

TUFTS CUMMINGS SCHOOL OF VETERINARY MEDICINE

Your Dog



The Newsletter for Caring Dog Owners

*NEW ARTICLES
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GOOD MANNERS HOUSE TRAINING

No matter your canine companion's age, breed or disposition, he needs to learn good household manners. The most important of these is house training. A dog who eliminates indiscriminately will cause headaches for his humans and himself. Luckily, a consistent behavioral program can give your dog perfect elimination etiquette.

- By C.C. Holland

Advice for every stage of your dog's life.

The Key: Watchfulness and Frequent Trips Outdoors

The best advice when house training a puppy: *"You can go with the flow of using the puppy's natural instinct to keep his den area or bedding clean,"* said Nicholas Dodman, BVMS, MRCVS, director of the Behavior Clinic at the Cummings School of Veterinary Medicine at Tufts University.

To begin, keep your puppy in a dry, secure area, such as an exercise pen or kitchen. Several times during the day, take him on-leash to a designated elimination area. Put the puppy down, keep him focused and let him move back and forth. When he eliminates, immediately offer a food treat and lavish praise. If he doesn't eliminate within 10 minutes, take him inside and keep an eye on him. Either confine him or attach his leash to your belt, wait 15 minutes and then, repeat the exercise. "It may take two or three 15-minute blocks," Dr. Dodman said, "but if at first you don't succeed, try, try again."

Stay with the puppy outside to teach him the correct behavior. "So many people just turn them out in the yard and wait for 30 minutes, let them in, and they urinate on the floor," said Dr. Dodman.

In general, puppies can hold their bladders for their age in months plus one; a 2-month-old puppy can go a maximum of three hours without a potty break. This means you'll need to make frequent trips outside during the day and usually at least once overnight. In addition, offer elimination opportunities 20 to 30 minutes after a meal and when the dog transitions from one activity to another, Dr. Dodman said.

When Accidents Occur, Don't Mask the Odor - Remove It

Never punish your dog for an accident, Dr. Dodman said. He can't associate the punishment with the deed, or worse, he'll simply learn not to eliminate in front of you - and that means outdoors as well.

If your dog begins to squat or urinate in the house, make a sudden, loud noise to distract him and interrupt what he's doing, then calmly and happily attach a leash and take him outside, Dr. Dodman said. Encourage him to eliminate there, and if he does, praise him to the heavens and give him a treat.

If you've adopted an older dog, especially one who's been in a shelter, even if he's supposedly house trained it's wise to act as if he isn't and begin at square one. Stress or changes in environment may cause some backsliding. Once he's reliable, a dog door can be a great aid to both owner and pet. "A dog door means the dog can now take charge of his or her own life, which is stress-relieving," Dr. Dodman said. *(continued)*

If a dog does have accidents in the house, you must clean up the mess and - most importantly - eliminate any associated scent. Once an area is soiled, it's marked as an elimination spot and a dog may tend to use it again. "Don't try to mask the odor with another scent," Dr. Dodman cautioned, "because your dog will still smell it. Use a solution that will destroy the compounds that cause those odors." He recommends Zero Odor (www.zeroodorpet.com), an oxidizing agent that removes both scent and stains.

Health Problems and Medicine Can Cause His Incontinence

Incontinence can plague older dogs, but it's usually associated with medical problems rather than age, Dr. Dodman said. While kidney function may decline as a dog gets on in years, that alone usually won't cause accidents. However, a variety of health challenges can cause incontinence or more frequent urination, including cystitis and various metabolic disorders.

Also, Dr. Dodman said, "If you get a dog who is 10 or older and suddenly starts to have accidents, think about canine cognitive dysfunction." House soiling is one of the hallmarks of the disorder, which can also cause disorientation and changes in sleep patterns and behavior. Excellent medications are available that can either eliminate or alleviate the symptoms in about two-thirds of treated dogs, Dr. Dodman said.

