

Your complete guide to natural dog care and training

# Whole Dog Journal™



PHOTO BY KATHRYN SOCIE-DUNNING



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# WholeDogJournal™

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Minimum order 1,000

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WHOLE DOG JOURNAL DOES NOT  
ACCEPT COMMERCIAL ADVERTISING

**B** *Whole Dog Journal* (ISSN #1097-5322) is published monthly by Belvoir Media Group, LLC, 535 Connecticut Avenue, Norwalk, CT 06854. Robert Englander, Chairman and CEO; Timothy H. Cole, Executive Vice President, Editorial Director; Philip L. Penny, Chief Operating Officer; Greg King, Executive Vice President, Marketing Director; Ron Goldberg, Chief Financial Officer; Tom Canfield, Vice President, Circulation. Periodicals postage paid at Norwalk, CT and at additional mailing offices. Copyright ©2019, Belvoir Media Group, LLC. All rights reserved. Reproduction in whole or in part is strictly prohibited. Printed in U.S.A. Revenue Canada GST Account #128044658. Canada Publishing Agreement Number #40016479.

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Subscriptions: \$39 annually (12 issues).

Bulk rate subscriptions for organizations and educational institutions available upon request.

Postmaster: Please send address changes to

*Whole Dog Journal*,

PO Box 8535, Big Sandy, TX 75755-8535

In Canada, send address changes to

*Whole Dog Journal*,

PO Box 39, Norwich, ON, N0J 1P0



## Crate Reasoning

*If for no other reason, teach your dog to be comfortable in a crate for emergencies.*

We have run many, many articles about crate training in the past 21 years of publishing WDJ. Though I'm sure at least one of those articles *mentioned* that an emergency evacuation is one very good reason to make sure your dog is comfortable in a crate, I'm not sure we ever gave it more space than a single sentence in a long article about crating.

Recent events, however, have prompted me to spend this entire editorial talking about this very compelling reason to help your dog learn how to happily spend time in a crate.

Dogs who quickly and willingly get into a crate save critical minutes in an extreme emergency evacuation. In some cases during the evacuation from the tragic Camp Fire, which started on November 8 near my town and burned for weeks, killing at least 88 people and countless animals, minutes made the difference between survival and death.

Also, animals who were securely contained in crates were easily moved from vehicle to vehicle, or carried by rescuers to safety. Many pets who were or got loose during the firestorm perished as their owners fled for their own lives.

For the past few weeks, I've been writing blog posts about the massive animal rescue efforts being made by volunteers in my community (you can read those posts at [wholedogjournal.com/blog](http://wholedogjournal.com/blog)). I have been volunteering in the shelters that have been housing animals who were safely evacuated by their owners and left at the shelters (because the owners couldn't keep their pets with them for any number of reasons) as well as the animals that have been rescued from the fire zone by firefighters, police, utility workers, and animal rescue teams. *All* of the animals being held at the emergency shelters – more than 2,000 dogs, cats, birds, and other pets at the height of the event – are being held in crates: wire crates for the most part and a few in the plastic airline-style crates. As I write this, many of those animals have been living in those crates for more than *three weeks*. Of course, the cat cages are cleaned daily and the dogs are taken outside to potty, but sadly, given the sheer number of dogs that volunteers need to walk, the time that each dog spends outside of the crate is very short.

This is far from an ideal situation, but the dogs who obviously had experience in crates were far less traumatized by their time in the crowded shelters than the dogs who freaked out every time they had to go back into a crate after a potty walk. This broke the heart of every volunteer who was there to help care for the dogs, including me. I'll never forget the elderly Boxer-mix who spent weeks moaning and pressing her head to the front of her crate. If only she felt that her crate was a safe place, not a hellish punishment.



NK

PAW PRODUCT REVIEW PAW

# GEAR of THE YEAR

**Training and dog-care equipment that, once discovered, we can't live without!**

The whole world is aware that we love to buy stuff for our pets; more than \$70 billion was spent by U.S. owners on their pets last year. But we have to say that a lot of that spending was a waste! There are *tons* of cutesy, low-quality products out there that fail to deliver any real benefit to either dogs or their handlers. That's where we can help, with five pages of top-quality stuff that you and your dog will truly enjoy.

## BRAHMA LEAD XS \$20 - \$67

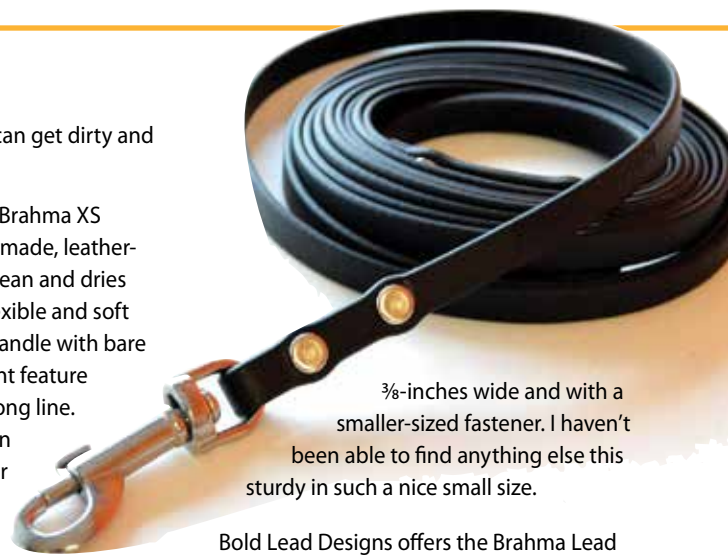
Benni (seen in the snow below) is my first small-sized dog in decades. I like to do the same activities with him that I did with my big dogs. But I discovered it can be hard to find quality products for active little dogs. Most small-dog items lean toward cute and not necessarily useful. This is especially true for leashes.

Because we walk in the woods year-round, we need a long leash that can withstand being dragged through

creeks, mud, and snow. Nylon isn't the best choice for these types of adventures, and

while leather is tough, it can get dirty and stiff and is hard to dry.

Enter Bold Lead Designs' Brahma XS leash. It's made of a man-made, leather-like material that wipes clean and dries immediately. It's super flexible and soft enough to comfortably handle with bare hands. This is an important feature when you're handling a long line. Nothing stings like a nylon leash sliding through your hands! The Brahma also has sturdy hardware (your choice of stainless steel or solid brass) – not the cheap stuff that falls apart in cold temperatures – secured with rivets.



$\frac{3}{8}$ -inches wide and with a smaller-sized fastener. I haven't been able to find anything else this sturdy in such a nice small size.

Bold Lead Designs offers the Brahma Lead in nine standard lengths (from four to 50 feet) and with four different types of "end": a regular loop handle, no handle (straight end), a handle loop with a loose ring, and a fixed O-ring. I have two of these leashes – a 12-ft and a 30-ft length. They're easy to coil up and won't kink.

I'll admit they are pricey, but after more than a year of daily use, they still look and feel brand new. I'll never go back to nylon for long lines! – Nancy Tucker

### GO TO ↓

**Bold Lead Designs**  
Aurora, CO  
(303) 856-3012  
[boldleaddesigns.com](http://boldleaddesigns.com)

But the main reason this brand is my favorite is because all of this comes in a regular ( $\frac{1}{2}$ -inch), wide ( $\frac{3}{4}$ -inch), and a small-dog package:



## STELLA & CHEWY'S MEAL MIXERS 16 OZ. \$39

These are not new. But I simply can't be without them, whether I'm training my own dogs, meeting and assessing shelter dogs as a volunteer, or feeding a sick foster dog or puppy back to health. And I've yet to meet a dog who will turn up his nose at this puffed-up, crumbly treat.

Meal Mixers are grape-sized nuggets of raw, freeze-dried muscle and organ meat, raw ground bone, and organic vegetables. They can be fed as a complete



and balanced diet (suitable for dogs of all life stages), a highly palatable food "topper," or a motivating and rewarding treat. I rehydrate and feed them as my secret remedy for transforming sick, inappetent dogs into healthy, hungry, happy ones. – Nancy Kerns

### GO TO ↓

**Stella & Chewy's**  
Oak Creek, WI  
(888) 477-8977  
[stellaandchewys.com](http://stellaandchewys.com)



## HURTTA ACTIVE HARNESS \$40



### GO TO ↓

Hurtta North America  
West Palm Beach, FL  
(561) 227-4092  
hurtta247.com

I hate to make my review of this harness all about the handle, because overall, it's designed beautifully, padded for the dog's comfort, easy to adjust for a perfect fit, and durable. It has a nice, big ring for attaching

a leash at the back of the harness and reflective strips that help your dog be seen at night. My dogs have worn this model daily for a few years and despite this hard use, and though they have been washed in a washing machine several times, they are still in great shape. A similar-looking harness

made by a competitor fell apart under less than half the duress.

But it can't be denied that the handle has been enormously useful to me. It helped when my older dogs started having mobility issues and needed occasional help upon rising, on stairs, and getting in and out of the car. It helped the Border Collie with a bum leg who I adopted, and it helped even more after my veterinarian amputated the problem leg and the exuberant young fetch addict was finding his way as a new "tripod" dog. And it's currently helpful when my young canine athletes lose their footing on a steep hillside or otherwise need a hand – which may be a uniquely mountain dog problem!

