put her in her exercise pen for a bit. This will give you both a chance to calm down without resorting to corporal punishment. When she realizes that biting makes the fun stop, she’ll learn to control her urge to grab.

Sound like a lot to think about? It should! Accepting responsibility for the life of another living creature requires serious thought and commitment. The way you care for your pup will determine whether she spends the rest of her life sharing companionship and love with you or, like too many dogs, gets passed from home to home in search of one where she will be better understood and appreciated. She deserves a lifelong loving home. They all do. 🐾

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

Is a Friend Planning for a Puppy? Throw Her a Puppy Shower!

Experienced dog owners can make a huge difference in the lives of the dogs belonging to their less-experienced friends or relatives. One of the best ways to help your friend start off on the right foot with her new dog is to throw her a puppy shower, and invite your dog-loving friends and their (well-socialized) dogs.

Send out invitations stating, “Gifts are not necessary, but if someone were so inclined, a list is enclosed of items that (name here) and her new puppy will really need.” Include items on the list that range from inexpensive toys and doggie treats to big-ticket items like crates and ex-pens. You can also suggest cost-free ways for them to contribute, and designate them all god-dog parents! Make the party fun, with games and prizes for dogs and humans, dog-friendly cake and ice cream, and party favors for all. You can even help your friend identify the best potential doggie-playmates for her pup-to-be!

Hold the puppy shower well before your friend brings her pup home, so she’ll have enough time to buy the things on the list that she didn’t receive.

Gift suggestions may include:

- Gift certificates or discounts for puppy-sitting, puppy daycare, “kindergarten” class, poop scooping, transport, spay/neuter, pet insurance, etc.
- Basics such as collar and ID tag, leash, harness, seat belt, clicker, treats, stainless steel bowls, pet bed
- Grooming supplies; cleaning supplies such as Nature’s Miracle
- Stuffing/chew toys, chase toys, tug toys (not to be left with puppy unattended)
- Books: Anything by Ian Dunbar, Patricia McConnell, Pat Miller
- Crate, baby gate, exercise pen

Toxic to Dogs

Watch out for the common food ingredients that can make dogs sick.

BY CJ PUOTINEN

When the yeast rolls finish rising, we'll put them in the oven. Then we'll move on to garlic-smothered chicken, French onion soup, and for dessert, grapes and xylitol-sweetened chocolate-covered raisins and macadamia nuts.

"That sounds delicious – and potentially deadly," says Dana Farbman, certified veterinary technician and senior manager of client relations at the American Society for the Prevention of Cruelty to Animals (ASPCA) Animal Poison Control Center. "Those ingredients are fine for humans, but for dogs, they can be a recipe for disaster."

Every year ASPCA's Animal Poison Control Center receives close to 100,000 phone calls from veterinarians and the public on behalf of dogs who swallow or are exposed to dangerous toxins. Most involve human medications or pesticides, but many relate to the fare mentioned above.

Here's a review of innocent-sounding foods that, depending on the circumstances of exposure, can threaten your companion.

Xylitol

Xylitol (pronounced ZY-li-tol) is a granular white powder with so many health benefits, it sounds like a dream come true. This low-calorie sweetener derived from birch trees was produced in Finland when World War

II interrupted that country's sugar supply. Because xylitol causes only minute increases in human blood glucose and insulin levels, it is recommended as a sweetener for patients with diabetes.

In the 1970s, Finnish scientists documented xylitol's benefits, including prevention of cavities, dental plaque, dry mouth, and bad breath, along with its unique ability to remineralize tooth enamel. Subsequent research showed that 8 grams of xylitol taken daily reduced ear infections in children by 40 percent and that xylitol may strengthen bones and help prevent osteoporosis.

As a result of these encouraging investigations, xylitol has become a popular ingredient in chewing gum, mints, candy bars, mouthwashes, nasal sprays, nutritional supplements, and other products. It is also available as a powdered sweetener.

It was this latter form of xylitol that nearly killed Skyler, a seven-year-old Portuguese Water Dog owned by Connecticut resident Tom Riley and his wife, Deborah Lee Miller-Riley. During recovery from a diabetes-related health crisis, Riley received a sample of xylitol from a friend who thought it might help during his recovery. But on the morning of April 29, 2003, Riley discovered Skyler staggering around the kitchen, lethargic and drooling. On the floor beside him was an empty plastic bag, and his paws and bed were covered with white powder.

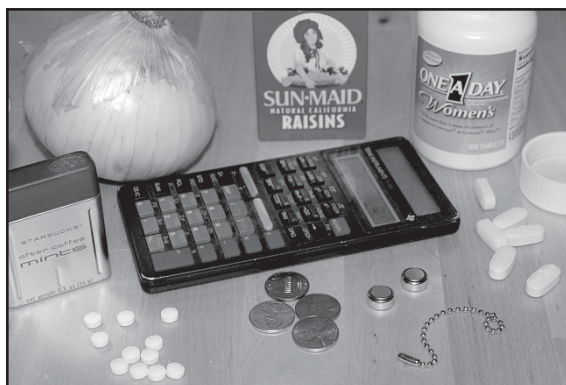
"Tom took Skyler to the Veterinary Referral and Emergency Center in Norwalk," says Miller-Riley. "That was my first choice as it has a new state-of-the-art emergency room and is a teaching veterinary hospital."

During the 20-mile ride in rush-hour traffic, Skyler vomited and had two seizures. Fortunately, the story had a happy ending. Skyler was diagnosed with hypoglycemia (low blood



WHAT YOU CAN DO . . .

- **Store potentially dangerous foods and household items in places that your dog cannot reach. Educate friends and family to keep toxic items away from your dog, too.**
- **Keep phone numbers on hand for emergencies: your vet, the closest emergency clinic, and the ASPCA Animal Poison Control Center: (888) 426-4435.**
- **If your dog is acting strangely or exhibiting strange symptoms, err on the side of caution and take him to the vet for an exam. Waiting can be fatal.**



Lots of household foods and other items can harm your dog. Teach your family about these dangers and enlist their help in keeping toxins from the dog.

sugar) and put on a glucose drip. He was released that night with instructions for monitoring him for hypoglycemic symptoms, and he made a full recovery.

At that time, nothing in the medical literature indicated that xylitol, which had been extensively tested on laboratory animals, posed any hazard to dogs. Skyler was one of the first dogs reported to ASPCA Animal Poison Control Center with a possible reaction to xylitol. To date, the agency has received reports of more than 150 dogs ingesting xylitol, some of whom died. In July 2004, ASPCA Animal Poison Control Center issued a xylitol warning.

"The problem with xylitol," says Farbman, "is that in dogs it can cause a rapid drop in blood sugar. Just one or two pieces of xylitol-sweetened gum could cause this reaction in a 20-pound dog. The clinical signs most associated with the ingestion of

xylitol include depression, vomiting, and hypoglycemia. In serious cases like Skyler's, these symptoms may be accompanied by shaky movements, an unsteady gait, weakness, and seizures."

To avoid problems, read labels carefully and keep all xylitol-sweetened products locked safely away from curious canines. Xylitol-sweetened chewing gum includes some flavors of Altoids and Trident as well as brands that promote xylitol on their labels, such as XyliChew, XyliBrush, Spry, and TheraGum.

If your dog swallows xylitol powder or xylitol-sweetened chewing gum, mints, or other products, go at once to your veterinarian or emergency clinic. Serious symptoms may develop within 30 minutes. Your veterinarian may induce vomiting. Activated charcoal does not absorb xylitol and is not usually recommended. For dogs who do not yet have symptoms, the administration of small, frequent meals for 8 to 12 hours after exposure may help prevent hypoglycemia.

Now that xylitol is being manufactured from corn cobs as well as birch trees, its cost is falling. As it becomes more widely used, ASPCA Animal Poison Control Center will no doubt receive more reports of affected dogs.

"Most people don't know anything about the risk that xylitol poses to canine health," says Miller-Riley. "I think xylitol products should come with warning labels. I tell everyone about Skyler's experience because I don't want any dog to have to go through what he did or any family to suffer the emotional trauma of carrying their convulsing dog into an emergency center."

Death by chocolate

Honey, a five-year-old Golden Retriever belonging to the Trupp family in Brightwaters, New York, loved chocolate. She had often consumed small amounts with no ill effects, but last March, she ate all of the semisweet chocolate Easter eggs in two 12-ounce bags.

"During the night, Honey swallowed the foil wrappers and everything," says Liz Trupp. "But she wasn't showing any symptoms like vomiting or diarrhea, so I wasn't too concerned. She did act a little nervous, but that's the way she always acted when she'd done something wrong."

On the way to their afternoon grooming appointment, Honey began panting heavily. "That wasn't unusual, either," says Trupp, "as she didn't like to be left at the groomer's



Honey was like a lot of Golden Retrievers: sweet, great with the kids – and always looking for things to eat. A stolen feast of Easter chocolate caused her early death.

and would often have an anxiety attack."

But when Trupp handed her dog's leash to the groomer, Honey collapsed. "Her legs were twitching," she says, "and I thought she was having a seizure. She had had a seizure in February, and that's exactly what it looked like. She seemed to recover, then lost consciousness. I did mouth-to-mouth resuscitation and took her straight to the vet, but by then she had died."

Last year, ASPCA Animal Poison Control Center received over 2,000 calls regarding chocolate exposure in dogs. Chocolate's problem ingredients are theobromine and caffeine, which are rapidly absorbed through the gastrointestinal tract and metabolized in the liver.

White chocolate contains the smallest amounts of caffeine and theobromine, while the concentration of both chemicals increases as one moves to milk chocolate, semisweet chocolate, bittersweet chocolate, and baking chocolate. The darker the chocolate, the more dangerous it is to dogs. As little as 20 ounces of milk chocolate, or only 2 ounces of baking chocolate, can cause serious problems in a 10-pound dog. Honey weighed 70 pounds, and she died after eating 24 ounces, or slightly less than 1½ pounds, of semisweet chocolate.

Cocoa powder's contents vary according to growing conditions and other factors, but cocoa's chemicals can be as concentrated as those in baking chocolate. Even cocoa bean shell mulch, a popular garden product, can be toxic when swallowed by chocolate-craving chow hounds.

At his vetinfo.com Web site, Mike Richards, DVM, says, "I have been practicing

for 20 years and do not recall having a patient die from ingesting chocolate, but I have seen some very excited dogs and have seen some dogs who probably would have died without treatment. I have also talked to veterinarians who believe they have seen dogs die from heart problems, pancreatitis, and other complications following chocolate ingestion even though the dogs ate less than the theoretical toxic dose."

When dogs are brought for treatment within four hours of ingesting harmful amounts of chocolate, veterinarians usually induce vomiting and administer activated charcoal and a cathartic laxative to help rid the body of caffeine and theobromine. Additional treatment may include drugs, urinary catheterization, and fluid therapy. Chocolate with a high fat content increases the risk of pancreatitis, another serious concern.

Now that dark chocolate has been shown to have significant cardiovascular benefits for humans, health food stores carry several brands of "dark," "very dark," or "extra dark" chocolate bars and candies. No matter what kind you favor, the more chocolate you buy, the more careful you have to be. This means educating children and other family members to keep chocolate away from Fido, especially at Halloween, Valentine's day, Easter, Christmas, birthdays, and whenever candy might be left in accessible locations.