In addition, certain medications - such as cortisone and bromide - can cause the dog to drink more, which can also lead to accidents. "Don't immediately blame the dog - think about the circumstances,

Dr. Dodman said. The bottom line: If your older dog begins to soil the house, have your vet check him out. If your dog has a medical condition that's incurable and causes incontinence, diapers designed for dogs can provide a good solution. For more on house training a senior dog, please see the following article.

DON'T PANIC DOG FLU

Elizabeth Rozanski, DVM, a specialist in emergency and critical care at the Cummings School, has this advice for owners worried about canine influenza: "*Don't panic. The flu in people and dogs has high morbidity - many get sick - but it has very, very low mortality.*"

As of this writing, outbreaks of the virus, which began in horses and crossed to racing Greyhounds and other dogs, have been identified in a half dozen states, including Florida, New York and Washington. Few deaths from complications, such as pneumonia, have been reported.

However, owners should limit their dog's exposure the same as they would with any other infectious disease, Dr. Rozanski said. "Avoid high volume boarding kennels and pet store puppies. Very old, very young dogs and immunosuppressed dogs - from chemotherapy, diabetes or prednisone - are at risk. Dog parks should be fine. They tend to cater to dog lovers who take good care of their dogs."

The signs are coughing, sneezing, nasal discharge and loss of appetite. Treatment consists of supportive care. Assessing the public health impact, Dr. Rubin Donis of the Centers for Disease Control and Prevention said in a briefing that horses have had equine influenza virus for more than 40 years. "In all these years, we have never *(continued)*

been able to document a single case of human infection with this virus.”

Said Dr. Rozanski: “The informed owner will recognize this is a minor crisis unlikely, except in rare circumstances, to cause problems.” Updated information appears regularly at <http://www.diaglab.vet.cornell.edu/news.asp>.

10 MINUTES TO BLISS

One day when Maui the Maltese was a pup, she jumped on owner James Jacobson’s lap while he meditated. “It surprised me at first, but I thought I’d try to meditate with her and see if it worked. It was fantastic, but then dogs are natural meditators,” he said. “Since then I’ve taught others to meditate by using the love they have for their dogs as the basis for meditation.”

The practice has helped Maui - now 11 - and Jacobson to refocus, reconnect and relax, he said. And it’s resulted in his slim, elegant book, *How to Meditate With Your Dog* (Maui Media), refreshing for its no nonsense approach and acknowledgment of skepticism.

“Don’t be intimidated by the word “meditation”,” Jacobson said in an interview. *“It needn’t take a lot of time. Just 10 minutes a day is fine.”* In the book, he describes a state he calls *“hound-lounge”* that every owner has seen. Dogs’ breathing slows, eyes droop to half mast. They’re between wakefulness and sound sleep, far ahead of us in achieving bliss, with no need of instruction.

HEARING TEST FOR THE BRAIN

If you suspect you’re having difficulty hearing, the first obvious step is to call your doctor for an exam. You’ll explain the loss you’ve been experiencing, its length and degree. Then you’ll have a hearing test, raising your hand when you hear a tone.

Now suppose you believe your dog has a hearing problem. Although the anatomy of the dog’s ear isn’t exactly identical to a human’s, he can be born with or acquire similar deficits and deafness.

The tricky part is identifying the problem - dogs can’t tell us if one exists. It becomes the owners’ responsibility to pay attention to their dog’s behavior and activity, especially if he’s in puppyhood, a crucial period of development. Observation can help identify hearing impairments. Affected dogs may be immune to sounds when sleeping. They may fail to interact with others and appear confused.

An array of behavioral traits can be easily confused with a hearing deficit, however, so testing is always the wisest course of action. A test in human medicine precisely graphs the brain’s response to sound transmission through the ear without eliciting a conscious yes-or-no response. Called the brain auditory evoked response, the BAER test is more involved than the average hearing test. It’s usually performed under the supervision of a veterinary neurologist.