But it's not just me: A friend uses the same harness to quickly lift her reactive small dog off the ground and whisk him to safety when they are unexpectedly accosted by an off-leash dog and the feisty terrier-mix takes extraordinary offense. It's quite literally a life-saver! – *Kathryn Socie-Dunning*



## POSTURE PEDIC PET MAT \$35 - \$70

It sounds a little strange, but the best mats I've ever found for padding my dogs' crates come from a company named and known for their pet deodorizing products. I'm not sure how they got into the pet bed business, but I'm glad they did. This is the *only* bed I will use in a crate, because they are both super comfortable for my dogs *and* virtually indestructible.

Now it's true: I have small dogs. But my Papillons go to town scratching on them at times – like, full-force try-to-dig-to-China scratching – and the pads never show a mark. And my sister is still using the one she purchased for her Labrador almost a *decade* ago.

The mat's closed cell memory-foam insert is protected by a tough Cordura

cover. The covers can be washed, and take washing and drying in the dryer well, though it always seems like they've shrunk when it is time to re-insert the foam core – but they haven't! It's just that the cover fits the foam tightly. I roll the foam up a little (in a U-shape), push that into the cover, then flatten it out and zip it up.



Alden Odor makes the pads in standard crate dimensions so they fit just as tightly in crates as in their own covers, so that it's difficult for a dog to pull up the mat and chew on it. The

mats come in nine sizes, from Petite (12" x 17") to Giant (28" x 48").

I just can't say enough about the quality of the memory foam insert; it's very supportive. Sometimes my tired little agility dog *asks* to go in his crate, so he can lie down on that mat. I'd even pay more for such a great product, though I'm happy that I don't have to! – *Cynthia Foley*

### GO TO ↓

Alden Odor Solutions  
Alden, IL  
(866) 364-6367  
dogodor.com

## THE DOGGER \$270

### GO TO ↓

Dog Quality 100 Mile House, BC  
(866) 297-5979  
dogquality.com

When my Norwich Terrier Ella was nearing her 13th birthday, she started slowing down. She could sometimes

do our regular two-mile walk at a trot, but other times she would slow to a walk partway through. I wanted to get a stroller so that when she got tired, I could put her in the stroller and my younger dog and I could continue walking at a good pace. The problem was that every stroller I looked at was made in China and the reviews indicated that they would start falling apart within six months. Most also had hard, plastic wheels that created an uncomfortable ride.

Then I discovered the Dogger from Dog Quality, a Canadian company that makes their own strollers. I wanted this stroller so badly that I waited an extra month while they were out of stock.

When it arrived, I couldn't believe the quality. The large (12") air-filled tires and shock absorbers create a smooth ride, even when I take the stroller onto trails. It rolls easily – I can push it with one finger when there's no dog inside – and maneuvers exceptionally well. It comes with just about everything you need, including a storage basket underneath, rain cover, and a canopy that can be adjusted in multiple ways (parts can even be removed if desired). The only extras I purchased were a drink holder with multiple compartments that I also use for storing leashes and poop bags, and an orthopedic pad for an additional \$10.

At \$270 (including shipping), this stroller costs about \$100 more than the cheap Chinese versions but will last forever. If a part does wear out or get damaged, you can buy just the replacement part instead of having to get a new stroller. The company offers a 15 percent discount to you and anyone you refer who also purchases one.

One day a woman who was driving by pulled over to tell me that she had used the same stroller for *seven years* and it still looked just like new; the only thing she had replaced were wheels, which they make exceptionally easy to do. I've had mine for a year and a half now, and the only maintenance I've had to do is put air in the tires (easily done with a bicycle pump).

Ella enjoys her stroller, which can hold up to 60 pounds and is large enough for two or more small dogs.

The Dogger also folds down easily for transport in a car.

– Mary Straus



## MARTINGALE ALL-IN-ONE \$60

When we put out a call to our friends and contributors, asking them for “gear of the year” product recommendations, the one that made me want to order the minute I saw a product photo was the Martingale All-in-One, which was enthusiastically put forward by Aditi Joshi, a street dog advocate from Mumbai, India (and who was featured in WDJ's August 2018 issue).

Aditi looks out for the health and well being of about 70 dogs in her neighborhood, taking them into her home when they need minor nursing care for injuries or parasites, and taking them to veterinary clinics when they need more advanced care. Her tool of choice when she needs to quickly collar and lead a street dog into a taxi or into her home? The Martingale All-in-One collar/leash combination. She received one as a gift from a friend in the U.S., and uses it daily.

What's so great about it? Well, first, it's a “limited slip” or martingale collar. This means that the collar fits loosely, unless

a dog tries to slip out of the collar or pull away. Then it tightens, but only as much as needed to prevent it from slipping off the dog; it can't tighten enough to choke the dog like regular, full slip leads can if the dog panics and fights the restraint.

Most other limited-slip collars, however, are put on the dog by sliding the loop of the collar over the dog's head. This one has a plastic buckle, which means a handler can slide it over the dog's head or, with dogs who are frightened or wary of being “lassoed” by a loop, the handler can tactfully pet the dog with the unfastened collar and buckle it when she is able.



### GO TO ↓

Four Paw Fun  
Port Orchard, WA  
(360) 876-2426  
fourpawfun.com

I often use leather slip leads as a volunteer at my local shelter, because few of the shelter wards wear collars and slipping a loop over their heads is fast and simple. If any of them panic and dig in their heels, we have to stop and jury-rig a knot so that the leash doesn't tighten so much that they are even more frightened by being choked, but one that is not so tight that they can slip out of the collar and get loose.

In contrast, this collar/leash combination, with its nice, wide, padded collar; the limited slip feature; the handy six-foot leash length; and soft-yet-strong, hand-woven material, is going to be just the dog-walking tool I have wanted for years. Aditi says so!  
– N.K.

## WOOLY SNUFFLE MAT \$40

Although an increasing number of dog lovers are familiar with the concept of snuffle mats, these fantastic dog accessories are still not nearly as widely known and used as they deserve to be. If you've never tried one, you and your dog are in for a treat – literally.

The basic concept of the Snuffle Mat is simple. Take a durable surface that has lots of nooks and crannies, load it with treats (or use it to feed him his regular meals), and let your dog ferret out all the goodies. It's fun, it invites him to use his nose (which most dogs love!), it keeps him busy, and uses up excess canine energy (scent work is surprisingly tiring).

It's also a perfect solution for the dog who inhales his food – he has to slow down his intake as he searches for food bits. In addition, Snuffle Mats are easily portable, so you can take them with you when you and your canine pal are visiting friends and

family, hanging out at your kids' softball games, or when you need to keep your vocal, high-energy



dog quietly and happily occupied during down times at training class.

There are numerous snuffle mat options, from simple make-it-yourself varieties to our favorite, the Paw5 Woolly Snuffle Mat. The Woolly is durable and washable, and its unique rounded fingers facilitate easy treat stashing. [Editor's note: My pit-mix Woody has been eating from the same one

for three years, and it's gotten a tad less "wooly," but still does the trick. I machine-wash and -dry it about every three to four weeks.]

A Google search turns up several other brands, including at least one that has other treat hiding/finding options in addition to the snuffle stuff. Check them out and give one a try. – Pat Miller

### GO TO ↓

Paw5  
Philadelphia, PA  
(215) 383-1654  
paw5.us

## THE PEEKEEPER \$40

My old dog Ella does a lot of peeing these days (she was diagnosed with early-stage kidney disease) and has accidents in the house if I'm not diligent about taking her

out consistently. I ended up buying a doggie diaper for her, but I've only had it on her a couple of times, as I can keep the accidents under control if I make sure to take her out a lot. But what about when I have to be out of the house for longer than Ella can hold it?

A friend recommended the PeeKeeper – which is billed as the "only escape-proof dog diaper" – as the only diaper that stays on well. It has a unisex design, so it would work well to control urine-marking from males as well as incontinence.



The PeeKeeper is highly adjustable and fits well. It is easy to take

on and off once you get the hang of it. Ella doesn't seem to mind wearing it. You add the feminine or incontinence pad of your choice to absorb the urine, which gives you a lot of choices as to size, thickness, and absorbency.

The product is currently made only in sizes that would fit small to medium-sized dogs (no more than 40 pounds). It is made with 100 percent cotton, and can be machine washed and dried.

The company does not take phone orders but is responsive via email. – M.S.

### GO TO ↓

PeeKeeper  
peekeeper.com



## NUDGES HOMESTYLE CHICKEN POT PIE TREATS \$14

You know how you're supposed to keep the "high value" treats on hand for serious training? I like to have cooked chicken or turkey available, but sometimes it's impossible because there's nothing cooked or I ran out or they're still frozen. And it's always a problem for me to have real meat in my pockets (yuck).

Then someone told me about Nudges Homestyle Treats, in the Chicken Pot Pie flavor. My dogs go *nuts* as soon as they smell these treats. They come shaped like a pot pie but are easy to break

apart so you can feed appropriately small pieces. Better yet, I can then shove the rest of the "pie" in my pocket with minimal crumbs.

I first thought the price was a bit much, but then I learned how long these treats last. They are sold in Target and Walmart stores, but unlike most of the treats in those outlets, Nudges have a reasonably healthy ingredients list, and no artificial colors, flavors, or preservatives.