If you discover that your dog has eaten chocolate, don't wait for symptoms to develop; contact your veterinarian at once.

"We're devastated over Honey's death," says Trupp. "She was a very special dog.

But if sharing her story makes people more aware of the dangers of chocolate, she may help save a dog's life. That's a comforting thought."

Grapes and raisins

Who would imagine that grapes and raisins could be poisonous to dogs? Yet, for reasons not yet understood, some dogs have experienced effects ranging from vomiting, diarrhea, and lethargy to intense thirst followed by acute renal failure.

According to Dana Farbman, none of the cases presented to ASPCA Animal Poison Control Center since January 2001 demonstrate a clear pattern, including breed, size, age, sex, or medical history. Dogs have been affected by eating grapes from the supermarket as well as backyard grapes and grape pressings from wineries. Both organically and commercially grown grapes and raisins caused kidney failure, as did seedless and seeded varieties. No definitive causes have been identified, but researchers at the Center along with other experts continue to look at pesticides, heavy metals, and mycotoxins as possibilities.

From April 2003 to April 2004, the ASPCA Animal Poison Control Center managed 140 cases of dogs that ingested various amounts of raisins or grapes. Of these, more than 50 dogs developed clinical signs ranging from vomiting to life-threatening kidney failure, and seven dogs died. For this reason, the Animal Poison Control Center advises not giving grapes or raisins to dogs in *any* amount.

"It's frustrating not knowing what triggers this reaction in some dogs but not others," says Farbman. "For now, we recommend keeping grapes and raisins away from all dogs, and for any dog who swallows them, we recommend immediate medical attention."

This is cause for dismay in many dog owners who regularly use small amounts of raisins or grapes as training rewards or treats. Is a total ban on these sweet and nutritious snacks warranted?

The amount of grapes or raisins eaten in the cases reported to the Poison Control Center was not always known. However, in six cases involving toxic exposures of a known amount of raisins, the smallest toxic exposure (amount of raisins eaten) was 2.64 ounces and the largest amount of raisins eaten was 2.11 *pounds*. The toxic dosage

of raisins ranged from .047 ounces of raisins per pound of body weight (1.41 ounces for a 30-pound dog) to .48 ounces of raisins per pound of body weight (14 ounces of raisins for a 30-pound dog).

In four cases where the amount of grapes ingested could be estimated, the smallest toxic dosage was about .336 ounces of grapes per pound of the dog's body weight (for example, 6.7 ounces of fruit eaten by a 30-pound dog). The smallest toxic exposure was 1.05 pounds of grapes; the largest toxic exposure was 1.85 pounds of grapes. That's a lot of fruit.



Never leave a bunch of grapes or raisins on the table! Dogs may help themselves to a potentially deadly large serving.

Our recommendation would be to err on the side of caution when feeding grapes or raisins to your dog. In our opinion, a few, fed as an occasional treat, probably won't hurt a dog of any size. However, dog owners should take care to keep raisins and grapes out of reach, so a hound with a sweet tooth can't possibly eat a large amount; absolutely *no* leaving a bunch of grapes in a bowl on any table any dog can reach. And warn your kids about leaving a backpack or lunchbox containing a box of raisins anywhere the dog might be able to reach it.

And, of course, if your dog shows any sign of impaired health after eating ANY amount of grapes or raisins, take him to your vet immediately.

Veterinarians treating dogs for grape or raisin toxicosis typically induce vomiting and administer activated charcoal, a treatment plan that works best if less than two hours have passed since exposure. Immediate treatment with fluids and diuretics to flush the kidneys may help prevent acute renal failure.

Onions and (maybe) garlic

As we've just seen, not all "healthy" foods are good for dogs (especially in higher doses). Consider garlic, which we prize so highly as an infection fighter and immune system booster that we put it in canine health foods, training treats, and nutritional supplements. In small amounts, the benefits outweigh their risks, but garlic also contains thiosulphate, which – in large enough amounts or over long periods of time – can cause hemolytic or "Heinz factor" anemia in dogs and cats. (Hemolytic anemia is a condition in which circulating red blood cells burst.)

Garlic's close relative, the onion, is actually the food that presents the highest risk of toxicity from thiosulphate. A *single* generous serving of onion can cause hemolytic anemia in a dog.

However, whether garlic contains enough thiosulphate and can be fed in high enough amounts to harm dogs is a matter of much controversy.

Hilary Self, founder of Hilton's Herbs, an international supplier of herbal supplements for dogs and horses, calls garlic the "best-known and most widely used herb in the world."

Self includes garlic in many of her supplements for dogs, and also recommends that owners use fresh garlic for its antifungal and antibacterial properties. Garlic promotes the production of white blood cells, acting as an immune booster for dogs with low or compromised immunity. Garlic may also benefit dogs with diabetes, Self says, by helping reduce blood-sugar levels.

Self recommends garlic for dogs with certain health conditions at a dosage of no more than one medium-sized clove a day for large dogs (a half-teaspoon of dry garlic powder); half a clove (or ¼ teaspoon powder) for medium-sized dogs; and no more than a quarter of a clove (or a pinch of the powder) for small dogs.

Self begins a dog on a "course" of garlic at about a quarter of the full dose, increasing slowly, and watching the dog closely for signs of intolerance. She does not recommend that dogs receive *any* herb every day, but for a specific length of time for a specific purpose.

Many holistic veterinarians and health care experts believe that doses up to 1 small clove of garlic per 20 pounds of body weight per day are not likely to pose problems for dogs. However, Farbman and others at ASPCA Animal Poison Control Center emphatically insist that both garlic and onion are best avoided in any amounts, and any dog showing symptoms, or who is known to have eaten foods containing onions or garlic, should be brought to a veterinarian.

Symptoms of hemolytic anemia can develop within a few hours to a few days. Signs include vomiting, diarrhea, weakness, depression, and a lack of interest in food. As the illness progresses, red pigment from damaged blood cells color the dog's urine, and as oxygen-carrying red blood cells decline in number, the animal becomes breathless and starved for air.

Macadamia nuts

Come on – macadamia nuts? This one sounds like an Internet hoax, but it's true. Last year, the Animal Poison Control Center recorded 80 cases in which Malamutes, Beagles, Chihuahuas, Cocker Spaniels, and other breeds experienced hind-end weakness, lethargy, depression, vomiting, and diarrhea after eating macadamia nuts. In some cases, the dogs were panting, unable to stand, and in obvious pain.

The toxic ingredient has not yet been discovered, but whether they're raw or roasted, shelled or made into nut butter, macadamia nuts can cause dramatic symptoms. Clinical effects were reported in dogs after the consumption of as little as 1 gram of macadamias per pound of body weight.

Fortunately, the muscle weakness and other symptoms didn't last long and all of the dogs reported to have had this condition recovered without complications within 12 to 36 hours. Some were treated in veterinary clinics with an enema, pain relief, and other supportive care, while others were simply observed at home.

Unbaked yeast dough

Mmmmm, bread dough. It's so sweet and yeasty, and there it is, rising in a warm place in the kitchen, just within reach of an interested counter surfer. What a mistake! Rapidly multiplying yeast cells cause swallowed dough to continue rising, creating a risk of blockage or even rupture of the gastrointestinal tract. Fermenting yeast also forms alcohol, and in severe cases, alcohol

poisoning can occur.

If you bake yeast bread, sourdough bread, pizza, cinnamon buns, yeast rolls, or holiday breads from scratch, remember to keep the rising dough in a safe, dog-proof location. And if your dog swallows any, call your veterinarian immediately.

Zinc toxicosis

Zinc pennies, zinc-coated screws or bolts, and other items containing zinc aren't foods, but when they are swallowed by dogs, they can wreak havoc.

Pennies minted after 1982 are 96 to 98 percent zinc, with only a thin copper coating. "One puppy of my acquaintance ate some zinc pennies," says Shari Mann of San Francisco. "The owners did not realize this, of course. She became very, very ill and almost died. X-rays revealed the pennies and surgery removed them. Recovery was long and difficult, but she did recover fully.

"Another puppy ate a zinc-coated zipper pull from a sofa cushion. She too nearly died. The diagnosis was difficult and long in coming. She was on such a lengthy course of cortisone that although she recovered from the zinc poisoning, she underwent serious and seemingly permanent temperament changes, becoming fearful and aggressive. Even now, over two years later, she is not at all a normal dog."

Dietary zinc is an important mineral, but its normal concentrations in the canine diet are very low, about 80 to 120 parts per million on a dry weight basis. The large amounts found in pennies, zinc-coated ob-

jects, and topical medications like zinc oxide cause acute zinc toxicity in dogs, leading to gastroenteritis, hemolytic anemia, inflammation, and possible necrosis (destruction of tissue) of the liver, kidney, and pancreas.

The symptoms of zinc toxicosis can be confused with acute gastrointestinal episodes because the patient may be uninterested in food or lethargic while vomiting and having diarrhea, either of which may be bloody. The swallowed object may not be visible in X-rays depending on its size, whether the dog vomited the object or passed it in feces, and its consistency. Zinc-medicated ointments and shampoos aren't visible in X-rays the way pennies are.

Treatment for zinc toxicosis depends on the source of the problem and individual symptoms. Obviously, zinc pennies and similar objects must be removed at once. Some dogs need blood transfusions and other supportive care.

According to Angie Hardy, DVM, and colleagues in a report to the College of Veterinary Medicine at the University of Georgia, zinc toxicosis is more common in dogs who are predisposed to pica, the disorder (possibly a mineral deficiency) that causes intense cravings for inedible substances like rocks, clay, plaster, glass, or wrought iron. "The exact mechanism of zinc toxicity is still unknown," they say, "but the prognosis is fair if zinc toxicosis is detected and treated early. Treatment consists of removal of the foreign objects, alleviating the anemia, supportive fluid therapy, and possibly chelation therapy."

Emergency First Aid at Home

Three-percent hydrogen peroxide (to induce vomiting) and activated charcoal powder (to absorb toxins) are worth keeping on hand. If your dog is accidentally poisoned, your veterinarian might instruct you to use them. But you *must* do this under instruction from a vet or the ASPCA Animal Poison Control Center, as vomiting is **NOT** recommended in some situations and activated charcoal doesn't always help.

The typical dose for inducing vomiting is about 1 ml per pound of body weight, not to exceed 45 ml or 3 tablespoons. It is advisable to offer your pet a small amount of moist pet food or a slice of bread with milk before giving hydrogen peroxide, as having food in the stomach can make vomiting easier. It is important to never force this or any other liquid into your pet's mouth, because he or she may accidentally inhale it, which could lead to pneumonia. Vomiting should also not be induced in animals exhibiting tremors or other neurologic signs.

RESOURCES

ASPCA Animal Poison Control Center. In emergencies, call (888) 426-4435. There is a fee for this service. See also aspc.org/apcc.

Mike Richards, DVM, vetinfo.com.

The list goes on . . .

Antifreeze, rat poison, ointments containing vitamin D, wild mushrooms, poisonous toads, prescription drugs, nutritional supplements, garden chemicals, cleaning chemicals, electrical cords, rubber bands, rubber gloves, string, dental floss, fluoride toothpaste, sticks, tennis balls – any of these and a hundred other things around the house can send a pup to the hospital.