Work With Puppies

At the Cummings School's Foster Hospital for Small Animals, BAER tests are performed nearly every week in the neurology department, the majority on litters of puppies 6 to 8 weeks of age. Neurology technicians Brynn Harrington and Cassie Lutz, who are among those running the tests, look forward to the puppies' arrival each week. "They always attract a crowd," Harrington said. "Everyone is so interested in what we are doing with the pups. It's the best part of our day."

Barring any abnormal findings, the technicians perform the tests relatively quickly. A litter of eight puppies takes 30 minutes and costs about \$53 each.

The BAER is highly specific in part because a computer that collects signals from a series of electrodes on the patient can interpret this data and plot an accurate graph of auditory function. Since the test doesn't require a conscious response, it can be performed on a sedated or anesthetized pet - some are too excitable to remain still for the procedure. Surprisingly, puppies tend to be more compliant than adult dogs because they're easily distracted. Holding them off the table or rubbing the nose or belly is often enough to keep them occupied during the test.

Rare Sedation

It begins by placing four tiny needle electrodes under the skin - two at the base of each ear, one on the forehead and one on the scruff of the neck. Expandable foam earplugs, connected to a noise transmitter, are then fit into each ear. Despite the elaborate setup, involving many wires and electrodes, most patients tolerate it well and rarely require sedation.

When all components are in position, noise is pumped into the earplugs at a specific frequency and volume in rapid clicks lasting about 30 seconds per ear. Sound is received in the ear canal, passes through the middle and then the inner ear. Deep inside the fluid-filled, snail-shaped cochlea of the inner ear lies a series of small hairs called the Organ of Corti. Side-to-side movement of these hairs in response to sound-induced waves in the fluid opens and closes microscopic electrolyte channels - a process that transmits sound information from the ear to the brain.

After the brain interprets the signals, electrical activity is released in a form that can be received by the electrodes and graphed on the computer screen. Dogs with normal hearing yield graphs with a typical series of waves, while deaf dogs have flatlined graphs.

A small handful of dog breeds is known to carry inherited genetic abnormalities responsible for early degeneration of the hairs in the channel, namely, Dalmatians, Jack Russell Terriers, English Bulldogs, Australian Cattle Dogs, English Setters and English Cocker Spaniels. They suffer deafness as a result.

"The heritability of this genetic disorder is hard to predict - it can skip generations because many dogs can be carriers," said neurologist Dominik Faissler, DVM, at the Cummings School. "Deafness also has a proven correlation to pigment. *(continued)*"

Inheriting a strong version of a gene that inhibits coat color ignites this early cell death cascade in the inner ear. The whiter the dog, the greater the risk.”

For this reason, breeders should be well informed of the complete family lineage before breeding dogs with the potential for congenital deafness. The American Kennel Club recommends BAER certification for show pups of the aforementioned breeds. Veterinarians also suggest BAER testing those high-risk puppies before selling them.

“We may not be able to cure this disorder. The best thing we can do is keep the breeding pool safe by spaying and neutering congenitally deaf dogs as well as by keeping accurate records for every litter,” Dr. Faissler said.

Genetic Screening

A genetic screening test to identify hearing puppies who are carriers of the gene would be ideal. “But we’re not quite there yet,” Dr. Faissler said. “For now, the more testing we can do and information we can gather, the more likely we’ll be to eradicate the disorder in future generations.”

Deafness not only poses greater risks of injury to dogs because of decreased awareness of dangers like vehicles and animal predators, but more important, the genetic underpinning of early hearing loss easily can be passed on to future generations. The importance of avoiding this can’t be overemphasized - responsible breeders understand that testing a litter gives information about those puppies as well as the rest of the family tree.

Later onset deafness isn’t attributable to the degenerative changes seen in congenitally deaf puppies. Instead, some dogs with chronic ear infections encounter significant inflammation, infection, scar tissue or ruptured ear drums, resulting in partial or considerable hearing loss. BAER testing usually reveals significantly shorter waves on the computer graph but rarely the flat-lined graphs seen in deaf puppies.

Less frequently, a tumor may alter the normal architecture of the ear. Affected dogs may hear sound at high volume, so BAER tests are run in stages, increasing noise incrementally to find the dog’s threshold. Because the adult test takes longer and requires multiple steps, the fee is \$120.