Everyone I have recommended them to has loved them (and their dogs, too!). When I pulled one out at class, one of my agility friends said, "Wow! You brought the good stuff!" – C. F.



### GO TO ↓

Tyson Pet Products  
Springdale, AR  
(877) 303-9247  
nudgesdogtreats.com

## RUFF TOUGH DOG KENNEL \$135 - \$330

When I hit a patch of black ice on the highway and went spinning and crashing into the median (a few times), my dogs were loose in the car and obviously terrified. None of us were injured, thankfully, but it scared me enough to look into crates that are durable enough to stay intact and protect my dogs if I was ever involved in another wreck.



That's when I discovered the Ruff Tough kennels. They are designed to take a serious beating and not skewer the canines inside them. They fit well in my car and are easy to load in and take out, if one wants to use them more than just in the car.

They are made of heavy-duty, high-density polyethylene and crafted with one-piece, molded construction, eliminating weak points and debris-collecting seams. They can be stacked without squishing the crate below, and there are built-in metal inserts that let you secure the kennels together; coupler kits are also sold separately that can join two kennels side-by-side.

They are sold with a one-year manufacturer's warranty and come in six sizes, from small (16" x 22") to extra large (22" x 40"). Ruffland does not sell

the kennels directly, but their website lists local and online retailers.

It may sound odd, but crates made life with multiple dogs heaven. I can't believe I never used them before, thinking a dog would hate me for putting them in one! In fact, my dogs will often go hang out in their crates by choice, which makes me enormously happy. It's a space all their own and I somehow never grasped how important that is for most mammals, myself included – sometimes you just need a break.

Thanks to the crates, I can open up the car when it's warm and they have a safe place to be. I can pull the crates out and set them up in the shade, so I can work one dog while the others are lounging comfortably. I can separate dogs while they chew raw bones quietly and never have to worry over sharp-toothed shenanigans arising. There's more too, but I'll stop there! – K.S.D.

### GO TO ↓

Ruffland Performance  
Kennels  
Tea, SD  
(605) 368-9872  
rufflandkennels.com



# Spending the Golden Years with Dogs

*You might need to make some adjustments, but you can absolutely continue to share your life with dogs as you age.*



*Many of us former owners of large dogs start to appreciate small dogs more in our senior years; being able to lift them up easily and not worry about getting pulled over hold newfound appeal!*

Well, it's happened: I have reached the age where I look forward to Social Security payments arriving in my bank account every month. With that significant milestone comes some new perspectives on life with dogs as a senior citizen. Not the least of these is the sobering realization that I have a finite number of dogs left to share my life with, making each one an even greater treasure.

Just as daunting is the awareness that, if and when my husband and I do add more new canines to our family, we might need to revise our checklist of desirable adoption-dog characteristics. If you,

too, are reaching your golden years or have dog-loving family members who are, you may find the following suggestions useful.

Don't get me wrong! If you're like me, you're still quite agile and active. I do barn chores every day, hike with my dogs, and work 12-hour days. Check out any agility competition and you can be reassured that there are plenty of aging dog-lovers who can still get around quite handily. These tips are not just for doddering centenarians – just some of the things you might want to think about as you contemplate your future with your four-legged family members.

## THE GOOD STUFF

Aging with dogs isn't all accommodations; there are lots of good things about being a senior dog owner:

■ **You will likely be home more.** With retirement comes more time to spend with

your dogs. They will love this! So will you! If you, like me, have lots of active years ahead, you can do more training, more hiking, more playing, more cuddling, and just have more all-around fun together.

■ **You might travel more together.** It's not uncommon for retirees to travel the country in a motor home, touring national parks and monuments, visiting out-of-the-way places, and crossing off bucket-list adventures.

Motor home travel is ideally suited for dogs; your dogs are cozy in their own home away from home and they get to go everywhere with you. You can even visit relatives without imposing your furry companions on them; if they don't have dog-friendly homes yours can hang in their own space, parked just outside. You can even live in it full time and forget about those mortgage payments!

■ **You could possibly qualify for a service dog.** No, not that we want you to be disabled, but if you *are*, you could consider this an opportunity to have a *super* well-trained dog who could go with you virtually anywhere (with just a few very rare, limited exceptions).

Qualified dog training professionals are starting to offer more opportunities for people to train their own service dogs and avoid the high cost of purchasing a well-trained service dog. Of course, your dog has to be appropriate service-dog material – and under no circumstances should you join the sad ranks of those who fraudulently pretend their dogs are service dogs just to gain access for them.

■ **Keeping a canine companion for company is good for you!** An increasing number of retirement villages, assisted-living facilities, and managed-care homes now welcome companion animals, recognizing that this can improve both the mental and physical health of their human residents. Having an animal companion helps ease



loneliness and stress, and animal-care tasks keep residents more active and social. If and when that time comes, you should be able to find a facility that will welcome you *and* your dog.

## THE CAUTIONS

So, what's the down side? Here are some of the not-as-fun things to think about as you approach your golden years with dogs.

■ **Providing proper care for dogs can be costly.** Unless you're one of the minority of Americans who have planned adequately for luxuries in your retirement years (kudos to you if you are!) the expense of caring for a dog can overwhelm a tight budget.

Top-notch pet insurance programs (see "Health Insurance for Dogs," WDJ March 2018) can help offset some of these costs, but it's something to keep in mind as you consider how many (or how many more) animal companions you can reasonably provide for. It would be devastating to have to give up your beloved dog because you can't afford to care for her!

That said, some expenses (such as pet-sitting/walking and doggie day-care) might decrease after retirement and help offset the cost of your dog's medical needs.

■ **Seniors must be sure, more than ever before in their lives, to make good adoption choices.** If you've had Labrador Retrievers all your life, and lose your beloved 15-year-old Festus to old age when you are 70, you might automatically think to get another Lab puppy. After all, you've always had them!

Remember, however, that you were a spry 55 years old when you adopted Festus, and he ran you ragged then, until he grew up and became perfect. It's easy to forget how hard Festus pulled on-leash as a youngster, but you likely remember how much your arthritis hurts on some days; that might not be a good combination.

Again, I empathize. When my husband and I were looking to adopt recently, a dog-trainer friend told

us about one of her clients who was looking to rehome his large, active German Shepherd. We considered it seriously; my husband loves GSDs. But in the end, we adopted a Pomeranian-mix, Sunny – and we are very happy with him!

If you've always been a "big-dog person" it might be time to think smaller. You may have more and more physical limitations – could you still lift an injured big dog into the car if you had to? And if you think an assisted-living facility, or even just a downsized home in a condominium complex, might be in your future, be aware that both often restrict the size of the dogs they will accept.

On the other hand, be aware that *very* tiny dogs (especially tiny dogs who are very zippy and active) can be a tripping hazard for a slower adult, or one with mobility challenges, so keep that in mind as well.

## SENIOR TRAINING AND EQUIPMENT TIPS

Now for more good stuff. Think of all you can teach your dog, with all that

time on your hands! Even if you don't need a service dog, yours can certainly help you around the house – finding, picking up, and bringing you things (see "How to Redeem Your Dog's Retrieve," January 2017), closing doors and drawers (see "Household Help," November 2013), and more.

A good trainer can help you with these and other tasks you'd like your dog to learn. Some trainers even offer classes specifically for older humans, where the pace of the class might be a little slower, and the focus is on helping to meet the training needs of seniors!

■ **In-home session with a professional trainer.** If you need help with training and can't attend a class because getting out of the house is hard, there are many good, positive trainers who will come to your home. Just be sure, as always, to research them carefully to make sure you're getting a bona fide force-free trainer who will help you train your dog without hurting or scaring him. (For more about how to choose a

## Seniors for seniors

As you look to adopt, consider the mature canine residents at your local shelters and rescue groups. When you adopt an adult dog you get to skip all the crazy-puppy-behavior stuff and often (although not always) get a ready-made companion. Plus the older dogs often have a much harder time finding a forever home, which is just *nuts*, because many senior dogs fit into their new families seamlessly.

One of the best adoption choices I ever made was an eight-year-old tri-color Rough Collie, surrendered to my local shelter due to urinary incontinence (which was easily treated). I offered to foster Mandy. She walked into our house and lay down on the floor like she'd always lived there, and never put a paw wrong for the remaining six years of her life with us. In contrast, Sunny, adopted at 11 months, still indulges in adolescent high-energy crazies, chews things randomly, and has an occasional house-training lapse.

For more information about adopting senior dogs, see "New Old Friends," May 2015.



trainer, see “Finding a Dog Trainer,” September 2010 and “Training Titles,” February 2014.)

■ **Front-clip harnesses.** Of course, the right equipment can also make life easier for *our* aging bodies. Front-clip harnesses can ease the pain of leash pulling; even smaller dogs can sometimes pull surprisingly hard! (For recommendations for front-clip harnesses, which can help manage a dog who pulls, see “Harness the Power,” April 2017.)

■ **Waist belt.** Also useful for seniors (or anyone with arthritic hands) is a waist belt that allows you to clip your dog’s leash to the belt. This transfers the dog’s pulling pressure to your hips, which are sometimes sturdier and more stable than your back and shoulders – but only if you are stable enough and your dog isn’t big enough to pull you over.