Keep potentially harmful items in closets, drawers, or cabinets that your dog can't open, not on a table or countertop or in a bag left on the floor. Make sure your kids understand these rules. And always supervise your dog's play indoors and out. 🐾

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, Labrador Retriever, and red tabby cat.

How to Save Yourself

In case of a dog-attack emergency, make like a rock or a tree.

BY PAT MILLER

The tragedy of the 12-year-old boy killed by his family's Pit Bulls in San Francisco once again highlights the importance of providing information that will help people survive such dog attacks – and perhaps the need for laws that encourage and require dog owners to be responsible for their dogs.

Any large, powerful breed of dog will, occasionally, cause serious injury, even death. Small dogs can certainly bite, too, though they normally have less potential to do serious harm (the Pomeranian who killed a six-week-old infant in California in 2000 notwithstanding). You and your family members would be smart to learn how to stay safe around aggressive dogs, by knowing how to avoid provoking an attack and how to protect yourself should one occur.

Easy to say, difficult to do

When I was a humane/animal control officer in Marin County, California, I once handled a report of an aggressive male Rho-

desian Ridgeback who was running at large in an upscale suburban neighborhood. As I walked up the front sidewalk toward the house where the dog was reported to live, a reddish-brown flash came speeding around the corner of the house, headed menacingly and directly at me.

I averted my eyes and held my breath, frozen in place as he charged up and bumped me with his nose, hard.

I have no doubt that if I had moved when he hit me with his nose, he would have bitten me, probably badly. Instead I passively held my ground and he backed off, staring at me intensely. Still without making direct eye contact, I backed slowly to my truck and climbed in, reached behind the seat for my control stick, stepped out, slipped the loop over his head and pulled it tight. Then I breathed.

In her excellent book, *The Other End of the Leash*, Patricia McConnell makes the important point that, as primates, humans tend to automatically do exactly the wrong

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WHAT YOU CAN DO . . .

- **Keep your body language quiet and as relaxed as possible if you find yourself near an aggressive dog. Don't make eye contact with the dog.**
- **Without running (which will draw the dog toward you), try to get into a protected place, or at least, find something to put between you and the dog.**

things when confronted by a dog. Instinctive, genetically programmed primate behavior causes us to make direct eye contact and confront a threat with full-face aggression – stare at the dog facing him directly, perhaps yell, reach, or move toward him or make other defensive moves, escalating rather than defusing the dog's aggressive behavior.

Programmed by decades of living and working with dogs, I knew to avoid eye contact and movement, and I froze instead. Lucky for me. Many people either scream in fear (or in an attempt to attract attention and help) or shout to try to scare or bluff the dog into leaving. Unfortunately, this usually further provokes the dog.

You can reduce the risk of being attacked, and reduce the likelihood of serious injury if you *are* attacked, by doing the right things, pre- and post-confrontation. The next time you feel threatened by a dog, remember these tips:

- **Be a tree:** If a dog approaches you with assertive/aggressive body language, be a tree. Stand perfectly still but relaxed. A tense, unnatural position looks weird to the dog; weird can trigger an attack. Avoid di-



Be alert in places where dogs are running loose and possibly aroused enough to behave aggressively – especially when you have small children with you. Teach your children how to “Be a tree” if approached by a scary dog and “Be a rock” if attacked.

rect eye contact, but keep the dog in your peripheral vision. Keep your arms at your sides, and don't speak – and certainly don't scream, which can further excite a dog who is already aroused. By offering appeasement behaviors and not doing anything assertive or provocative, you increase the odds that the dog will back off and move away without attacking.

■ **Be a rock:** If the dog *does* attack despite your inoffensive body language, you have two choices. If the dog is small or just nipping at you rather than launching an all-out attack, seek safety – climb up on a fence or tree, the hood of a car, or any object large enough to provide sanctuary. You can unobtrusively scope out the landscape for such objects while you're being a tree.

If you feel you're being overpowered by the dog, be a rock. Drop to the ground in the fetal position with your hands behind your neck and legs pulled up to your chest, protecting your throat, face, and vital organs. If there are people nearby who could help you, screaming to get their attention could save your life. On the other hand, screaming may also further provoke the dog. If you feel certain that no one will be able to hear you, don't yell.

■ **Find a shield:** While you're being a tree, carefully scan the area for possible shields – a gate you can slip through, a garbage can lid you can hold between you and the dog. If you think the dog will allow it – like the Ridgeback that came after me – back carefully to your shield, keeping the dog in view, and use it as needed to protect/defend yourself.

■ **Find a weapon:** In no way do I advo-

Fatal Dog Attacks

It's important to keep dog-bite deaths in proper perspective. Dogs usually cause fewer than two dozen deaths each year in the United States. According to the Centers for Disease Control in Atlanta, Georgia, dogs killed 22 people in 2004. In 2003, nearly twice as many people (43) died after being struck by lightning; in 2002, 113 people died in traffic collisions with deer.

Because dogs are our trusted and loyal companions, a dog-related fatality is more sensational and seems more sinister than most other accidental deaths. There are thousands of non-fatal dog bites each year, but statistically, the chance that you're at risk of being mauled to death by a dog is very low. Of course, that's small comfort to anyone who has been approached or attacked by an aggressive dog, or to the families of those who were killed by one.

cate hitting dogs in the name of training. But if you're attacked and have access to a club or other weapon of some kind, do what you need to do to save yourself. Don't attempt to use a weapon, however, unless you're prepared to use it with full commitment. Waving a stick feebly at an attacking dog may only antagonize him further. If you use it, either offer it as a target for the dog to bite, or use it as hard as you can. If you walk in an area with free-roaming dogs, consider carrying a club with you, or a shield such as an umbrella, to help ward off dogs.

■ **Report incidents:** Even if you escape unscathed, report the incident to animal control and the police department; the dog's *next* attack may be fatal. If you don't feel local officials are taking you seriously, talk to their supervisors, and if necessary, your local elected representative and the media. You may save the life of the next person the dog would accost. (For more about reporting dog attacks and how to get local officials to act, see "An Accident Waiting to Happen," February 2004.)

Complications

The first four tips listed above are much more difficult to implement if you're walking your own dog(s) on a leash, or are accompanied by a child, senior citizen, or disabled person. You may need to use your own body as a shield by calmly moving into position between your dependent dog or person and the attacking dog.

You may be able to lift a child or your dog onto a raised surface for safety, and then climb up yourself. You can still use the fetal position, either while coaching the other person to do the same, or by folding a small child or small-to-medium-sized dog between your chest and knees, or wrapping them in a jacket if you happen to have one with you.

You might practice these maneuvers in advance with lots of positive reinforcement so no one panics if it happens in a real-life encounter. Carrying a weapon of some kind is still an option.

I'm sorry to say that there are no guarantees that the above suggestions will save you from being bitten, or even mauled, but it's a good bet that if you do the wrong things when a dog accosts you, or do nothing at all if you're attacked, the damage will be greater. It's sort of like the terrorist threat: you don't want the risk of being attacked to alter your regular activities or enjoyment of life, but it pays to be on heightened alert, and to be prepared to defend and retaliate in case of attack. 🐾

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

Teaching Kids How to Be Safe

One fantastic resource for teaching kids how to be safe around dogs (and even cats) is a video called *Dogs, Cats & Kids: Learning to Be Safe With Animals*. Created by Donald Manelli with Wayne Hunthausen, DVM, this 30-minute videotape shows children how to read cat and dog body language and the warning signs of threatening animals, explains the right way to approach and handle animals, and most importantly, demonstrates (in a calm, clear fashion) what to do in case of a dog attack.

I bought one of these videotapes shortly after a young boy in Oakland, California – a mile from where I live – was mauled nearly to death by loose dogs. I watched it with my son a few times, and then donated it to his elementary school library. It's available for \$19.95 from Animal Behavior Associates, (303) 932-9095 or animalbehaviorassociates.com. – Nancy Kerns



Help for the Home-Along Dog

Finally, an effective tool for keeping home-alone dogs occupied all day.

BY NANCY KERNS

Maybe I love KongTime™ so much because it works wonders on a dog I love so much: Carly Hoyer, my former-next-door neighbor's dog. The Hoyes were my neighbors for seven years; their first dog, Sadie, was a frequent model for WDJ. The summer after Sadie passed away, the Hoyes went to a local shelter and brought home a nine-month old Shepherd-dog mix they named Carly.

Right off the bat, Carly was a doll, incredibly sweet and affectionate with the kids, bashfully compliant with adults, and playfully submissive to every other dog she met. The Hoyes signed her up for an adolescent dogs class, and Carly learned the basics of good manners training (plus a few cute tricks) very quickly.

There was only one fly in the ointment: As soon as the kids went back to school and Carly was left home alone during the day, things in and around the Hoyer's house began to get chewed. Initially, they thought it was just puppy teething, and to save the rugs and furniture (not to mention the hardwood floors and woodwork around the doors and windows in their restored Victorian) the Hoyes started leaving Carly outside during

the day. But she soon advanced to chewing the lattice off the sides of the deck and the shingles off the sides of the house. She also chewed hoses and laundry baskets and any other random item she found in the yard. On the weekend, when the family was home, she continued to be an angel.

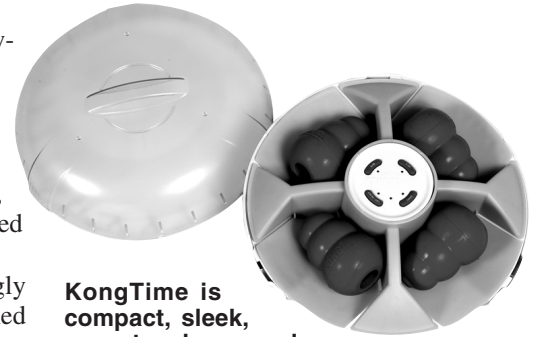
The dad, Dan Hoyer, grew increasingly irritated with the destruction, but I hastened to explain that Carly's behavior was *not* spiteful or some sort of "payback" for being left home alone. This was classic behavior for a dog who was experiencing *separation anxiety*. Carly was looking for things to do to keep herself busy and feel marginally better about being separated from her pack; it was stress relief.

Situation worsens

The mom, Maureen Hoyer, was being very patient with Carly, and actively looking for solutions for managing the anxious dog. As she explained, "This was really the only thing we didn't like about Carly; otherwise, she was the perfect dog for us."

However, my explanations about separation anxiety didn't reduce Dan Hoyer's frustration, especially when Carly added digging to her stress-relieving repertoire. She dug up plants and drilled holes in the lawn. She burrowed so enthusiastically next to the fence on the far side of her yard that she got the home-alone Labrador in *that* yard digging, too, and together they tunneled into each other's yards. Soon, long expanses of the wood fence between the yards began to sway and tip, as each post was undermined and loosened.

I advised the Hoyes to stop feeding Carly in a bowl, and start leaving her each day with a number of food-filled Kong toys, hidden in various places around the yard. This tactic worked brilliantly for a few days, but as Carly learned to hunt for and empty the Kongs more efficiently, it distracted her for only an hour or two. After unstuffing the Kongs, she would go back to work on



KongTime is compact, sleek, easy to clean, and easier to operate. Just place food-filled Kongs inside, press a button, put the lid on, and leave. It dispenses the Kongs at random intervals throughout the next four or eight hours (your choice).

the yard. Worst of all for *me*, the work-at-home neighbor, Carly started engaging in long barking sessions.