Complex advances in human medicine have yielded devices like the cochlear implant, an electrode-based device surgically implanted in the inner ear to amplify sound. The implants can sometimes help humans when external hearing aids can’t. However, the technology is still being finely tuned, and the surgery is invasive. The implants have yet to be used in veterinary medicine - more research and testing are necessary. In addition, veterinary training would be extensive and the cost of the procedure high.

Overall, the occurrence of deafness in the overall canine population remains fairly low. Limited data is available. Three studies indicate a prevalence ranging from 0.025 to 0.875 percent. But it’s important to understand that the prevalence in certain breeds is much higher. Jack Russell Terriers and Dalmatians are reported to have a prevalence of complete deafness ranging between 8 to 9 percent. Each year, many deaf puppies continue to be euthanized because they’re difficult to sell or adopt. *(continued)*

Owners who learn they have deaf dogs will need to provide a low-stress environment and perhaps a bell on their collars to alert them to their dogs' location. They may decide to teach the dogs sign language or hand signals. And they'll need to know, despite the challenges, deaf dogs can live full, happy lives.

CUMMINGS' RESEARCH SEEKS BLOOD SAMPLES OF DOGS WITH THE DISEASE AND UNAFFECTED LARGE BREEDS

If you have a Golden Retriever or other breed with hemangiosarcoma, you might want to consider participating in a study of the disease's genetic risk factors at the Cummings School.

Chieko Azuma, DVM, Ph.D., assistant professor at the school's Harrington Oncology Program, and Dr. Kerstin Lindblad-Toh of Harvard's Broad Institute are working to compare the DNA of affected and unaffected dogs.

"We will use a newly developed, powerful analytical method to search for small differences in DNA patterns," Dr. Azuma said. "Comparing these patterns will make it possible to identify the small region of the DNA associated with the disease. This should lead to the identification of genes predisposing a dog to hemangiosarcoma."

"When results of the study are available, it may be possible to test for carriers of the disease and improve breeding programs," Dr. Azuma said. "Ultimately, understanding the biology of this disease will lead to the prevention and effective treatment of canine hemangiosarcoma."

She and Dr. Lindblad-Toh have begun collecting blood samples. *"Recently the AKC has informed us that the study is highly likely to be funded. We are also applying for other grants and encouraging private funding for this project because of the expenses required for genetic analysis."*

If your dog has hemangiosarcoma or is a normal large-breed dog without the disease, and you are interested in being part of the study, please ask your veterinarian to draw a blood sample and send it, together with medical records and pedigree information, to Dr. Chieko Azuma at the Harrington Oncology Program, the Cummings School, 200 Westboro Road, North Grafton, MA 01536. Large breeds, such as Golden Retrievers, seem to be predisposed to hemangiosarcomas.

DOG SURVIVED CANCER

Rachel Shapiro of Parker, Colo., has had the rare experience of having two adopted dogs develop hemangiosarcomas. One has since died. Her second dog, Penny, arrived from a rescue program emaciated, with most of her hair gone and a huge growth hanging from her neck.

"After fostering this sweet, wonderful dog for a week, I took Penny in to remove the mass, which was thought to be just fatty tissue," Shapiro said. "When I went to pick her up after surgery, they showed me the mass, which was filled with blood - hemangiosarcoma."

(continued)

Shapiro knew Penny couldn't be adopted out with the disease and took her to live her last months as a permanent foster. *"That was almost a year ago, and I'm happy to say that Penny is currently cancer free,"* she said. *"The hemangiosarcoma was the skin type, and no new masses have returned."* Shapiro officially adopted Penny and today the dog shows no signs of slowing down. *"She is a bundle of energy and love, who believes people are here just to pay attention to her and rub her belly!"*