The High Sierra Walk-A-Belt from White Pine Outfitters is a good choice for a waist belt ([whitepineoutfitters.com](http://whitepineoutfitters.com)).

■ **Bungee leashes.** A leash that has some give or stretch can also reduce the impact on you if your dog runs to the end of the leash. One style that tends to work well for absorbing leash shock is the Dog Outdoors Ezy Dog Zero Shock leash ([thedogoutdoors.com/ezydog-zero-shock-leash.html](http://thedogoutdoors.com/ezydog-zero-shock-leash.html)).

■ **Waist best and bungee leash!** Ruffwear sells a waist belt that comes with a stretchy leash. See our review in the August 2018 issue (“The Trail Runner System”).

■ **Bring the dog up closer to your level.** Here’s another benefit of downsizing to a smaller dog: You can pick her up or invite her to jump up on an elevated surface (such as a sofa, bed, ottoman, or a table provided for this purpose) and do much of your training there! Dog steps and/or ramps can be useful if she can’t jump high enough and you can’t pick her up – or she doesn’t like being picked up.

■ **Deliver treats on a stick!** Finally, something as simple as peanut butter or baby food smeared on a long-handled wooden spoon can ease the delivery of treats to a small dog without having to bend over.

## HELPING SENIOR FAMILY MEMBERS

Perhaps you aren’t in the senior category yet, but you have friends and family members who are. There are countless ways you can make life easier for your aging dog-loving friends and relatives:

- Make a standing offer to help with transport as needed for vet visits, groomer, training classes, etc., or help

them find good mobile vet, training and grooming services that will come to their home.

- Either offer to help exercise their dog, or help them hire (and perhaps pay for) a professional dog walker for at least a few days per week. (See “Finding a Reliable Dog Walker,” March 2014.)
- Do some or all of the training yourself, if appropriate and needed.
- Assist them with setting up a regular order of pet supplies from companies like Chewy.com that will auto-ship repeat deliveries.
- Help them make good choices if and when they are contemplating adding new animal companions to their family.
- When the time comes for assisted living, research facilities that allow animals and help them select an appropriate new living situation.
- Have the difficult discussion about planning for their dog’s future, and help them make those arrangements.

## ENJOYABLE ADJUSTMENTS

I’m working on the aging thing in my own world. I’ve actually signed up with Sunny for our new program here at Peaceable Paws, to help owners train their own service dogs. Not that I’m anywhere needing one yet (I hope!) but just for some fun and interesting things to train.

And I’ve accepted that my lifetime dream of having an Irish Wolfhound will probably never come to pass. Ah well, with our 30-pound Kelpie (Kai) and the 20-pound Pom/Eskimo-mix (Sunny), I’m happy to settle for smaller these days. 🐾

*Author Pat Miller, CBCC-KA, CPDT-KA, is WDJ’s Training Editor. She lives in Fairplay, Maryland, site of her Peaceable Paws training center. Miller’s newest book is Beware of the Dog: Positive Solutions for Aggressive Behavior in Dogs. See page 24*

*Many seniors look forward to retirement specifically so they can spend more time training and having fun with their dogs – and perhaps even take up a sport that requires a lot of practice time, such as agility.*



## Caring For Your Dog After You're Gone

I'm not sure which is worse: contemplating my final years with no dogs in my life, or having my dogs outlive me. At some point you might decide it's not fair to adopt any more, either because you're no longer able to care for one, or your living situation doesn't allow – or simply because you don't want your dog to outlive you. I cannot conceive of not having a dog in my life, so fortunately, there are several different ways you can ensure that your dog is cared for after you are gone. You can guarantee this – and give yourself peace of mind while you're still here – by taking one or more steps to provide for her future:

- Consult with your retirement advisor. Pet trusts, pet protection agreements, and provisions in your will can ensure that your dog will be well taken care of after you are gone. Forty-six states (all except Kentucky, Louisiana, Minnesota, and Mississippi) have enacted pet trust laws. Your retirement advisor will have more information regarding the specifics in your state.

- Provide for your dog in your will. Who do you want to care for your dog? Check with friends and family members before you designate them for your dog's care in a will. They need to be willing and able to care for her the way you want her to be cared for. If you plan to leave her in the care of a non-profit animal protection organization, research the group very well first. Some charge a fee for this service, and again, you want to be sure your dog will receive good care. People have been known to take the money and then neglect or even euthanize the dog.

- Set up a pet trust. A pet trust is managed by a trustee – someone you select to manage the money you will place in the trust – and a caregiver who is the person selected to care for your dog. The trustee disperses resources to the caregiver who will then use them to care for your dog in the manner you've described in the trust. Pet trusts are expensive. You must fund the trust (typically at least tens of thousands of dollars) and pay lawyer's fees that can easily top one thousand dollars. For more information visit [ASPCA.org/PetTrusts](http://ASPCA.org/PetTrusts).

- Write an agreement. In lieu of a will or trust, you identify one or more caregivers and write out an agreement that states that this person will care for your dog upon your death or inability to care for your dog yourself. The biggest advantage of this is

affordability. Make sure you discuss the arrangements with your designated person(s) first. You can obtain a standard form Pet Protection Agreement at [LegalZoom.com](http://LegalZoom.com) for a cost between \$39 and \$79, or you can write the letter yourself, and have it signed (by both you and the caregiver) and notarized. Make sure that your vet and close family members have a copy of this agreement, so they will know who to give your dog to if something happens to you.

- Research continuing pet care programs. Some animal sanctuaries, humane societies, and veterinary schools offer programs to care for your dog if you can't. Programs guarantee food, shelter, and state-of-the-art medical care until your dog can be adopted by another family. You will probably pay a one-time fee for your first dog and an additional fee for each additional pet you place in the program. To find a program near you, do an online search for "continuing pet care," or ask for a referral from your veterinarian or local humane society. A big caveat here – your dog may end up spending the rest of her life in a kennel in a shelter if she doesn't get adopted. Think carefully about this one.

- Leave readily available information about your dog. Carry a wallet card that will tell someone that you have animal companions and who to contact to see that they are cared for. In the case of emergency or sudden illness, make sure family members know where to find the basics:

- ✓ Contact information for your veterinarian.
- ✓ Any special medications or medical issues.
- ✓ Food that your dog eats.
- ✓ Favorite toys and sleeping places.



*Many of us want a dog with us to the very end. It's only fair, then, if we make arrangements for our dog to enjoy the rest of his life in a comfortable setting after our passing.*





HEALTH

# Steroids: Pros & Cons

*Owners love these effective drugs for the visible speed of their action – but they should be used with care, as their powerful effects can cause harm, too.*



*Corticosteroids come in many forms and can be delivered in many ways, from otic (for use in ears), ophthalmic (for use in eyes), injectable, and as an oral medication.*

Steroids are perhaps one of the most ubiquitous medications in the veterinary world. They can be used for a host of problems ranging from inflammation and allergies to autoimmune disease. While they are incredibly useful and diverse medications, steroids are not without significant side effects. It is important to know *why* they are used and how they can *best* be used. It is also critical to realize the possible negative effects and interactions that can occur. Steroids are not benign.

Corticosteroids, as they are more correctly called, includes a varied group of medications. Some of the most commonly used in veterinary medicine are prednisone, Temaril-P, Neopredel (topical), dexamethasone, dexamethasone sodium phosphate (“Dex-SP”), methylprednisolone (Depo Medrol), and triamcinolone (Vetalog).

They come in many preparations including oral, injectable, ophthalmic (for use in the eye), otic (ear), and topical sprays and powders.

Steroids exert their activity in the body in

many different ways. They affect every system, which is why it is important to make sure your veterinarian is aware of any medications that you give your dog, including over-the-counter supplements or pain relievers.

The major modes of their activity are:

■ **Anti-itch.** One of the most general uses of steroids is in fighting “the itch” (pruritus) caused by allergies. Allergies are common in dogs, especially breeds like Boxers, Labradors, Maltese, West Highland White Terriers,

Bulldogs, and pit bulls. These allergies can be food- and flea-related, or caused by seasonal allergens – a condition called atopy.

The mechanism by which steroids control itching is complicated, but it includes decreasing the number of allergen-fighting cells (mast cells) in circulation and suppressing release of histamine. Histamine is one of the substances that leads to the formation of itchy hives and wheals.

For allergies, only short-term doses of steroids are recommended. Itching should be controlled while the inciting cause is identified and secondary infections treated, and then the steroids should be tapered off slowly. Newer drugs such as Apoquel (oral) and Cytopoint (injection) are slowly supplanting the regular use of steroids for itching.

The most commonly used oral steroids for allergies are prednisone and Temaril-P. Some veterinarians use longer-acting injections such as Vetalog, as well. Long-acting steroid injections can cause more pronounced side effects than their oral counterparts. Their use is becoming less common as other

methods of itch control and more allergy management options become available.

Topical steroids for both the skin and ears have extensive uses and may prove to be a better option than oral medications, as they cause fewer side effects. Topical use can decrease inflammation and itching. This is important within the ear canal, as less inflammation allows ear medications to penetrate deeper. It also damps down itching, so dogs are not continuously self-traumatizing.