I had offered to provide daycare for Carly, and at this point, eager to avoid aggravating *all* the neighbors, the Hoyer family took me up on my offer. On many days, Carly would come over and hang out with my dog and me in my office, which has a door to the backyard that I mostly keep open while I work, allowing the dogs to come and go as they please. We even removed a plank in the fence between our yards to facilitate an easy transfer.

The downside of this arrangement was that I'm not *always* home. Plus, I'm sure the Hoyes weren't entirely comfortable with the thought of their dog spending many work days bonding with another family!

News of a potential solution

One day, at a photo shoot for an unrelated article, I happened to mention Carly and her family's dilemma to Sandi Thompson, head trainer for Sirius Puppy Training in Berkeley, California. Thompson frequently models for the training articles in WDJ, and I enjoy talking about dog behavior with her. When I told her about Carly, Thompson grew excited. "She would be a *perfect* dog to test our invention," she said.

That's when I learned that Thompson

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WHAT YOU CAN DO . . .

- Consider purchasing KongTime™ if your dog exhibits signs of separation anxiety when left home alone.
- Enrich your puppy's environment whenever you leave her alone, to help keep her occupied and prevent her from developing separation anxiety. (KongTime is perfect for this application.)

and David Rucker, her engineer partner (another dog owner who sometimes consults for pet product makers), had dreamed up an idea for a machine that would dispense food-filled Kong toys to a home-alone dog. Rucker had built several prototypes of the machine and the couple was distributing them to a number of professional trainers and behaviorists for evaluation and testing.

That very day, they loaned me one of the prototypes – a large, unwieldy contraption with no resemblance to the machine’s current incarnation. The point was not how it looked; it was how and whether it would work to assuage a bored, anxious dog’s destructive and disruptive behavior.

That evening, I enthusiastically rushed the device over to my neighbors’ house, eager to share this new technology with them. They agreed to set up the machine so it would deliver four food-filled Kongs to Carly the next day.

As per Rucker and Thompson’s directions, they first operated the machine in “demonstration” mode in front of Carly, so she could hear the “preview” tone that precedes delivery of each Kong, and witness the toy itself rolling forth with its goodies inside. (Rucker added this feature to assuage concerns, expressed by some behaviorists, that a dog might wait anxiously all day in front of the machine, afraid to miss it eject a Kong. The tone is loud enough to alert a dog who has gone somewhere else in the house or yard, so the dog soon learns to be confident that the machine will let him know each time a Kong is about to emerge, and he will feel free to occupy himself elsewhere while waiting.)

The KongTime machine can be placed on the floor, or, if an owner is worried that her dog might spend an inordinate amount of time trying to get the Kongs out ahead of schedule, it can be placed on a counter or table. In this case, Rucker suggests that the owner run the machine on “demo” mode, to test the trajectory of the ejected Kongs. If they bounce or roll into a spot where the dog can’t get them, they can cause *more* anxiety!

A huge success

The Hoyes’ KongTime test went exactly as KongTime’s inventors intended. As Maureen Hoye recalls, “From the very first day, all of Carly’s destructive behavior stopped completely. She quickly learned that the tone meant a Kong was about to come out, and she’d go running toward the machine as soon as she heard

it. Of course, it didn’t take her any less time than usual to unstuff the Kong, but she seemed to be content in between the Kong deliveries, knowing that more would arrive later. As far as I’m concerned, it was nothing short of miraculous.”

I was a more-than-interested witness to this miracle, with a front-row seat to Carly’s transformation. From my kitchen window, I could watch Carly in my neighbor’s backyard. Within days, she changed from an anxious dog who paced and dug and barked and chewed when home alone, to a bit of a couch potato. Almost every time I looked out the window, she was either lying on the Hoye’s deck or on the lawn, or chewing a Kong. Occasionally she’d get up to chase a squirrel out of the yard or along the top of the fence. Then she would lay down again. The Hoyes and I were both pleased, and a little surprised. It seemed almost too easy.

The Hoyes used the machine prototype for about two months, until its inventors needed it back. Carly completely stopped all her destruction and barking during that time, and we were all a little worried when we had to say goodbye to KongTime. The Hoyes went back to their original program of hiding food-filled Kongs all around the deck and yard when they left for work, and this time, that seemed to do the trick. Carly stayed destruction-free, with very minor, occasional exceptions.

Worth the wait

It’s a good thing for me and my neighbors that Carly’s problems seemed to be solved, since it took several years for Rucker and Thompson to finish the design process, obtain patents and financial backing, and begin production and distribution of the final incarnation of KongTime. Personally, I’ve been waiting rather impatiently, because I’ve been wanting to promote it in WDJ. I



Portrait of a young dog in trouble: Carly in 2001, in her excavated yard with some of the stuff she had chewed. KongTime stopped all that.

know *so* many home-alone dogs who would benefit from this tool.

Sadly for me, the Hoyes moved to another part of town. Carly had earned the privilege of spending her days in the house, sometimes with a sliding glass door open so she could go in and out as she wished. I no longer got to talk to her daily over the fence, or have her come over and visit. But the Hoye twins and my son are best friends, so I still see Carly periodically at the Hoyes’ house and at Little League games. And when they go on vacation, I get to dog-sit.

Curiously, Carly has been fine this whole time – no behavior problems despite being home alone all day during the school year. That is, until just a few months ago.

One day, Maureen called me to report that Carly had suddenly relapsed, causing hundreds of dollars of damage to their home. The boys came home from school and found the house in a shambles. The sliding glass door in the kitchen, which had been closed that day, was covered with slobber and footprints, to a height of six feet. All the vinyl window shutters in one section of the Hoye’s living room were chewed up. Several doors and door jambs throughout the house were scratched and gouged, apparently by nails *and* teeth. And the window-shades in Brendan’s room were chewed and knotted.

Maureen and I talked about the incident and tried to guess what might have set off what was clearly a sustained attempt on Carly’s part to get out of the house. Was she panicked? Or just bored? Since Carly does enjoy watching squirrels out the window, Maureen guessed that the dog might have been running from viewing spot to viewing spot, trying to get at the squirrels. “When is that darned KongTime going to be available for sale?!” Maureen asked me.

I called David and Sandi and learned that, coincidentally, they had *just* received the first units off the production line. They were nice enough to give one to the Hoyes that day – which also happens to be the last day Carly has wrecked anything.

It’s been about three months, and the Hoyes are still setting KongTime for Carly every day. Now that it’s on the market, they don’t anticipate ever going without the machine again. “At this point, it’s all about breaking up the monotony of her day,” says Maureen.

She also admits that when the family first got Carly, the young dog’s destructive behavior and barking was probably

caused by separation anxiety, which the KongTime seemed to alleviate. This most recent outbreak, Maureen speculates, had more to do with boredom. "I think she invented a new game of 'chasing' the squirrels that she sees out the window from one window to the next, and she just got swept up in it," says Maureen. "Reintroducing KongTime – in the nick of time! – broke the pattern."

Sometimes, the Hoyes set KongTime for Carly on the weekends when they are home. "We like to watch her when we hear the preview tone," says Maureen. "It's fun, because she really does enjoy it. When she hears the tone, she *runs* to the kitchen and grabs the toy, gives it a flip or two to get the loose food out, and then takes it off to her bed or the backyard to work on emptying the sticky stuff."

Not a sole solution

Despite its success in Carly's case, Rucker and Thompson are quick to explain that no owner should depend on KongTime to provide the sole solution for a bored or anxious home-alone dog.

"We don't want people to think KongTime is going to be a cure-all," says Rucker. "A dog who is home all day by himself faces a number of challenges. We're confident that KongTime will *help*, but we also feel that it's best used as part of an overall program to alleviate all of the factors that cause a dog's anxiety-related behavior."

Helping the dog's owner identify the po-

tential contributors to the dog's stress is where Thompson's 20-plus years as a dog trainer come in handy. She frequently consults with dog owners on the phone, asking questions to help them analyze the situation. Has the owner stopped allowing the dog access to the outdoors? Has a new cat moved into the neighborhood, one who might be teasing the dog from atop a nearby fence? Is the dog battling a flea infestation or allergy that might be cranking up his discomfort?

All of these problems need to be addressed to effectively improve the dog's behavior. As Thompson says, "KongTime is a useful supplement to anything and everything else the owners can do to reduce the dog's tedium and isolation."

Prevention role

Given Thompson's long history teaching puppy classes, it makes sense that she would *most* like to see KongTime used for puppies in a preventive role, rather than as a fix for behavior problems that have resulted from a dog's home-alone stress. "At some point, puppies have to be weaned from constant attention; eventually, most people have to go to work and leave their puppies home. In my opinion, KongTime is an ideal tool to give those puppies something to occupy



That's the Carly we love: sweet, calm, and content.

themselves, and perhaps prevent boredom and stress-related problems from *ever* developing."

Other trainers concur. Dana Cleveland, a trainer and the training and behavior manager for Citizen Canine, a daycare and boarding facility in Oakland, California, volunteered the dogs at her workplace as KongTime

testers. "The dogs get good exercise here, but they do have a couple of periods a day when there isn't much to do," she says. "David and Sandi asked me to test KongTime in any way I saw fit, so I used it with several young, restless dogs who I thought might benefit from some extra fun and enrichment."

Cleveland laughs, and then adds, "Also, frankly, I had doubts as to whether the machine would hold up to a couple of these dogs. I chose dogs that I thought might be able to break into and damage the machine; the most likely culprits included a couple of young Labradors, some known major chewers and food pigs."

To her amazement, KongTime stood up to each of the six dogs Cleveland tested it with. "I gave it to one dog in particular, a seven-month-old Lab. I thought, if anybody has the ability and desire to bust into this machine, it will be this guy – but he never did! He just waited for the Kong, and then I'd see him on his bed, eating his Kong, wagging his tail. In fact, *none* of my test dogs tried to bust into it; they were just thrilled when the Kongs rolled out."

All in all, Cleveland says she found KongTime to be a valuable tool for providing dogs with fun and enrichment. "I'd use it for any dog who was home alone for more than a couple of hours," she says.

"I definitely recommend it to our clients, since many of the daycare dogs are here because they have such bad separation anxiety. KongTime gives them another tool in their toolbox for the times when daycare is not an option. It wouldn't fix a dog who had *very* severe separation anxiety, but it's ideal for the average home-alone dog, and to prevent boredom in home-alone puppies."

I'm no trainer, but I'm obviously a believer. Consider KongTime for any anxious or understimulated dog you know. You could really improve his or her life. 🐾

Nancy Kerns is Editor of WDJ.

Further Facts About KongTime

■ KongTime's inventors do not recommend KongTime for use in households with more than one dog. "The potential exists for one dog to end up with all the Kongs. It's perfect for the home-alone dog where this isn't an issue," says Rucker.

■ KongTime is sold ready to use with batteries, four medium or large Kong toys, and samples of The Kong Company's products Stuff'N Snaps (biscuits that you can use to neatly cap the wide opening of a food-stuffed Kong) and Stuff'N Paste (an thick, edible paste that sprays out of a can, similar to Cheez Whiz; you spray it into a Kong to help hold the contents inside so the dog has to really work for a while to extract all the yummy stuff inside). The suggested retail price is \$139. The machine is sold with a one-year limited warranty.