Julie Claytonhorne and her family adopted Shadow, a Border Collie mix, from the Denver Dumb Friends League in 1996. All was well until two years ago when Shadow had a stand-off with a friend's pet cat. *"Now, this was a dog who loved to chase anything that moved - squirrels and cats being her favorites - so we called her off,"* Claytonhorne said. *"A few minutes later, we found her stumbling around, looking semiconscious. She vomited, paced the room and couldn't get comfy. We thought she might have eaten something bad. We had no clue what the problem was."*

The veterinarian listened to Shadow's heart, took a chest X-ray and recommended a thoracic ultrasound. An echocardiogram confirmed the diagnosis of hemangiosarcoma on the right chamber of her heart. Claytonhorne took Shadow to the oncology department at Colorado State University in Fort Collins. Her pericardium - the sac that encloses the heart - was enlarged because the tumor had bled into it. It had compressed the heart to a degree that it couldn't function efficiently.

"The stand-off with the cat had raised her excitement level, but her heart could not pump enough oxygen to her brain, hence her odd behavior," Claytonhorne said. *"They told us she might have just a few days left. We were devastated."*

She decided on surgery at CSU to remove Shadow's tumor and part of the pericardium. Within days, with a 9-inch scar running from shoulder blade to belly, Shadow jumped into the back of Claytonhorne's car, ready to go home. She underwent chemotherapy, but soon an ultrasound showed spots on her spleen. Because of the high probability of another hemangiosarcoma, the spleen was removed.

In February 2004, Shadow seemed unable to keep warm. Even short walks left her shivering. Her gums were pale. *"Our veterinarian confirmed that somewhere inside, another tumor was bleeding,"* and Shadow had lost so much blood that her body could not maintain its temperature, Claytonhorne said. *"We didn't want to put her through more poking and prodding. We just watched her and loved her."* Throughout the ordeal, Shadow behaved normally, although occasionally specially prepared food was needed to encourage her to eat.

"On Valentine's Day 2004, Shadow passed away at home with us," Claytonhorne said, *"but not until she had given chase to her squirrel one last time."*

BIG STEAK DINNER

Ah, the holidays. 'Tis the season to relax with friends and family, to share good cheer, to reflect on life's blessings. And, for some, it's also the season to rush a vomiting dog to the emergency clinic. *(continued)*

Gravy, turkey skin, cookies, creams - all that rich holiday fare may make human bellies shake like a bowl full of jelly, but it can kill dogs by triggering acute pancreatitis. The life-threatening condition is a severe inflammation of the pancreas. The glandular organ, nestled beneath the stomach and the small intestines, aids digestion and regulates blood sugar by pumping out enzymes and insulin. The condition develops when the enzymes responsible for fat digestion are released prematurely and start to autodigest, or digest the cells of the pancreas.

“Acute pancreatitis can be very serious. It in fact can be fatal, resulting in fluid buildup in the abdomen and thorax, the development of acute kidney failure, and disseminated intravascular coagulation, an inflammation that triggers clotting factors and uses them up to the point where spontaneous bleeding occurs,” said Mary Labato, DVM, clinical associate professor at the Cummings School of Veterinary Medicine at Tufts University.

Although there are many suspected triggers for an attack, including certain medications, pesticides and trauma, pancreatitis that occurs suddenly is most commonly associated with dietary indiscretion - a raid on the garbage can or a big steak dinner, said Dr. Labato.

Veterinarians say they see many more cases of pancreatitis around Thanksgiving and the December holidays, brought on by high-fat table scraps. Even owners who are diligent about protecting their pets from other holiday hazards, such as tree tinsel, chocolate Santas and turkey bones, may be unaware of the dangers a lipid overload can pose to their pets. One very sick mixed breed drove this point home to Bonnie Beaver, DVM, professor at the College of Veterinary Medicine at Texas A&M University and immediate past president of the American Veterinary Medical Association.

Her patient had been on a fishing trip with his owners when he started vomiting violently. Dr. Beaver asked if he had eaten anything that may have upset his stomach. At first the owners said no. Then almost as an afterthought, they remembered a dietary indiscretion earlier in the day.