■ **Anti-inflammatory.** In conditions such as inflammatory bowel disease (IBD), steroid-responsive meningitis, and intervertebral disc disease, inflammatory cells dominate, causing redness, swelling, and pain. Steroids decrease inflammation by lowering white blood cell release from the bone marrow, among several other pathways. This effect is helpful for addressing IBD and steroid-responsive meningitis. Doctors find steroids useful for treating intervertebral disc disease in humans, and anecdotally, some veterinarians report success with steroids for the same condition in their canine patients, but the scientific literature isn't really clear either way.



*This dog has an autoimmune disease, pemphigus foliaceus. After two weeks of treatment with steroids (and other drugs), he is not yet cured but there has been a dramatic improvement.*

The anti-inflammatory dose of steroids is generally fairly low, but side effects are still noted. Prednisone is used most often for this problem.

■ **Immunosuppression.**

Autoimmune (AI) disease, a general term describing a variety of ways that the body attacks itself, is common in dogs. The triggers for AI disease are poorly understood. Some antibiotics like cephalosporins have been implicated, as well as vaccines. Cancer also can induce autoimmune processes. In most cases, an underlying cause is never identified.

The list of autoimmune diseases are too numerous for this article, but they can affect all of the organ systems in the body, including the skin, brain, blood cells, joints, and other internal organs. Some of the more commonly seen disorders in veterinary medicine are immune-mediated hemolytic anemia (IMHA), immune-mediated thrombocytopenia (ITP), brain and spinal cord diseases such as meningitis, and skin diseases like pemphigus foliaceus and lupoid onychodystrophy.

ITP is an example of a well-known and frequently seen autoimmune disease, in which the body turns its defenses on its own platelets. Platelets are important in the first step of clotting. As the body attacks and destroys them, the platelet numbers



**What you should know**

• *There are a few health conditions for which the long-term use of a steroid may be indicated, such as certain autoimmune conditions and Addison's disease. When used long-term, the dosage should be maintained at the lowest effective level.*

drop rapidly. Bruises become visible on the skin and gums.

Steroids treat this and other immune diseases by suppressing the body's immune system, its natural defense against infection and illness. In these cases, steroids are started at very high levels (as much as 2 to 4 mg/kg body per day).

As the symptoms improve, the steroids are slowly tapered to the lowest dose possible. This is to keep the autoimmune disease in check while avoiding the worst side effects of steroids. Most dogs with an autoimmune disease will remain on steroids or other immunosuppressive medication for life.

■ **Steroid insufficiency.** Another common condition in dogs is Addison's disease. The body of a dog with Addison's does not produce enough steroids and/or mineralocorticoids (responsible for water and electrolyte balance within the body).

Cortisol and mineralocorticoids are essential for life, and when a dog's body is not producing them, serious illness results. The general symptoms of Addison's are waxing and waning GI signs: weight loss, vomiting, diarrhea, and picky appetite. Addison's is often called the "great pretender" because it can look like many other diseases and can be difficult to diagnose.

In these cases, steroids are indicated to replace those that the body is not making, as well as supplementation with a medication called Percorten or Florinef to replace the other corticoids. A few rare dogs with Addison's can be maintained on Percorten alone; however, in times of stress or illness, they would require prednisone as well.

*One of the best-known adverse side effects of long-term use of steroids is the development of iatrogenic Cushing's disease. This is characterized by weight gain, hair loss, panting, restlessness, frequent skin and urinary tract infections, and dramatic increases in urination and drinking. Discontinuation of the steroids will reverse this.*



Some dogs are affected by atypical Addison's disease, in which only the cortisol levels are low. These patients can be even more difficult to diagnose, as the characteristic electrolyte changes on bloodwork are absent. Once diagnosed, these dogs must remain on a steroid for the rest of their lives. In this case, the steroids are usually administered on a twice daily to daily basis. The most commonly used steroid for this is prednisone, an inexpensive tablet.

■ **Lymphoma/cancer.** Several cancers respond to steroids by shrinking. Lymphoma is a frequent cancer of dogs. The earliest symptoms are usually general malaise and enlarged peripheral lymph nodes (found underneath the jaw, in front of the shoulder blade, in the groin area, and behind the knee).

Lymphoma is highly sensitive to chemotherapy and carries a good prognosis if treated aggressively. Many owners opt for palliative care however, for a variety of reasons, including cost and concern for quality of life.

Prednisone is an excellent palliative agent for lymphoma and can often keep it in remission for weeks to months. However, it is important to know that prednisone will interfere with chemotherapy. If your dog has been diagnosed with lymphoma, and you are considering chemotherapy, prednisone should not be started until speaking with an oncologist.

Many other cancers are often

treated with oral steroids, as well. These are usually used adjunct to chemotherapy and/or radiation. Doses are higher than with anti-inflammation and anti-pruritus, usually in the range of 2 mg/kg of body weight per day or higher.

### WHEN SHOULD STEROIDS NOT BE USED?

There are many cases where steroids are not an appropriate treatment. For some of the following examples, steroids remain controversial. Some veterinarians continue to use them based on years of experience (anecdotal), while others have

discontinued use based on the same reasoning. Scientific data is somewhat conflicting and lacking on the subject, but these are the most current thoughts on steroid in certain situations:

■ **Shock.** Steroids were once a common and well-accepted treatment in cases of shock. For example, if a dog was hit by a car, one of the first ministrations would be a large dose of steroids given by injection.

Over the years, it has become apparent in human medicine that steroids during shock are

not helpful and are likely detrimental. They can downregulate important enzymes throughout the body, leading to worsening of low oxygen conditions (hypoxia, present during shock). This can lead to kidney and gastrointestinal damage as evidenced by bloody diarrhea and vomiting.

Steroids should no longer be used to treat shock. Instead, treatment should focus on oxygen therapy, pain relief, control of hemorrhage, and intravenous (IV) fluids.

■ **In combination with non-steroidal anti-inflammatory drugs (NSAIDs).** NSAIDs are very common

### What you can do

- *If your veterinarian recommends or prescribes a corticosteroid, make sure you have informed her about every drug and supplement you give your dog, to ensure there are no adverse drug reactions caused by incompatible medications.*
- *Be sure you understand the dosing amounts and schedule, particularly when it comes to "weaning" your dog off of the medication.*
- *Don't ask or allow your veterinarian to prescribe steroids for the long-term management of allergies; this use in particular can cause the development of other, even more serious health problems. Allergies are better addressed by applying oneself to discovering the offending allergen(s) and managing your dog's exposure, and using steroids only to control an acute flare-up of a "hot spot," for example, and just on a short-term basis.*



in veterinary medicine and have a similar action in certain parts of the body. NSAIDs include meloxicam, carprofen, deracoxib, firocoxib, and several others. Using them with steroids can compound negative side effects and lead to gastrointestinal ulcers, hemorrhage, kidney damage, and in extreme cases, death. They should almost never be administered in tandem.

The one exception is in the case of immune-mediated hemolytic anemia (IMHA). Patients with IMHA are prone to blood clot formation, so while steroids are used for immunosuppression, very low dose aspirin also may be used to prevent clot formation.

If a switch is required between these drugs, a wash-out period of at least two to three days is recommended to avoid these interactions. It is also critical to tell your veterinarian if you are administering any medications to your dog, especially over-the-counter pain relievers like canine aspirin (or human aspirin).

■ **Snakebites.** Even today, steroids are still used to treat snakebite victims. It has become apparent through research that steroids do not provide much (if any) benefit for these patients. The cases in which they might be useful are upper airway swelling as occurs with a bite to the mouth or neck or during an allergic reaction to antivenin. Otherwise, steroids are not indicated.

## SIDE EFFECTS OF STEROIDS

There are many well-known side effects of steroids. In the short term, dogs will drink and urinate excessively. A previously house-trained dog may start having accidents in the house. Dogs also will eat more. Often, heavy panting occurs. Restlessness and pacing are also side effects.

Occasionally, dogs will behave in an agitated or aggressive way (the well-known “roid rage” syndrome noted in humans). If steroids are used long term, symptoms become more pronounced, and your dog

may develop iatrogenic (caused by medication) Cushing’s disease.

Cushing’s disease occurs naturally when the adrenal glands overproduce cortisol (it is the opposite of Addison’s disease), the body’s natural steroid. This can occur due to either a brain tumor called a pituitary adenoma or an adrenal tumor.

The symptoms of Cushing’s are weight gain, hair loss, panting, restlessness, frequent skin and urinary tract infections, and dramatic increases in urination and drinking. If oral or injectable steroids are administered frequently over extended periods of time, this syndrome can occur. Discontinuation of the steroids will reverse this.

Steroids should never be stopped abruptly. When steroids are taken orally or by injection, the body’s natural steroid levels drop. If the exogenous (originating from outside the body) source is stopped, the body needs time to recover and resume making its own (endogenous) cortisol. In this gap, patients can develop a steroid insufficiency and exhibit signs of Addison’s disease: vomiting, diarrhea, weight loss, and anorexia. Because of this, steroids should always be tapered slowly. Most courses will go from twice a day, to once a day, to every other day.