■ KongTime can be purchased in the following locations:
Petco: petco.com, (877) 738-6742 (Petco's order line), and some Petco stores
ProActive Pet Products: proactivepet.com or (800) 706-0308
In Northern California, Pet Food Express stores
Select independent pet supply stores

■ To learn more about KongTime, see kongtime.com or call (800) 995-8996

Swim Party

A family struggles with a dog who goes nuts when they enjoy their pool.

Cocoa is a Lab-mix who goes crazy when we are in our pool. She runs around the pool barking and will not settle down. I have tried to calm her verbally, petted her, etc. But as soon as we move in the water, she goes crazy. She will run until she is exhausted. I thought about putting her in the pool with us, but I'm worried she will be too crazy.

Liam Smith, via e-mail

WDJ's Training Editor, Pat Miller, of Hagerstown, Maryland, responds:

There are several solutions and approaches for Cocoa's behavior. The first, and probably the easiest, is **simple management**. If you don't want her to run around the pool endlessly while you and the family are enjoying a dip, give her a luscious stuffed Kong and put her somewhere else – in the house where she can't see you through a window, in her crate, in the garage – anywhere she'll relax and be calm until you return to dry land.

The major benefit of this solution is that it's quick and simple. The downside is you have to shut Cocoa away from the family fun, and she may object to being isolated from the pool party.

You could, as you suggest, teach her to swim in the pool with you. If you choose this **training option**, you'll also want to show her where the steps are and teach her how to get out unassisted, in case she should end up in the pool when no one is there to rescue her.

The benefit of this solution is that Cocoa can be a part of the family fun. However, she may be overenthusiastic and happily maul and submerge family members in her excitement. Or, she may help herself to pool parties she's not invited to.

Another **training option** might be to teach her a very solid down-stay or some other behavior that's incompatible with running around the pool. It would take a high degree of training to achieve reliable compliance in the face of the constant stimulus

of your family in the water – and would probably diminish your own enjoyment of the pool as someone would have to constantly monitor Cocoa and reinforce the desired behavior, at least at first.

Behavioral solution

Finally, you could implement a program of counter-conditioning and desensitization (CC&D). When you say, "The dog goes crazy" a behaviorist would say that the dog is having a strong conditioned emotional response (CER) to some stimulus, which suggests a CC&D approach – changing the dog's emotional response to that stimulus. A CER is a reflexive response; the dog goes on automatic pilot and is literally unable to control her behavior.

The CC&D program for Cocoa's pool behavior would start with one of you sitting with her, on leash, some distance from the pool. You'll follow the steps in this program, with multiple repetitions at each step until you see the desired conditioned response (the dog looks at you with a "Where's my chicken?!" expression) occurs in place of the undesirable behavior.

■ Start out by having one family member (FM) in a swimsuit approach the pool at the shallow end.

The instant Cocoa starts becoming *slightly* aroused, start feeding her bits of canned chicken (or some other delicious treat) non-stop, and have FM stand still. Then have FM walk away from the pool, and stop feeding the dog. Mark the spot where FM stopped, and repeat. When you get a consistent "Where's my chicken?" response at this step, go to the next step.

■ Have FM approach the pool and take one step past the original marked step. Repeat this step until you achieve the "Where's my chicken?" response.

■ Have FM approach pool and take

two steps past original marker. Repeat until you get the "Where's my chicken?" response.

■ Continue one step at a time until FM is at poolside. Have FM sit by pool and dangle legs in water. Feed chicken. Repeat until Cocoa displays the desired response.

■ Have FM get in pool and stand in shallow end. Feed chicken, etc.

■ Have FM walk slowly around in pool. Feed chicken, etc.

■ Have FM swim a short distance. Feed chicken, etc.



This terrier gets wild in the pool, barking at, jumping on, and scratching the swimmers. Though this boy has taken defensive measures, pool parties are safer with the dog locked in the house.

■ Continue gradually increasing distance FM swims until he or she can swim the entire pool. Feed chicken, etc.

■ Now go back to the first step, and repeat the entire sequence with *two* family members, then three, until the whole family is in the pool.

■ Gradually increase activity level of family members until they are moving and acting as they normally would in the pool. Now gradually decrease the distance you and Cocoa are sitting from the pool, until she can be at pool's edge without getting aroused.

(continued on page 24)

In Support of a Sound Skeleton

Strong bones are a structural goal – and a metabolic necessity.

BY RANDY KIDD, DVM, PHD

The bones that dog owners are most familiar with are the ones they buy for their dogs to chew; ideally, these are moist, fresh (or frozen) cattle bones, still sporting tissues that dogs can tear and gnaw off and nutritious marrow to extract. Posing a great deal more risk to a dog's teeth are the dead, nearly fossilized bones sold in many pet supply stores.

The bones inside the living dog barely resemble the dry, brittle bones sold as recreational chews. Rather, living bone is a dynamic, vibrant organ that is in a perpetual state of flux, constantly generating and dying, accumulating and being worn away.

Living bones perform a multitude of functions. They provide scaffolding for softer tissues and offer protection to inner organs; they are the levers that create movement around joints; their inner core produces all the blood that circulates throughout the body; and, as other body cells circulate through it, the skeleton's scaffold creates a permanent communication center for kinesthetic, neurologic, and im-



Over time, humans have drastically altered the skeleton of the dog, creating enormous variation in the appearance of diverse breeds – and causing severe problems in some, especially in the tiny and giant breeds. The farther we get away from the natural canine's skeletal structure, the more apt he is to have debilitating skeletal problems.

The Whole  Dog Journal™

WHAT YOU CAN DO . . .

- **The dosage and balance of your dog's mineral supply is critical to bone health. Consult a vet with advanced education in nutrition whenever formulating and home-preparing your dog's diet.**
- **Until a young dog's growth plates are closed, limit his jumping and other repetitious and concussive movement.**
- **Investigate any lameness without delay, as it may signal quick-moving bone disorders.**

munologic information to be processed. The skeleton as a whole is truly a multi-tasking marvel.

Physiology and function

Bone is perfectly composed to perform its most primary function: to provide a sturdy base that allows for movement and protects and supports the body's softer tissues. From a chemist's viewpoint, bone could be seen as an ideal conglomerate of several kinds of materials that each have a specialized function. The resultant composite that we call bone is a substance that is much like fiberglass: firm without being too brittle, flexible and somewhat rubbery without being too bendable, firmly tied together with a strong interweave of fibrous material.

The hard part of bone is mineral – mostly salts of calcium and phosphorous. Bone's mineral deposits ultimately align themselves so they are positioned to withstand the normal stresses placed on the dog's moving

limbs and other body parts. Healthy bones carry an extra factor of strength – enough to withstand the extra stresses of the running, jumping, and turning of an active dog. Note that this reserve of weight-bearing capacity occurs in *healthy* bones, and is enhanced through exercise along with proper nutrition.

For optimal performance, bone needs to be heavy or dense enough to offer protection and to withstand the loads imposed by the dog, including excessive loads, yet light enough that the dog can still move around with ease. One way this is accomplished is with structures that are nearly hollow, with material of much lesser density in the middle, offering maximal strength with minimal weight.

The mineral part of bone is mixed within a matrix of collagen, a relatively rubbery, connective tissue mostly made up of proteins. Collagen is also present in tendons and skin, and it forms the cartilage that

protects bone ends as they rotate against each other. Collagen fibers are interconnected throughout the mineral portions of bone via fibrous connecting links, and the collagen and fibrous tissues are aligned in a fashion that allows bones to withstand stresses applied from all directions – an accomplishment that would fascinate a structural engineer.

Veterinary practitioners, however, are more concerned with how to maintain healthy bones, prevent abnormal bone formation, and heal bones that are diseased or fractured. We rely on the basics of bone physiology to help us support these tasks.

Bone growth

If we look at living bone tissue under the microscope, we see mineralized tissue, a proteinaceous matrix, and several types of bone cells. Interestingly, in a healthy bone we'll see one type of cell that is manufacturing mineralized tissue (osteoblasts) and another cell type that is eating or eroding away mineral (osteoclasts); often, the cells are almost side by side. (A third type of bone cell, the osteocyte, seems to be just sitting in the midst of bone matrix; we'll see what it is doing later.)

At first glance this simultaneous growth and "decay" doesn't make sense at all, but it becomes more comprehensible when we understand the dynamics of bone formation.

Bones constantly reorganize in response to the physical stresses placed on them and to the mineral needs of the body. (For more on the latter, see the sections on bone diseases caused by metabolic and nutritional problems, below.)

As a bone is subjected to the stress of bearing weight, the osteoblasts are stimulated to produce additional mineral mass to withstand the additional stress. However, if this went on indefinitely, the bone could grow to tree trunk size, and the dog would no longer be able to walk. So, along with the bone formation (mineralization), there is concurrent de-mineralization somewhere in the bone where the stresses are not as great. The result is a constant dynamic re-aligning of the bone, with more mineralized mass accumulating where it is needed. Note that this process is ongoing and normal throughout the life of the dog.

Bone lengthening in the growing dog is another almost mystical event. During the time frame when a puppy's long bones are growing in length, the ends of the bones must maintain a cartilaginous and lubricated surface so they can move against one an-

other through the joint. This means that the bone growth cannot occur at the very ends of the bones. Instead, a puppy's bones grow outward from the epiphyses, *near* the ends of the bones. The new boney tissue actually emanates from a line of cartilaginous tissue called the physis or "growth plate," that runs across the bone. It is evident in radiographs as an area of non-mineralized tissue within the bone.

When a dog (or other mammal) reaches maturity, the growth plates "close" or become mineralized, precluding further growth along the length of the bone. Damage to a growth plate during the dog's growing phase (an epiphyseal fracture, for example, or the repeated and excessive compression of the growth plates caused by allowing too-young agility candidates to jump too much) can lead to a permanent cessation of long bone growth, with resultant shortening of the affected limb.

At the same time a pup's bone is growing in length, it is adding more mass to support the pup's growing weight. The obvious way to do this would be to add mineralized tissue to the outside of the bone, but if too much bone were deposited, the bone could become enormous. So, once again, the bone balances the mineral that is laid along the outside of the bone with bone resorption along the bone's inner core.

While this entire process is elegant in its conception, there are times when it goes awry. Prime examples of bone formation gone bad occur when there is abnormal joint

movement, as when the dog suffers hip dysplasia or as a result of decreased mobility of a vertebrae. With abnormal joint movement, the bones surrounding the joint try to compensate with excess bone growth (exostosis) that we refer to as osteoarthritis. (We'll discuss osteoarthritis and other diseases of joints in much more detail in a future installment of the Tour of the Dog).

Boney growths in or surrounding the joint often produce pain and result in a lack of mobility in the joint. If they are allowed to continue, these growths may ultimately totally fuse the joint.

The periosteum, a specialized connective tissue that covers all bones, is highly vascularized and has the ability to form bone. Irritation to the periosteum is painful, and can produce excess bone growth.

Other roles

Bone also produces blood cells. All the blood cells in the adult animal are produced in the bone marrow, located in the relatively hollow core of the bone.