“Oh yeah, they said. I forgot to tell you he ate a pound of bacon. Could that make a difference?” recalled Dr. Beaver. The dog recovered but only after a lengthy and expensive hospital stay. A pound of bacon doesn't have to be the culprit. Even a small amount of fat can cause pancreatitis in an animal prone to it.

Unfortunately, there's no way to predict if an individual dog has such a predisposition. There is a lot of variation in fat tolerance from one dog to another. Obese dogs appear to face the highest risk, said Dr. Labato. Middle-aged and older females also have a greater tendency to develop the condition.

Among breeds, miniature Schnauzers are known to have a higher risk, but scientists are not sure why. Researchers have been looking for the gene, but have not yet found it. A few other breeds, including miniature Poodles, Cocker Spaniels and some terriers also appear to be prone to it.

Symptoms of the condition are non-specific and can be mistaken for a host of other gastrointestinal disorders. Vomiting is the major sign, but some dogs vomit often for all kinds of reasons. It can be hard to say if the problem is an upset stomach or pancreatitis, which means a trip to the veterinarian is essential.

As a general rule, if a dog vomits several times in a 12-hour period, pancreatitis should be suspected. A single, severe episode of vomiting will warrant medical attention if the owner knows a dog ate a fatty food. Other symptoms include weakness, abdominal pain and dehydration.

Diagnosing the condition can be tricky. *“It can be very difficult to distinguish pancreatitis from other gastrointestinal disorders. Both can cause very severe and refractory [uncontrollable] vomiting and an extremely painful abdomen,”* said Dr. Labato. *“Pancreatitis is often diagnosed by excluding other causes and seeing evidence of inflammation in the pancreas.”*

Veterinarians use imaging techniques and blood tests of pancreatic enzymes to make a diagnosis, said Dr. Labato. *“Abdominal ultrasound is perhaps the best way that we have here for identifying pancreatitis.”* Testing pancreatic enzymes are helpful, but many aren't specific or sensitive enough for a firm diagnosis.

Treatment is mostly supportive, resting the pancreas until the inflammation subsides. *“When the animal is vomiting frequently and severely, there should be nothing by mouth for 24 to 48 hours until the vomiting comes under control,”* said Dr. Labato. Then it's important to provide nutritional support through a feeding tube and intravenous fluids. The dog may also need medication for nausea and pain. Severe cases may require plasma or whole blood transfusions.

In rare cases, a single bout of the disease may so badly damage the pancreas the dog may become diabetic. Most of the time, patients will recover and have no long-term consequences.

Nevertheless, *“it can be expensive and require a lot of hospitalization and good quality patient care,”* Dr. Beaver said. “Prevention is much better than trying to cure it.

SILENT KILLER AND CURABLES

Dogs of any age can be susceptible to hemangiosarcomas - malignant tumors arising from blood vessels - but those middle-aged and over 8 are especially vulnerable. The aggressively spreading cancer may go undetected until the last stages, making it a silent killer.

Although they can be found almost anywhere in the body, about 80 percent of all hemangiosarcomas begin in the spleen, said John Berg, DVM, chair of the Department of Clinical Sciences at the Cummings School of Veterinary Medicine at Tufts University. The spleen, a large organ in the abdomen, stores blood, among other functions. “Fewer hemangiosarcomas arise in the heart and fewer still in other sites, such as the skin,” he said. “And although not directly heritable, there appears to be a predisposition among purebreds - particularly large breeds such as German Shepherds, Labradors and Golden Retrievers.”

Surgery can often cure the form of the disease affecting the skin. In that location, the tumor often doesn't metastasize, or spread, to distant sites. *(continued)*

Otherwise, hemangiosarcomas are rarely curable. As long as expectations are realistic, however, temporary remissions are possible. "Many dogs recover quickly from tumor removal surgery and, although they may only have a short time left, the quality of life during this time can be excellent," said Dr. Berg, a surgical specialist.