## BOTTOM LINE

Steroids are very useful and important medications. But, as with any medication, using them correctly is critical to success. They have many side effects. Make sure to work closely with your veterinarian to ensure that steroids are the best option, as many medications are now available to take their place. 🐾

*Catherine Ashe, DVM, graduated the University of Tennessee College of Veterinary Medicine in 2008. After a small-animal intensive emergency internship, she practiced ER medicine for nine years. She is now working as a relief veterinarian in Asheville, North Carolina, and loves the GP side of medicine. In her spare time, she spends time with her family and reads voraciously.*

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CONSUMER  
ALERT

# Genetic Health Screening

*A booming new industry provides direct-to-consumer genetic tests that purport to detect the potential for your dog's inherited health disorders. But are they reliable?*

The American Pet Products Association released a report in late March revealing that spending on veterinary care by U.S. pet owners increased 7.0 percent between 2016 and 2017, from \$15.95 billion to \$17.07 billion. The association estimates a 6.9 percent increase in spending on veterinary care in 2018, exceeding growth estimates among all spending categories assessed.

Genetic health testing is one of the newest additions to this booming industry.

While most owners are familiar with genetic tests to determine the ancestry of mixed-breed dogs, many are not aware that a

number of companies have expanded into testing for genetic health disorders. The companies typically advertise these tests as having the potential to both save money and heartache by giving owners an opportunity to prevent or detect diseases in their earliest stages, in order to add health-filled years to our beloved canine companions' lives. But is this rosy promise even possible?

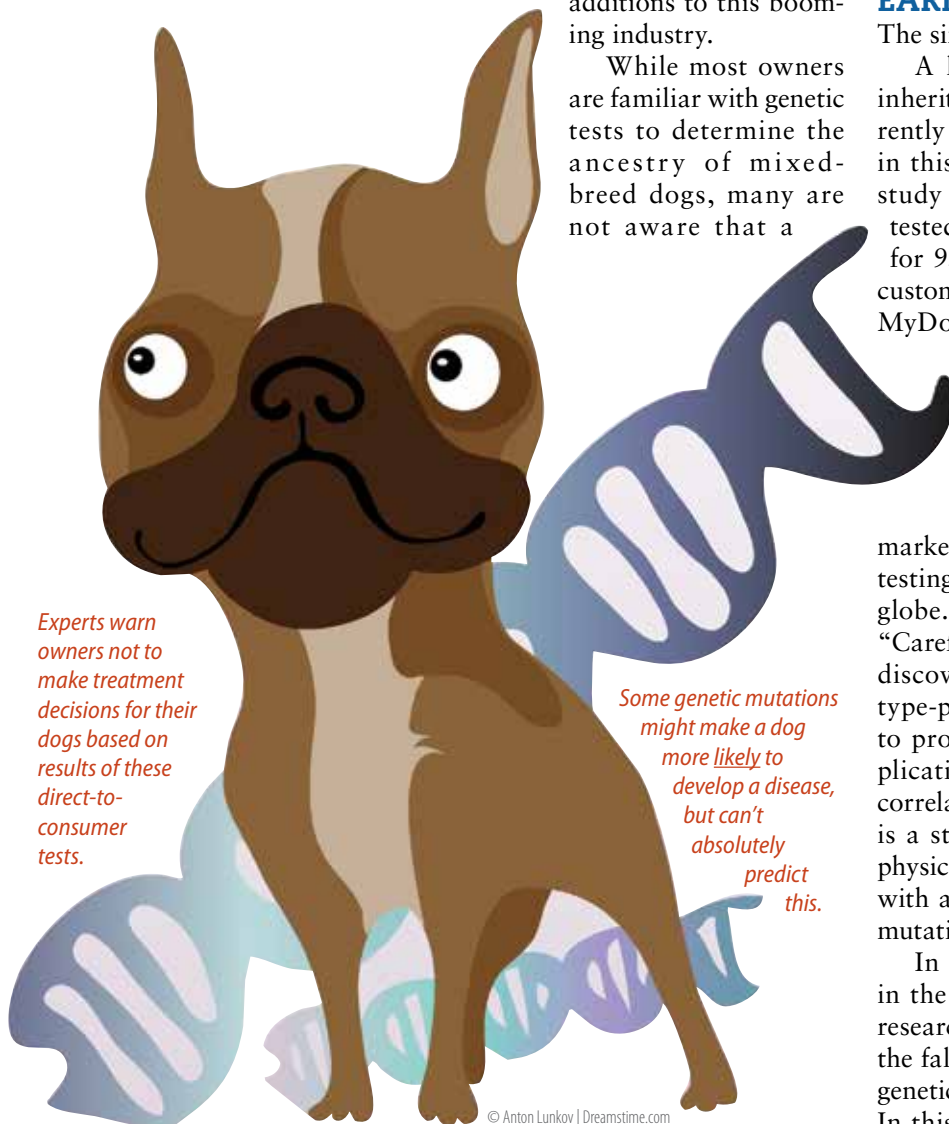
## EARLY DAYS

The simplest answer is yes, but...

A large and ever-growing number of inherited genetic disease mutations are currently known to exist in dogs and research in this emerging field continues. In a 2016 study published in PLOS One, researchers tested 7,000 dogs representing 230 breeds for 93 disease-associated variants, using a custom-designed genotyping microarray (the MyDogDNA panel test). This research revealed 15 previously undocumented risk variants in 34 breeds, bolstering the case for genetic health screening as an increasingly powerful preventative veterinary medical tool.

It is no surprise, then, that laboratories marketing direct-to-consumer genetic health testing products are popping up around the globe. However, the study's authors noted, "Careful follow-up studies of any unexpected discoveries are essential to establish genotype-phenotype correlations, as is readiness to provide genetic counseling on their implications for the dog and its breed." (The correlation between genotype and phenotype is a statistical relationship that predicts a physical trait or abnormality in an individual with a given mutation or a group of similar mutations.)

In a cautionary commentary published in the journal *Nature* in July 2018, several researchers raised important issues regarding the false hope companies are selling through genetic testing for dogs at this point in time. In this paper, it's pointed out that no regu-



*Experts warn owners not to make treatment decisions for their dogs based on results of these direct-to-consumer tests.*

*Some genetic mutations might make a dog more likely to develop a disease, but can't absolutely predict this.*

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lating body oversees this testing. In the United States, for example, the FDA plays no role in overseeing how these tests are performed, how results are validated, or the best protocol for conveying this complicated data to consumers.

This lack of oversight proved problematic for 23andMe, a human version of genetic health testing. In 2013, the FDA ordered the company to stop selling these tests, citing concerns that people might take drastic medical measures on the basis of their results or seek unnecessary treatment based on false positives. Regulators demanded evidence of the tests' accuracy and that consumers were well-informed as to the meaning and usefulness of their results.

Alberto Gutierrez, director of the FDA's Center for Devices and Radiological Health, said in a letter to the company, "FDA is concerned about the public health consequences of inaccurate results" from the Personal Genome Service (PGS), which is what 23andMe calls its test. Some of the intended uses of PGS were "particularly concerning," the letter continued, because of the potential health risks that could come from a false positive or false negative. "Assessments for drug responses carry the risks that patients relying on such tests may begin to self-manage their treatments through dose changes or even abandon certain therapies depending on the outcome of the assessment," Gutierrez wrote.

While 23andMe was cleared to resume selling their product, albeit under increased regulatory scrutiny, how successful these measures have been in accurately setting consumer expectations still remains to be seen.

Ironically, the website of Embark, one of the most popular companies offering direct-to-consumer genetic health testing for dogs, includes an enthusiastic customer quote exclaiming: "It's the 23andMe for dogs!"

Yes it is. Promises, pitfalls, and all.

## EXPERTS ADVISE OWNERS USE CAUTION

Just as the FDA recognized with its human counterpart, "pet genetics

needs to be reined in," according to Jessica Heckman, a veterinarian and postdoctoral associate at the Broad Institute of MIT and Harvard, where she studies the genetics of dog behavior. She recently wrote a piece published in *Undark Magazine*, saying: "If not [reined in], some companies will continue to profit by selling potentially misleading and often inaccurate information; pets and their owners will suffer needlessly; and opportunities to improve pet health and even to leverage studies in dogs and cats to benefit human health might be lost."

Discussing genetic health testing further with Dr. Heckman, she encourages consumers to explore what they want the information for and what they plan to do with it prior to investing in it. She explains: "I believe there is a bright future for genetic health testing of dogs, but we just aren't there yet. Before we can trust these tests, the industry will have to start working harder to validate them, and until that happens, I don't recommend that important decisions be based on them."

Screening dogs for genetic disorders has strong potential to guide diagnosis, treatment, and breeding, but since the science and technology are currently in its nascence, too many questions remain. For starters, veterinary healthcare practitioners are left to decide when it's valuable to screen a dog for all known genetic disorders or restrict screening to disorders recognized for a dog's particular breed. Then, there are myriad problems that arise in the interpretation of these data.

This dilemma gets increasingly muddled when a veterinarian lacks the necessary training in genetics to make the best decision for/with a patient/client and even more so when non-scientist consumers, who are being marketed to directly by companies, are making these choices based on limited or no knowledge whatsoever. Too often, consumers are

## What you should know

- *Genetic health testing is an emerging field. The tests that have been around the longest, such as the multi-drug resistance genetic test (MDR1), tend to be the most reliable.*
- *If your dog's results contain a mutation that suggest the potential for development of a specific disease, contact the company and ask for additional interpretation and guidance about the relative risks indicated, and discuss this with your veterinarian.*

left to interpret complicated genetic health data, again based on emerging science, on their own. While many of the direct-to-consumer genetics health tests services provide some form of guidance on the results for customers, it is not the kind of in-depth genetic counseling even a highly educated dog owner requires to be able to effectively integrate these data into the veterinary care of their four-legged friend.