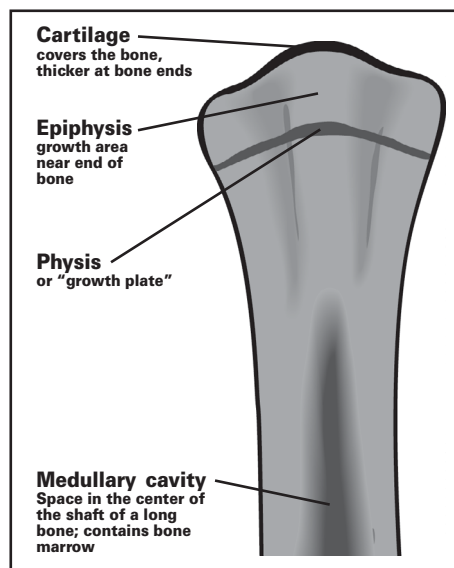
Further, bone plays an important coordinating role in the body. Immune information is processed in the bone as blood circulates through the boney tissues – interesting, given that bone is one of the longest-living tissues in the body. In addition, the skeleton is a primary source (primarily through nerve sensors located in the joints) for providing kinesthetic information to the whole body, informing the animal of its posture at all times.

Unfortunately, boney tissues also provide an ideal microenvironment for trapping cancerous cells that are circulating through the body, and the growth of those tumor cells may continue within the bone.

And finally, we know that those osteocytes that we once thought were simply inert cells that had been isolated within the bone's calcium matrix are actually intimately connected to one another throughout the entire structure of the skeleton. This interconnection of nervous and immunologic input within long-lived skeletal tissues may some day prove to be one of the most important sites for giving and receiving whole-body communications.

Fractures and fracture repair

Fractures are probably the most common bone "disease" in dogs. Any bone of the body may be involved, usually as a result of a traumatic incident (however, see metabolic diseases, below, for other causes of bone fractures).



Depending on the breed, the growth plates of a puppy's long bones "close" when the pup is between 6 and 12 months, stopping the increase in the length of the bones.

When a bone is fractured, the surrounding blood vessels are also usually broken, and blood hemorrhages into the area and forms a clot. This clot is converted into a fibrous mass, and new blood vessels begin to interlace into this mass. As the clot continues to harden, it forms a structure (called a callus) that begins to hold the ends of the bone with reasonable firmness.

After about two weeks the adjacent periosteum produces fibroblasts that begin to develop osteoblastic characteristics. As more and more calcium salts are deposited, the tissue becomes more rigid osteoid or bone. This early bone (cancellous or spongy bone) is not yet organized into fully mature bone, and its relative softness may take months or even years to become fully organized, strong bone.

While most bones will ultimately heal on their own, they will heal much faster (and with less pain for the dog) if some form of stabilization is provided. Fractures in youngsters tend to heal much faster than in older dogs.

The prognosis is guarded, however, if the immature dog's epiphysis is involved in the fracture. Healing may be prolonged, and/or premature closure of the growth plate – and resultant cessation of the growth of the affected bone – may result.

Infectious diseases

Infections, referred to as osteomyelitis, are a common cause of inflammatory disease of the canine's bones. Typically a penetrating wound would be involved as the source of infection, or infections may occur following fractures or during surgical fracture repair.

Symptoms include pain (sometimes with refusal to bear weight on the affected limb), local swelling, and fever. As the disease progresses, draining tracts may occur. X-rays will reveal areas of bone lysis (areas where bone mass has been dissolved). If the condition continues, there may be boney growth surrounding the infection and areas where bone tissue has died.

Osteomyelitis may be instigated by many types of bacteria (the most common one being *Staphylococcus aureus*), but about half of all infections involve more than one species of bacteria. Treatment consists of antibiotic therapy, with culture and sensitivity often needed to accurately appraise the bacteria to match it to the appropriate antibiotic. If the case has become chronic, surgery may be needed to remove extra bone growth and any dead



Fractures heal best when stabilization and immobilization is provided, in a way that also allows for some (but not too much) weight bearing.

bone tissue resulting from the infection.

Note that there are also several mycotic (fungal) organisms that infect bone tissue, and these often require specialized diagnostic procedures to ferret out as well as specific medications to treat. The more common examples include:

■ **Coccidioidomycosis** – A respiratory disease that occurs primarily in the Southwest U.S.; it also may infect bones.

■ **Histoplasmosis** – A disease of the gastrointestinal tract that may extend to the skeletal system.

■ **Blastomycosis** – A skin or generalized infection that may also involve bone.

■ **Actinomycosis** – The *Actinomyces* organism is a normal inhabitant of the mouth of most dogs (and cats); penetrating wounds of the mouth may result in infections of surrounding bones.

■ **Nocardiosis** – A respiratory infection that may spread to the skeletal system.

■ **Aspergillosis** – An infection of the nasal passages, noticed as a chronic nasal discharge. Bone tissues may also be involved.

Metabolic bone disease

There are a number of diseases that can loosely be categorized as “metabolic” in origin. The primary examples include the following:

■ **Renal hyperparathyroidism** – This tongue-twisting disease is caused by chronic kidney disease, which results in an excessive rate of parathyroid hormone (PTH) secretion, which in turn causes a softening of the affected bones. Although the loss of hard boney structure is generalized throughout the body, the most noticeable area of involvement is the jaw, and the bone loss here is referred to as “rubber jaw.”

■ **Nutritional hyperparathyroidism** has the same end result (rubber jaw), but in this case the causative agent is an improperly balanced diet – often from an all-meat diet fed to a growing animal. All-meat diets are too high in phosphorous and/or deficient in calcium, creating low blood calcium levels. The body attempts to correct this by demineralizing the skeleton, mining it for its calcium. This can result in bones that are vulnerable to fracture and deformity.

■ **Primary hyperparathyroidism** is a rare disease, typically seen in the older dog. Its cause is a functional lesion of the parathyroid gland that results in a higher than normal level of PTH.

■ **Hyperadrenocorticism** – Can be a result of Cushing's disease or from prolonged and/or excessive administration of glucocorticoids. This can have several adverse actions on the maintenance of healthy bone. It can inhibit absorption of calcium from the gut (via an antagonistic effect on vitamin D), increase urinary excretion of calcium, and/or decrease proliferation and differentiation of fibroblasts and osteoclasts, thus affecting the elaboration of collagen and bone matrix. It can also have a catabolic (tissue destroying) effect on proteins, resulting in abnormal production of the bone matrix. The osteoporosis associated with this disease is usually prominent in the spine and long bones.

■ **Osteoporosis**, a human disease that often affects postmenopausal women, is a disease that has not yet been reported in dogs, at least not in the same, hormonally-related form that is seen in older humans. There are, however, several diseases and toxicities that may result in thinning of dog

bones (secondary osteoporosis), including: drug intoxications; the hyperparathyroidism and Cushing's diseases mentioned above; hyperthyroidism (a disease more common in cats than in dogs); hepatic toxicities; disuse due to immobilization of the limb; multiple myeloma; cysts; and tumors.

With any of these osteoporotic diseases in dogs (or humans) the telltale clinical sign is a fracture of one or more of the long bones or vertebrae. The prognosis for any of the osteoporotic diseases depends on the severity of the disease and on obtaining an accurate diagnosis for effective treatment.

Note that **disuse osteoporosis** can develop any time there is a prolonged period (two to three weeks or more) when the limb (or limbs) are not undergoing weight-bearing activity (making an excess of sofa-time, in my mind, as big a risk to skeletal health as anything).

This period of non-weight bearing may occur during the period of immobilization for fracture repair, and the de-mineralized bone will be more subject to fracture immediately after the dog returns to mobility. However, newer orthopedic techniques typically allow for weight bearing during immobilization of the fracture site, so this problem has been minimized. Total remineralization will occur rapidly as the limb begins to fully bear weight again.

Genetic diseases of bone

There are several genetic diseases that affect bones, the cartilaginous tissues between bones, and the joints. As a general rule these are rare diseases, often involving a disorder of the metabolic pathways that create bone or cartilaginous tissue, and are often limited to one specific breed.

A comment should be made about the malformed bones we have created in our dogs through breeding programs that emphasize cuteness, unique body and facial characteristics, and excessive variation in size and type, rather than normal and healthy function. Many of these genetic expressions we seem to treasure should be classified as genetic abnormalities, such as dwarfism and gigantism.

In many cases we continue to breed animals with genetic predispositions to a plethora of bone and joint diseases – hip dysplasia is perhaps the best example here. And we could use a whole litany of genetic-defect terms to describe the faces and mouths of our dogs, muzzles so shortened they can no longer hold a full complement

of teeth, for example, let alone produce the normal scissor bite of the natural canine.

The farther we get away from the natural canine's skeletal structure, the more problems we create; in contrast, the more the dog looks like the wolf or coyote from whence he came, the less apt he is to have debilitating skeletal problems.

Nutrition and bones

There are several generalized nutritional diseases that affect bones. Some nutritional deficiencies may potentiate genetic diseases; we have already seen how nutrition plays a role in metabolic diseases such as nutritional hyperparathyroidism.

Nutritional diseases of the bone have been reported as a result of the following:

■ **An imbalance of calcium and phosphorous** (includes deficiencies and excesses of either or both minerals).

■ **An excessive intake of vitamin D**, possibly from high intake of cod liver oil or other vitamin supplements.

■ **Too little vitamin D**, usually from decreased absorption of the vitamin due to chronic administration of mineral oil.

■ **Hypervitaminosis A** (too much vitamin A), especially from long-term ingestion of a diet limited to, or with excessive amounts of, liver.

■ **Too little zinc.** Some dogs (particularly a familial line of Alaskan Malamutes) require supplementary zinc throughout their lifetimes.

The most critical point to retain is that overfeeding and oversupplementing dogs, especially growing pups (and most importantly, puppies of large breeds), must be avoided to prevent bone disorders. Numerous trials have demonstrated that dogs fed for maximum growth are predisposed to bone abnormalities including hip dysplasia, panosteitis, hypertrophic osteodystrophy syndrome, osteochondritis dissecans, and wobblers syndrome.

In addition, newer studies have indicated that restriction of caloric intake (by about 30 percent) both prolongs length of life and creates a healthier quality of life.

Bone tumors

Osteosarcoma, a malignant primary tumor of the bone and/or surrounding cartilaginous

tissues, is the most common bone tumor in dogs, constituting an estimated 85 to 90 percent of all bone tumors in large dogs. It typically affects older dogs (from about seven years of age on), although it can occur at any age. Saint Bernards, Great Danes, Golden Retrievers, Irish Setters, Doberman Pinschers, German Shepherd Dogs, Boxers, and Collies all seem to have a higher incidence than other breeds.

Clinical signs of osteosarcomas include a rapid onset of lameness over a two- to five-day period, localized swelling around the lesion – most commonly involving one of the long bones of the limbs – and occasionally fever and anorexia. Fractures may occur. The tumor is often very active; growth rate is rapid and metastasis (most often to the lungs) occurs in a high majority (about 80 percent) of cases.

Chondrosarcomas (affecting cartilaginous tissues) and **fibrosarcomas** (affecting fibrous connective tissues) are tumors that may occur within boney tissues. Both of these tumors are malignant, and clinical signs depend on the location of the lesion, the extent of invasion into tissues, and occurrence and site of metastasis.

All of these malignant tumors can present extreme treatment challenges. Depending on the tumor, surgical excision, amputation, chemotherapy, or radiologic therapy will be the conventional treatment of choice.