Because splenic hemangiosarcomas develop internally, they often give little warning until they become quite advanced. The spleen may suddenly begin bleeding, and blood may enter the abdomen. "A dog may exhibit sudden weakness or he may collapse," Dr. Berg said. "His gums look pale and his pulse is rapid. He is in danger of going into shock or even dying. If this happens, consider it an emergency and get your dog to a veterinarian."

Distended Abdomen

An alternate scenario occurs when the tumor grows slowly within the spleen without bleeding. "The dog's abdomen may become quite distended," said Dr. Berg. "The tumor may grow as large as a basketball and weigh five pounds or more. Owners may not recognize the presence of a tumor of this size because organs within body cavities, such as the liver, lungs, kidney or spleen, have a lot of reserve capacity, and tumors within them often must become very large before they make a dog feel ill. Also, tumors within the body are difficult to see or feel until they are quite large."

Understandably, dogs with such tumors may act "off," exhibiting low energy and reduced appetite. They may tire easily, and they may experience weakness, rapid breathing and depression.

In some instances, veterinarians find hemangiosarcomas during a physical exam. Abdominal swelling may suggest the disease in an older, large-breed dog. Bloody fluid aspirated from the abdomen is even more suggestive. For hemangiosarcomas of the spleen and heart, the key test is ultrasound, said Dr. Berg. "In splenic hemangiosarcoma, the image shows a huge mass - the primary tumor - attached to the spleen." It might also reveal metastases to the liver. Veterinarians take X-rays to rule out metastases to the lungs.

Without treatment, the average time from the tumor's discovery until death of affected dogs is under two months. Some dogs die suddenly after showing no symptoms apparent to their owners. When an older, large-breed dog dies suddenly, owners might consider an autopsy. A diagnosis of hemangiosarcoma can prevent agonizing over possible reasons for the death of a beloved pet.

Spleen Removal

If no definitive evidence of advanced metastases is found, veterinarians usually recommend a splenectomy - removal of the spleen - for splenic hemangiosarcoma. Dogs tolerate this relatively simple surgery well. Certain tumors involving the heart can also be removed, although this surgery is more complex and entails a slightly longer recovery period. "Removal of the spleen makes the dog feel normal again and prevents sudden bleeding that the tumor might otherwise cause," Dr. Berg said.

Virtually all dogs undergoing removal of heart or splenic *(continued)*

hemangiosarcomas will eventually die of metastatic disease. Their average lifespan with treatment is four months; however, the added time is important to many owners. When the end does approach, most dogs will develop signs such as sudden weakness, breathing difficulty or poor appetite. At that point, owners should consult their veterinarian, and if advanced metastases of the tumor are confirmed, euthanasia should be considered.

Radiation therapy usually doesn't play a role in the treatment of hemangiosarcomas. And although chemotherapy may be given in an effort to slow the growth of metastases, it's not likely to cure the cancer, Dr. Berg said. "If owners want to feel they've done everything possible and perhaps obtain some more time for their dog, they may consider chemotherapy. However, there are no definitive studies proving it prolongs survival times."

Because the chemotherapy doses used in animals are lower than those used in people, dogs receiving chemotherapy usually don't experience severe side effects, he said. "The expense may be a bigger factor in a dog owner's decision whether to go with chemotherapy." A typical regimen of chemotherapy in a large breed dog may cost \$1,000 to \$3,000.

Surgery remains the cornerstone of treatment for splenic hemangiosarcoma. "For some owners, the prospect a good quality of life for several months makes the surgery worthwhile," Dr. Berg said. "It may give a dog another spring, summer or fall, and hours and hours of quality time with his owner."

NEW LIFE TO AN OLD DOG

When an owner who claimed not to have enough time for her surrendered Mandy to the Marin Humane Society, the 7-year-old tri-color Rough Collie was in pitiful condition. She was 7 years old and 20 pounds overweight, and her weak hind legs could barely hold her up. Her coat was matted, and her incontinence had burned the skin on her legs from contact with urine soaking the matted fur.

I grew up with Collies and have a soft spot in my heart for them. I offered to foster Mandy and help her through rehabilitation so she could be adopted. She walked into my home and my heart as if she'd lived there all her life.