As just one (albeit extreme) example of what can go wrong when less-than-certain results are given to an owner with little or no guidance or counseling, the authors of the *Nature* article shared the story of a 13-year-old Pug who started having trouble walking and controlling her bladder and bowels.

Then a DNA test revealed (among other things) a mutation that *can* – but does not always – indicate that its carrier will develop degenerative myelopathy (DM). The owners made the decision to euthanize the dog – perhaps convinced the Pug would die slowly and painfully. Sadly, the mutation for DM is far from perfectly predictive; the mutation does not guarantee a dog has the disease. It's entirely possible that the Pug's condition could have been successfully treated.

## MUD-FREE ZONES?

The least muddy areas, it would seem, are genetic screens for disorders recognized for a dog's particular breed or predominant breed if the dog is a



mix. Take, for example, the Multi-Drug Resistance Gene (MDR), which codes for a protein that is responsible for protecting the brain by transporting potentially harmful chemicals away. It is currently known to affect 10 herding breeds, two sighthound breeds, and herding-breed mixed dogs.

In these dogs, an MDR1 mutation causes sensitivity to Ivermectin, Imodium, and a growing list of commonly administered drugs. Dogs that

are heterozygous, or have one copy of the gene mutation, can still have a negative reaction to these drugs, but typically at higher doses. Dogs that are homozygous, carrying two copies of the mutation, experience buildup of toxins that results in neurological symptoms, such as seizures, ataxia, or even death. (See “Dogs with a Drug Problem,” WDJ December 2012.)

Since this mutation is most concentrated in Collies, with as many as 70 percent affected, when I added

a smooth-coated Collie to my crew a few years back, I became keenly aware of this issue and had him tested through Washington State University’s Veterinary Clinical Pharmacology Laboratory.

Turns out he’s heterozygous at MDR1 and as a result, I stay up to date on the list of drugs to steer clear of and remind my vet of his status whenever we discuss treatment options for him to be sure both of us are keeping a lookout for his best health.

## Popular direct-to-consumer genetic health testing services

### EMBARK

Embark uses a proprietary SNP-chip (single nucleotide polymorphism) that evaluates 200,000 locations across your dog’s genome, allowing for comprehensive results on disease risks and traits, testing for over 160 mutations associated with genetic diseases from DNA acquired through a cheek swab. The company works directly with consumers and in partnership with veterinarians.

**The Good:** Each mutation is queried two to eight times and examined by a team of geneticists and veterinarians to ensure accuracy. As a research partner of the Cornell University College of Veterinary Medicine, Embark is committed to the continued development of the emerging science of genetic health information and shares updated information with consumers as it becomes available.

**The Questionable:** The mapping of genetic variants to the risk of disease is incredibly challenging and currently based on a nascent science with a lot of noise in the interpretation of the data. As a result, when a dog tests positive for a health risk mutation, owners need to receive these data with skepticism and discuss these results with their veterinarian. While Embark communicates this, it takes a lot of digging to find. The upfront marketing by all of the companies providing this service, lends the impression that their results are much stronger than they actually are.

### WISDOM PANEL

The health panel offered through Wisdom looks for 3,000 genetic markers, incorporating the MyDogDNA test from Genoscooper Laboratories of Finland. Their mail-in cheek swab tests for breed identification while also screening for the mutations associated with multidrug sensitivity and exercise-induced collapse.

Blood tests that provide breed identification and screening for more than 140 mutations and markers associated with various disorders are available through

Banfield Pet Hospital, a Mars Petcare subsidiary, and through veterinarians who offer a test from Royal Canin, another Mars Petcare subsidiary.

**The Good:** The tests for MDR1 are licensed through Washington State University (WSU), which is the only entity licensed to perform stand-alone MDR1 genotyping in the United States. According to WSU: “Unless testing is conducted by Washington State University’s Veterinary Clinical Pharmacology Laboratory or its licensee Wisdom Health, Washington State University cannot control quality and accuracy of results. Consumers may risk receiving inaccurate results.”

This is particularly important because three different mutations have been associated with this deleterious phenotype, but many genetic-testing companies indicate that they may test for only one. “Thus, a dog declared ‘clear’ for a given gene might still harbor other known, clinically relevant mutations in that gene that the company has not tested for,” according to the paper published in *Nature*.

**The Questionable:** If an owner chooses to seek more genetic health information via the blood test route, the testing is guided by a veterinarian at Banfield, a Mars Petcare subsidiary. The blood is then sent to be analyzed by Wisdom, a Mars Petcare subsidiary, and the results interpreted for you by that veterinarian at a hospital owned by Banfield – again, a Mars Petcare subsidiary. This represents a possible conflict of interest.

The authors of the paper in *Nature* highlight the problems that could arise, given the lack of regulation in the industry, saying: “If the test comes back positive, the clinic’s vet might recommend preventive steps, such as specific pet foods (made by the same company), periodic screening tests (performed by the company’s clinical lab), and more-frequent exams (performed at the company’s vet clinics), even though there may be low or no risk of disease in the first place.”

## WHAT'S A CONCERNED OWNER TO DO?

Figuring out where to get good, reliable genetic health information and how to get the most accurate interpretation of the results that is currently available requires a bit of digging, a fair amount of skepticism, and a willingness to ask questions.

While arguably much of the onus is on science and industry to deliver clear and accurate genetic information to the public, as consumers it is our job to be skeptics and demand products of the highest caliber from companies. We need strong data that we can understand, evaluate, and utilize effectively. That may seem like a tall order, but where the health of my dogs is concerned, I refuse to settle for less.

In May 2017, recognizing the increasing numbers of new DNA tests and testing laboratories and the challenge of choosing the best versions of these tests, the International Partnership for Dogs (IPFD) launched an open-access database, the “Harmonization of Genetic Testing for Dogs” ([dogwellnet.com](http://dogwellnet.com)). The goal is to make accessing detailed, breed-specific information on genetic traits, including original research and mutation information, less time-consuming and difficult. The new database:

- Catalogs available genetic tests for hundreds of dog breeds and varieties.
- Helps consumers make informed

## VET PROGRAMS THAT OFFER GENETIC TESTS

Reputable genetics health tests are offered through a variety of veterinary programs, offering in-depth consulting from experts in veterinary genetics. However, the tests offered are breed and disease specific, limiting their usefulness to a subset of dog owners. **Note:** This is not intended to be an exhaustive list, but were the most often referenced by veterinarians consulted about genetics laboratories they trusted and utilized most often.

LABORATORY	WEBSITE	AVAILABLE TESTS
University of California at Davis	<a href="http://vgl.ucdavis.edu/services/dog.php">vgl.ucdavis.edu/services/dog.php</a>	Twenty-two individual tests, plus 28 breed-specific tests and groupings
North Carolina State	<a href="http://cvm.ncsu.edu/genetics/">cvm.ncsu.edu/genetics/</a>	Four breed-specific tests for heart disease and two for neurologic diseases
Washington State University	<a href="http://vcpl.vetmed.wsu.edu/">vcpl.vetmed.wsu.edu/</a>	Multidrug sensitivity only
Orthopedic Foundation for Animals (OFA)	<a href="http://ofa.org">ofa.org</a>	Offers testing for 18 genetic diseases. They also provide a list of all currently available DNA tests by breed, including which laboratories offer each test.

choices when buying DNA tests by describing the expertise, quality-assurance activities, and resources of the providers of genetic tests.

- Describes clinical and genetic information on individual genetic tests and their use.
- Provides information on the original science and research behind genetic tests.
- Includes basic guides for consumers on types of tests as well as testing

information to aid veterinary professionals in advising clients.

The database is overseen by a multiple-stakeholder steering committee with funding for the prototype of this online resource provided by IPFD Founding Partners, the Orthopedic Foundation for Animals, and the American Kennel Club Canine Health Foundation.

The resource is still in an early prototype stage, however, so consumers are left to wait and see how useful it ultimately becomes.

Genetic health information is an incredibly promising emerging field grounded in a science that is rapidly developing. As the authors of the commentary in *Nature* aptly stated: “Done right, the use of genetic testing in companion animals could be a powerful way to better connect people to the possibilities of genetics for treating disease. Done wrong, it could erode trust in science for an increasingly skeptical public.” 🐾

*Kathryn Socie-Dunning lives in Montana with her husband, their newborn baby boy, and three dogs.*

## CITATIONS

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HEALTH

# You Need to Hear This

*Your dog's repeated ear infections should not be ignored, as they can easily lead to permanent hearing loss.*

Given that “itchiness” is the most common reason for veterinary visits, I suppose it shouldn't be surprising that ear infections run a close second. Ear disease is a symptom that something else is going on in your dog's body, such as allergies, so it makes perfect sense that ear infections are a leading cause of veterinary visits.

Otitis – inflammation of the ear – can be a painful condition that always has a root cause. The challenge is to figure out what that is.

## NORMAL VERSUS NOT

The canine ear canal is shaped like a capital letter L, with the opening to the outside located at the top of the vertical section (versus the human ear that's a straight, horizontal shot). Glands and hair line the dog's ear; the glands produce wax, and the hair moves it up and out to clean the ear, naturally. A normal dog ear should not require much home cleaning.