In many cases the prognosis will remain poor, no matter what treatment is used. The very few cases that I've thought I had any positive effect on the dog's lifespan or quality of life were treated with classical homeopathic methods.

In addition, tumors from other sites in the body may metastasize into the bones, including carcinomas, melanomas, sarcomas, fibromas, lymphosarcomas, hemangiosarcomas, reticulum cell sarcomas, and meningiomas. This list is further indication that living bone is continually in contact with the blood and cells from other areas of the body – a resonating scaffolding that I like to think of as the "rhythm" section of the orchestra we call the body.

And finally, there are benign tumors that affect bone, including osteomas, chondromas, and osteochondromas. Some of these will not require any treatment; others will be better off after surgical removal. In my experience, many of the benign tumors respond favorably to alternative medicines such as homeopathic or herbal remedies, or acupuncture.

Unknown etiology

Panosteitis is an inflammatory disease of long bones, the cause of which has not yet been defined. It usually occurs in young, large breed dogs, most commonly German Shepherd Dogs. Symptoms include an acute onset of lameness unrelated to trauma. The lameness may go away spontaneously, only to recur later, and the pain may shift from one leg or bone to another. The only other obvious abnormality may be radiographs that reveal a thickness of the inner cavity of the bone.

An uneventful recovery is the usual course of the disease, and the conventional treatment consists of analgesics, corticosteroids, and/or anti-inflammatories. Alternative medicines such as herbal or homeopathic remedies or acupuncture may be as effective as conventional drugs, without the increased potential for adverse side effects. Limiting activity may also be beneficial. With recovery, radiographs of the bone will show a return to normal.

Hypertrophic osteodystrophy (HOD) is another self-limiting disease with unknown etiology. It affects rapidly growing large and giant breed dogs. Symptoms include mild to moderate painful swelling of the periosteum at the ends of the long bones. The cause of the disease has not yet been clearly determined.

Although many holistic practitioners find therapeutic levels of vitamin C to be helpful for treating HOD, this is controversial. Conventional treatment consists of rest, analgesics, and for severe cases, corticosteroids. Most dogs have a spontaneous remission within a few days to several weeks, regardless of the treatment. And, while some dogs may be left with permanent boney deformation, relapses of the painful portion of the disease are rare.

Bone cysts (areas of demineralization within the bone) are rare, and their exact etiology is unknown. They are generally benign and cause no problem unless the bone loss is severe enough to cause fractures.

Lead poisoning, caused by ingestion of lead paint, linoleum, or other lead-containing materials, can occur in dogs. Symptoms of lead poisoning are generally limited to neurologic, gastrointestinal, and hematologic abnormalities; asymptomatic bone changes ("lead lines," dense bands of boney proliferation seen in the metaphysis of long bones of mature dogs) may coincidentally be seen on X-rays.

Hypertrophic osteopathy or **hypertrophic pulmonary osteopathy** (HO or

HPO) is an interesting disease of bones in that its origin is typically a tumor of the lungs. HO produces a generalized symmetrical swelling and periosteal reaction that results in lameness. Exactly how the lung tumor manifests itself in bone changes has not been determined. Treatment is aimed at the thoracic disease.

Alternative medicines

My approach when treating diseases involving the skeletal system is to try to return the function back to normal; if the disease has already changed the structure of the bone, I don't expect that I'll have much luck changing existing structures of the bones. What this means is that there are a lot of diseases of bones that I feel are better treated by



Chiropractic care is the treatment of choice for many skeletal problems.

Western medicine – fractures are a prime example here.

Having said this, I think that if we can help return the function of the bone and associated joints, we are helping the quality of life of the dog. And additionally, if we have enough patience, a functional change (changing the gait of the dog back to normal) has the potential for ultimately changing (via remodeling of the bone) the actual structure of the bone.

With all this in mind, my approach has been to first use chiropractic adjustments to help return abnormal joint movement back to normal. Then I'll use acupuncture; herbal or homeopathic remedies; and nu-

tritional supplements to help speed up and support the healing process. If indicated, I recommend physical therapy, massage, and/or ultrasound therapy, and although my personal experience is limited, I understand that magnetic therapy may be helpful for the healing process.

Note that I feel the chiropractic adjustment is absolutely vital whenever we're dealing with a skeletal problem. To my way of thinking, if the animal can't use his joints properly, or get back to some reasonable semblance of a normal gait, there is no hope for us to get him back to a normally functioning animal, whatever the problem is with his skeletal system.

Acupuncture is an excellent adjunct therapy for anything involving the skeletal system – it diminishes pain, allowing for more normal function, and it has been reported to speed up healing of both soft and boney tissues. The herbal remedy, *Symphytum* (comfrey) has been reported to aid bone growth, and a number of herbs can be used to counter inflammation or pain or to enhance the immune system.

Homeopathic remedies that apply to bone tissues include *Symphytum* (to help speed fracture repair), *Silicea* (where realignment of mineralization may be needed), *Hepar sulphris* or *Hypericum* (for pain), and *Ruta graveolens* (for early inflammation of the periosteum). The spectrum of *Calcaria*, *Phosphorous*, and/or *Floricum* remedies may be indicated for a variety of bone disorders.

It is important to remember that a certain portion of bone is protein and fibrous – proper protein nutrition is thus necessary for bone health and repair, and vitamin C is especially important for maintaining the interconnecting links between individual fibers. (Conventional veterinarians have been taught that a dog manufactures its own vitamin C and therefore does not need supplemental C; most holistic vets – me included – feel we see improved healing when we add supplemental C as indicated.)

Check with your holistic vet for dosage schedules for homeopathic, herbal, and nutritional remedies. 🐾

Dr. Randy Kidd earned his DVM degree from Ohio State University and his PhD in Pathology/Clinical Pathology from Kansas State University. A past president of the American Holistic Veterinary Medical Association, he's author of Dr. Kidd's Guide to Herbal Dog Care and Dr. Kidd's Guide to Herbal Cat Care (see page 24).

Debate About Kidney Diets

Hill's differs with our opinion on diets for dogs with chronic renal failure; we respectfully disagree with Hill's.

Dear readers: In May 2005, we published an article by long-time WDJ writer and book author CJ Puotinen about dietary considerations for dogs with renal failure. Quoted several times in "When to Say No to Low-Protein," was dog owner Mary Straus, a researcher who has exhaustively studied the veterinary literature regarding treatments for chronic renal failure (CRF).

In response to our article, we received a long letter from S. Dru Forrester, DVM, MS, Diplomate ACVIM (Small Animal Internal Medicine), a scientific spokesman for Hill's Pet Nutrition. Dr. Forrester began his letter with a statement that our article contained inaccurate information, and that some of the recommendations in the article could cause "significant harm" to dogs suffering from chronic kidney disease.

However, after going through Dr. Forrester's letter with a fine-tooth comb, we feel confident that our article contained no errors, but rather, statements that represent different opinions from those of Dr. Forrester and Hill's.

We shared Dr. Forrester's letter with Mary Straus, as, quite frankly, we needed some help finding and checking the 10 footnoted studies Dr. Forrester referred to in support of his critique of our article. Straus not only had the studies on hand, but also was familiar with them. Shortly after she received Dr. Forrester's letter, Straus countered with an even longer letter, citing 30 footnoted references in support of *her* critique of Dr. Forrester's letter.

There is some pretty fascinating stuff in these letters – fascinating, at least, to us dog food geeks! In recognition of the fact that not all of our readers may be similarly enthralled, we offer below an edited version of the two letters. Interested individuals can contact us (at the editorial office address listed on page 2) if they are interested in receiving the complete text of both letters.

Hill's pioneered the field of clinical veterinary nutrition, and has always been the leader of that new industry. Its founder, a brilliant and visionary veterinarian, Mark L. Morris, Sr., may have been the first modern veterinarian to recognize the therapeutic value of adjusting the diet of animals as part of a veterinary response to their disease; the company was founded on a product he developed in 1939 to treat dogs with kidney failure – a product that is still a company best-seller.

We respect Hill's history and acknowledge its enormous contributions to the field, but also wish to note that its oldest product (Prescription Diet® Canine k/d®) has changed over the years in response to new developments – meaning it might change again, *perhaps* even to incorporate some of the research we cited in our article. Other companies now make foods for dogs with kidney failure, and the resulting products are not all alike.

"When to Say No to Low-Protein" expressed our support for some different ideas. We don't believe that Hill's currently possesses the only correct prescription for feeding a dog with renal failure, nor the best one. – *Nancy Kerns, Editor*

HILL'S SCIENTIFIC SPOKESMAN WRITES:

I discovered several inaccuracies when reading "When to Say No to Low-Protein." The article summarizes dietary treatment for chronic renal failure (CRF), now known as chronic kidney disease (CKD), in dogs. The author recommends a new approach to feeding dogs with kidney disease and states that newer research has radically changed and fine-tuned dietary recommendations for canine CKD patients.

Some of the recommendations in the article are appropriate; however, others could cause significant harm to dogs suffering from CKD. The readers of your journal should be aware of this information when making decisions about what to feed their dogs with CKD.

The author is correct that newer research

has radically changed and fine-tuned the dietary recommendations for canine CKD patients; however, current recommendations made by veterinary nephrologists contradict those made by the author of this article.

The most current findings available are from a clinical study of dogs with naturally occurring CKD conducted at the University of Minnesota by leading experts in the field of veterinary nephrology...

These findings further support current recommendations made by veterinary nephrologists to feed a therapeutic food such as Prescription Diet® Canine k/d® to dogs with CKD. Therapeutic foods such as Prescription Diet® Canine k/d® are indicated before kidney disease becomes severe; they should be fed when serum creatinine concentration is greater than or equal to 2 mg/

dl. Waiting until kidney failure is more advanced decreases patient survival time and quality of life and also may decrease acceptability of the therapeutic food.

When calculating dietary protein requirements, one must consider digestibility and quality of the protein source. Digestibility refers to the amount of protein available for absorption and subsequent use by the pet. High quality protein sources deliver essential amino acids, those that cannot be synthesized by the pet.

As the quality and digestibility of the protein source increases, the amount of protein required in pet food decreases. Prescription Diet® Canine k/d® contains proteins that are of high quality and digestibility, therefore, a lesser amount of protein can be used to meet maintenance

requirements for dogs.

The role of dietary protein restriction in dogs continues to be debated amongst veterinary nephrologists. To date, studies have not shown a conclusive effect on delaying progression of experimentally induced CKD in dogs; however, there have been beneficial effects observed in dogs with naturally occurring kidney diseases.

It is generally accepted that reducing protein intake decreases blood urea nitrogen (BUN) concentrations and ameliorates clinical signs of uremia in patients with CKD. In addition, restricting dietary protein may help ameliorate effects of metabolic acidosis, common in CKD.

Although further evaluation is needed, dietary protein restriction is associated with reduced magnitude of urine protein loss (i.e., proteinuria) in dogs with glomerular diseases (i.e., kidney diseases characterized by increased permeability of glomerular blood vessels that allow protein leakage into the urine).

Protein supplementation (e.g., meat, eggs, tripe) is contraindicated in these patients because it may worsen severity of proteinuria and subsequent hypoalbumin-

emia (decreased protein concentration in the blood).

The reader should also be aware that feeding a food with reduced protein is only part of the picture when talking about therapeutic foods such as Prescription Diet® Canine k/d®. Other beneficial components of these foods include moderate phosphate restriction, moderate sodium restriction, increased supplementation with polyunsaturated fatty acids (PUFA), increased B vitamins, and increased buffering capacity (to counteract the tendency toward decreased acid excretion by the kidneys).

In the past, owners of dogs with CKD often found that therapeutic kidney foods were not very palatable. Prescription Diet® Canine k/d® dry and wet formulas have undergone several improvements in palatability during the past several years and most dogs with CKD readily accept these foods.

It is important to slowly transition a dog from the old food to the new therapeutic food over a seven-day period. Dogs with advanced CKD often are nauseated and will not be interested in any type of food. Clinical signs of nausea and vomiting should be

controlled before attempting to introduce a new food.

There are no nutritional reasons that support providing excessive amounts of dietary protein; older dogs (> 7 years) do not require more protein than young adults. In fact, subclinical kidney disease may exist in apparently healthy older or geriatric dogs and kidney function can be worsened by feeding excessive protein (and phosphorus) to these patients.

In summary, your readers should be aware that kidney therapeutic foods are routinely recommended by veterinary nephrologists and small animal internists for managing dogs with CKD. Prescription Diet® Canine k/d® contains reduced amounts of high quality, highly digestible protein that is more than adequate for maintenance needs of adult dogs. To date, Prescription Diet® Canine k/d® is the only kidney therapeutic food that has been studied in dogs with naturally occurring CKD. Feeding Prescription Diet® Canine k/d® to dogs with CKD prolongs survival time and improves quality of life for these patients.

S. Dru Forrester, DVM MS
Scientific Spokesman, Hill's Pet Nutrition

RESEARCHER MARY STRAUS RESPONDS:

I would like to respond to the allegations in the letter above regarding supposed inaccuracies in the WDJ article, "When to Say No to Low-Protein" – allegations I believe are wholly without foundation.

Dr. Forrester's letter says that "current recommendations made by veterinary nephrologists contradict those made by the author of this article," then goes on to give the results of a study that compared the use of Prescription Diet® Canine k/d® (hereafter referred to as k/d) with maintenance kibble.

I do not believe that dogs with CKD should be fed maintenance kibble, nor does WDJ advocate this. The article clearly stated that dogs with CKD need a reduced phosphorus diet, and advocated feeding a home-prepared diet that reduces phosphorus without overly restricting protein.

I agree that diet should be modified before kidney disease becomes severe, and the WDJ article specifically suggests reducing phosphorus "even with early stage CRF."

I do not agree that protein should be restricted at this stage, or that the level of phosphorus restriction in k/d is required for early stage renal disease. According to the

Nutrition Support Service at Ohio State University Veterinary Hospital, "Results of recent research are changing our recommendations for nutrient modification in dogs with early signs of CRF. Restricting phosphorus intake to about 30 mg/pound/day [about half the amount found in normal diets] as soon as polyuria is recognized, and supplementing potassium intake (with alkalinizing salts if acidosis is a concern) to maintain serum potassium within the normal range may be all that is necessary until patients develop severe disease."

There have been no studies done that I'm aware of showing that lower amounts of high quality protein do not cause problems due to protein deficiency in dogs with CKD. Suggestions I saw regarding the use of high quality proteins for dogs with kidney disease specifically suggested not reducing the quantity of protein below levels referenced above, but instead increasing the quality of protein fed.

I would also dispute Hill's claim that it contains "proteins that are of high quality and digestibility." The ingredients in Canine k/d are "brewers rice, pork fat (preserved with mixed tocopherols and citric acid),

dried egg product, flaxseed, corn gluten meal, chicken liver flavor, soy fiber," plus supplements and artificial preservatives. Of these, only eggs would be considered high quality protein (and "dried egg product" is almost certain lower quality than fresh eggs). Corn gluten meal and brewers rice are poor quality and incomplete proteins. None of the other ingredients provide protein at all.

It is true that reducing protein decreases BUN, but this is only significant when BUN is high enough to cause signs of uremia (in general, over 80 mg/dl). Our article did advise reducing protein when a dog is uremic. But no studies have shown that reducing protein improves quality of life, extends life, or slows the progression of kidney disease when instituted before a dog is uremic.

The studies cited by Hill's that purportedly show otherwise apply only to dogs with canine X-linked hereditary nephritis (a rare, breed-specific form of juvenile renal disease), and the first study only indicates that a protein restricted diet reduces proteinuria, which is a symptom (comparable to BUN) that is related to the amount of protein in the diet and does not mean that there is any

actual benefit from the reduction. The first study also indicates that the dogs fed the low protein diet “did not maintain starting body weight or plasma albumin concentration within the normal reference range,” dangerous side effects of low protein diets, and that “unintended differences in digestibility of protein and energy prevented assignment of the diet effect exclusively to protein.” I would argue that this study actually supports WDJ’s contention that low protein diets can be harmful.

Concerning metabolic acidosis: I looked up the references cited in Dr. Forrester’s letter. The first one cited is the study noted above, which indicates that low protein diets led to loss of body weight and hypoalbuminemia. Proteinuria may lead to hypoalbuminemia as well, but not because there is too much protein in the diet, but rather because protein is being lost faster than it is being restored.

Proteinuria is a symptom, not a cause, of renal disease. In reality, higher protein diets may be required when dealing with proteinuria and hypoalbuminemia, due to the excessive loss of protein through the kidneys.

Dr. Forrester points out that feeding a food with reduced protein is only part of the picture when feeding dogs with CKD. The WDJ article recommended phosphorus restriction and supplementation with B vitamins. Supplementation with omega-3 fatty acids was also highly recommended.

Hill’s admits that their diets have not been palatable in the past, but claims they are improved now. I would suggest that they would have made the same claims in the past, and will at some point in the future likely make further changes that they will then claim make their food more palatable than it is now.

The fact is that low protein foods are inherently less palatable, and that commercial diets will never appeal as much to a dog as fresh food diets. Anecdotally, many people still report their dogs refusing to eat Prescription Diet® Canine k/d®. Even if some dogs are willing to eat this food, it is not unreasonable to suggest alternatives for those that will not, or additives that will make it more appealing, as well as healthier, for dogs with early to moderate stage CKD.

There are many recent studies that indicate older dogs, even those with kidney

disease, may need more protein than younger dogs. As to older dogs that “may” have subclinical kidney disease, low protein diets have not been shown to benefit dogs that do have kidney disease, nor have they been shown to reduce the risk of kidney disease or slow its progression. There are no studies indicating that feeding excessive protein to older dogs is harmful. In contrast, research over the past 10 years or so has shown that protein does not harm the kidney of dogs.

In summary, I stand by the recommendations in the WDJ article. I will continue to recommend that dogs with kidney problems receive adequate amounts of protein, along with fish oil (not the flaxseed found in Canine k/d®) and high quality fresh foods that they enjoy, and that moderate, rather than severe, restriction of phosphorus is all that is needed for early stage renal disease. I also stand by the assertion that older dogs, including those with CKD, do not benefit, and may be harmed, by excessive protein restriction.

Mary Straus
Pleasanton, CA

Two More Types of Collars to Consider

Regarding “The Collar of Money” (WDJ May 2005): I don’t know how you left out the Lupine collars! They are very fairly priced, come in cool designs and best of all, Lupine will replace them *even if chewed!* Around here, all you have to do is bring the collar to the store you bought it from; you don’t even have to mail it to the company. All their designs are great and they change frequently. I recommend them to everyone in my classes, especially puppies. Lupine even offers matching leashes with the same guarantee. My dog is still wearing the same one after nearly five years and it looks *great!*

Nancy Freedman-Smith, Gooddogz Training
Portland, Maine

I don’t know how I missed mentioning Lupine, either. As you said, the collars are very reasonably priced and available in an amazing variety of patterns. See lupinepet.com or call (800) 228-9653 to locate a Lupine dealer near you.

You mentioned in “The Collar of Money” that many collar manufacturers fail to make sizes (with appropriate hardware) for little tiny dogs. I found the same was true for large and giant breed dogs. As the owner of three American Bulldogs, I have been repeatedly disappointed by the collars on the market that were intended for extra-large dogs and large working dogs. I have seen too many collars with plastic components or single prong buckles break when under

the strain of a large, strong dog (creating an unsafe situation for the dog and bystanders alike).

To solve these problems, I started manufacturing special collars with these special dogs in mind. I use double-ply nylon webbing with an average break strength of over 12,000 pounds. The two-inch width spreads out the strain placed on the neck by pulling, putting less force on the dog’s trachea. I use only stainless steel hardware, and buckles with double prongs, reinforced by rivets that are capped on the underside for a better seal and no rough edges against the dog’s neck.

All my collars are double-stitched on all edges with thread that is resistant to rot, mold, mildew and heat. An extra large D-ring makes it easier to grab, and I added a small D-ring is added specifically for ID tags. I also use brass grommets in heat-sealed holes to prevent stretching and fraying.

Blocky Dogs collars are available in nine colors in three styles. View them at blockydogs.com, or call for a brochure: (440) 668-0112.

Rebecca Reed, owner, Blocky Dogs
Chesterland, Ohio



CRAZY ABOUT SWIMMING, CONTINUED FROM PAGE 15

Alternatively, you could do CC&D with everyone in the pool, starting at a far enough distance that Cocoa doesn't react, and gradually move her closer to the pool, achieving the "Where's my chicken?" response at each step.

Sound like a lot of work? It will depend on how much time you devote to the program and how quickly Cocoa responds. Some dogs can

work through a 20-step CC&D program quite rapidly. Others can take months. Which is why *my* first choice for this behavior, if it were *my* dog, would probably be to manage it by just putting Cocoa away during pool parties.

– Pat Miller, CPDT, CDBC

RESOURCES

BOOKS

WDJ Training Editor Pat Miller is author of two books: *The Power of Positive Dog Training* and the brand-new *Positive Perspectives: Love Your Dog, Train Your Dog*. Both books are available from DogWise, (800) 776-2665 or dogwise.com

Dr. Kidd's Guide to Herbal Dog Care and *Dr. Kidd's Guide to Herbal Cat Care* are published by Storey Books, (800) 441-5700 or storeybooks.com

TRAINING AND INSTRUCTION

Pat Miller, CPDT, Peaceable Paws Dog and Puppy Training, Hagerstown, Maryland. 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

The Association of Pet Dog Trainers (APDT) has references to member trainers in your area. Write to 150 Executive Center Drive, Box 35, Greenville, SC 29615, or call (800) 738-3647. The APDT database of member trainers can be seen at apdt.com

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

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WHAT'S AHEAD

Shipped Fresh and Raw

The market for commercial raw diets has exploded. Here's what to look for in a diet you can count on for your dog.

Gentle Jaws

What "bite inhibition" is, and why you want to make sure your dog has it.

Leash Envy

The best basic leashes, and some tricked-out models you have to see to believe!

Why to Keep the Extra Bits

Why one physical therapist who works on canines is against removing front dewclaws and cropping tails.

Trust Your Feelings

How your intuition can sometimes tell you something about your dog that even your vet or trainer couldn't figure out.

Update on Digestive Enzymes

More people than ever are feeding digestive enzymes to their dogs. We have new cautions and recommendations.