A normal, clean ear should be a healthy pink – and not stink! Signs that something is not right in your dog's ears can include:

- Head shaking.
- Frequent head rubbing on the floor.
- Ear scratching.
- Other dogs licking or smelling your dog's ears.
- An unpleasant odor.
- A red ear canal.
- Ear flaps that look like orange peel.

## WHEN THE HEAT IS ON

An ear infection (otitis externa) begins when a trigger creates heat and inflammation in the ear. The glands that line the ear kick into overdrive and produce excess wax. Yeast and bacteria, normally present at low levels in your dog's ear, thrive in that type of environment and grow rapidly out of control. The ear then becomes swollen; if left untended, the ear canal itself can become completely closed and no longer visible.

## THE THREE P'S

Ear disease is merely a symptom that your dog's body is dealing with another problem; there is always a reason why an ear infection develops! The challenge is to ferret out what, exactly, is the underlying cause.

Start by looking at the three P's: Primary, Predisposing, and Perpetuating causes.

**1** Primary causes lead directly to inflammation of the ear and include:

- **Environmental allergies or adverse food reactions;** these account for a whopping 97 percent of primary causes!

*You can help your veterinarian determine what factors are contributing to your dog's recurrent ear infections by looking for and sharing behavioral signs of your dog's discomfort.*







*"Orange peel ear flap" – In this case, the dog also displayed excessive waxy, scale consistent with seborrhea.*



*This is a case of severe otitis, complete with lots of pus. (Cotton-tipped swab present for scale; owners should not use these for ear cleaning.)*



*Ear mites (*Otodectes cynotis*) produce dark brown gunk in your dog's ear, but so do yeast infections. Mites are often over-diagnosed, so be sure your vet runs a cytology to confirm the presence of mites. Inappropriate treatment for mites can delay the correct diagnosis.*

- **Parasitic disease** such as mites. Mites create a dark discharge, but so does yeast. If your vet doesn't run a cytology, the conditions can be easily confused. In fact, mites are frequently over-diagnosed, and are less of an issue than we might think.
- **Foreign bodies** such as foxtails or other grass awn.
- **Keratinization disorders.** These are conditions that affect the skin's surface appearance and may involve abnormalities in skin cell production, glandular production, and skin cell breakdown. Seborrhea, for example, produces excess sebum and build-up of skin cells. Though seborrhea is more common in certain breeds (such as Cocker Spaniels), on the whole, primary keratinization defects are uncommon.
- **Autoimmune disease**, such as pemphigus. A biopsy must be performed to diagnose autoimmune disease.
- **Growths or polyps** from glandular tumors such as adenoma and carcinoma.

**2** Predisposing factors in your dog that make her more susceptible to ear disease include:

- **Variations in ear conformation.** Shar-Pei, for example, may have narrowed ear canals.
- **Moisture** in ears, particularly in dogs who frequently swim or dive, often exacerbated by floppy ears. Nonetheless, this, too, is overrated as a reason for ear infections, particularly if the dog is only an occasional swimmer. The design of the dog's ear – just like ours – is meant to be protective and prevent water from causing a problem.
- **Excess hair** in the ear canal.
- **Inappropriate prior treatment.** If your dog has had an ear infection that was not properly treated, improper care can accelerate the disease process by negatively altering the environment in your dog's ears.

**3** Perpetuating factors make us ask why the ear infection keeps coming back. It could be that changes in the lining of the ear canal were never addressed. Your dog's condition may

have started out as primary (disease) but developed into a new problem. Recurrent bacterial and yeast infections and infection of the middle ear can fall into this category.

## THE DIAGNOSIS

If your dog's ears seem to bother her – and particularly if she has developed a second and/or recurrent ear infection – your veterinarian or veterinary dermatologist is the best place to start. Your dog's general practitioner should:

- ✓ Look in both of your dog's ears with an otoscope.
- ✓ Take a sample and run an in-house cytology by simply viewing cells under a microscope, looking for yeast and/or bacteria and inflammatory cells.
- ✓ Design short- and long-term treatment plans. After running the cytology, the veterinarian should clean your dog's ears and prescribe an appropriate course of action based upon what she saw under magnification.

A long-term care plan includes ferreting out the true cause of the infection. If your dog is a frequent swimmer, for example, that might be the sole cause of her issue. But if other symptoms exist, you could well be dealing with an allergy.

Don't just put out fires by treating without understanding what precipitated the problem. Help your veterinarian figure that out by sharing what symptoms and symptomatic behaviors you've observed. Excessive licking? Paw chewing? Hot spots? Anal gland issues? It only happens at certain times of the year? Generally speaking, though far from absolute, think "ears and rears" for food sensitivities, and face, paws, and belly for environmental causes!

## PREVENTIVE CARE

Prevention is a great place to start, particularly if you have a floppy-eared dog or frequent swimmer – though, again, these issues are often compounded by others. Regular ear checks and gentle wiping can help stave off problems.

Tiffany Tapp, DVM, DACVD, a board-certified veterinary dermatologist at Veterinary Healing Arts in East Greenwich, Rhode Island, likes a simple 50/50 water/white vinegar solution to keep ears clean. Vinegar is naturally antibacterial and anti-yeast; it acidifies the ear canal to make it less hospitable for these interlopers to take root.

Dr. Tapp also suggests using regular saline solution from the drug store; she recommends warming the fluid slightly, stuffing your dog's ears with rolled cotton, pouring in the liquid, massaging the ears, then removing the cotton.

Additional specialty products are available for cleaning when necessary; some products make the ear more acidic – which is good for knocking back yeast – while others are better for addressing bacteria. Dr. Tapp's favorite commercial ear cleaners include:

- ✓ Douxo, a gentle, soothing, antibacterial micellar ear cleaner.
- ✓ Acidic, drying, deodorizing products such as Glycozoo Otic,



*Healthy pink: A normal canine ear flap should be a healthy pink. A floppy ear or hair on the flap are not primary causes of infection.*

some dogs have an adverse reaction to lanolin-based products, leading to deafness.

When selecting a product, your veterinarian can consider the type of exudate in your dog's ear; ideally, she should avoid prescribing an oily product if your dog has a lot of oozing liquid or pus in her ear. Oily medications simply sit on this yucky liquid (separating like any oil and water) leading to inadequate treatment.

## WORTH A LOOK

If your dog suffers from recurring ear infections and your general veterinary practitioner is out of answers, it could be helpful to seek out the expertise of a veterinary dermatologist. The dermatologist has access to specialized tools such as video otoscopy that allow her to see deep into the dog's ear canal. She also has many more specialized treatment options at her fingertips.

Even for less serious cases, given their specialization, dermatologists are well equipped to offer a "less is more" approach and may get to the root of the problem more quickly.

Otitis inflammation of the ear may seem like an insignificant issue that will resolve with time, but in most cases, it won't. Ear infections are not only painful – think back to when you were a kid or one of your children had an ear infection – they also can cause hearing loss if left untreated.

If you see outward signs that something is not right in your dog's ears – even if it doesn't seem painful – don't wait! Seek out veterinary treatment as soon as possible. 🐾

EpiOtic Advanced, and Mal-Acetic Ultra, which also help maintain the proper ear pH.

- ✓ A topical therapy called Zn4.5Otic with zinc, amino acids, and boric acid (which is anti-yeast) to help heal the microenvironment of the ear and stave off repeat infection.

Keeping the surface hair of your dog's ear flap clipped short is helpful and preferable to vigorous plucking, particularly in a floppy eared dog. Plucking hair from the ear canal may lead to microtrauma and inflammation in the ear that can predispose your dog's ears to infection.

## WHAT NOT TO DO

Q-tips were not designed to accommodate the L-shaped structure of the canine ear canal, so don't use them to clean your dog's ears. They irritate the ear canal and push debris further in to unreachable areas, making a small problem much worse.

Don't use alcohol, mineral oil, and lanolin-based products in your dog's ears. Alcohol both stings inflamed tissues, which will decrease your dog's willingness to allow you to examine or handle his ears; it also can dry out the sensitive tissues inside the ear. Mineral oil is heavy and traps dirt, bacteria, and fungi in the ear. And

*Lisa Rodier, CNWI, lives in southern Rhode Island with her husband and a Bouvier named Atle. When she's not at the beach, she competes with Atle in scent work trials and teaches K9 Nose Work classes.*

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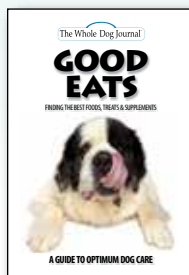
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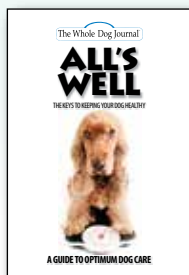
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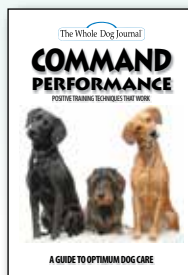
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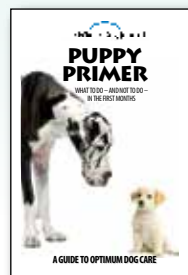
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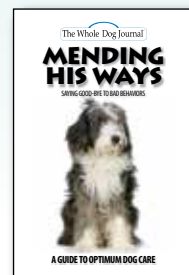
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