Most folks think puppy when they're considering a new canine family member. Puppies are appealing - and a lot of work. They eliminate everywhere, chew stuff, have miserably sharp teeth, need lots of vaccinations, spay/neuter surgery, training classes and tons of attention. They have boundless energy and often can't - or shouldn't - be left alone all day.

Mature Companion

Consider a more mature canine companion. An older dog may already be house trained. If not, he's usually physically capable of "holding it" once he's introduced to the concept. He's probably calmer than a puppy, well past the chewing stage, already neutered and likely less needy overall.

Shelters and rescue groups have a steady supply of senior Setters, aging Am Staffs, geriatric German Shepherds, timeworn Terriers, elderly Elkhounds, venerable Vizslas, mature mixed breeds and more.

Puppies are generally in great demand. At all but the most overcrowded shelters, they're likely to be adopted. Seniors wait and wait - sometimes for the remainder of their lives - for a new forever family to recognize their irresistible qualities and take them home. You can do a good deed and avoid puppy headaches by adopting an older dog.

You may not be completely off the hook, however. Sometimes an older dog is given up because of behavior or health problems. An owner may or may not be forthcoming with this information. Stray dogs come with little or no known history, so you could have a complete mystery at the end of your leash - and a package of potential problems.

Some older adoption candidates are gems. They've lost their homes through no fault of their own - an owner died and no one in the family could take the dog. A beloved pet became lost, and a heartbroken owner is looking in all the wrong places. A divorce occurred with neither partner able to keep the dog. Moving overseas, called for active duty, owner health problems - are all legitimate reasons for a wonderful dog to find himself in need of a home.

In reality, however, when an older dog is in search of a new family, there's often some reason, large or small, that the bond wasn't strong enough for his previous family to make the effort to keep him. Common challenges you might face with a senior dog include:

- House soiling
- Destructive behavior
- Escaping (see sidebar)
- Poor socialization
- Bad manners
- Separation anxiety
- Current or future health problems

A committed, new owner may easily resolve behaviors that caused a dog to be surrendered. Sometimes the problem is harder to fix, but a true dog lover knows it's worth the effort. Here are tips to prepare you for the challenges you may face:

House training

Senior Sam may already be house trained. Sometimes the shelter or rescue can tell you this - sometimes you'll find out on your own. Assume he's not or that he'll need a refresher course, and treat him as you would an 8-week-old pup. Keep him under direct supervision, take him out every hour on the hour to his designated potty spot, and reward him generously for doing his business. You'll soon know if he's really house trained. If not, it's probably for one or more of the following reasons:

1. He's lived outdoors and doesn't know about life indoors. He should be fairly easy to house train with a standard training program - constant supervision, *(continued)*

crating when supervision isn't possible and frequent trips outdoors on leash until he gets the idea.

2. He's a "marker" - lifting his leg everywhere in the house. Use a "belly band" - and strip of cloth pinned or Velcro'd around his abdomen, with a sanitary pad inside - while you work on the standard house training program. Neutering often slows or stops this behavior but not always.

3. He's been forced to soil his kennel or crate - the hardest to retrain. He may come from a puppy mill, hoarder or a substandard rescue group - where dogs are kept in filthy kennels and crates. Forcing a dog to soil his living space weakens his instinct to keep his den clean. The crate is normally an invaluable house training tool, but you won't be able to use it with this dog. You can "reverse" crate train - crate him only when you know he's empty and take him out often enough that he doesn't dirty his den.

4. He belonged to someone, perhaps elderly or ill, who was unable to take him out. You may be able to use the crate with this dog, and might consider training him to use an indoor litter box if house soiling persists.

5. He has a urinary tract infection or intestinal upset. The most common symptom of UTI is multiple small puddles, even in his crate, even when he's just been out. Parasites and digestive tract disorders can cause diarrhea - he can't control it. He'll be impossible to house train until you treat the problem. If you suspect a medical cause, make an appointment with your veterinarian.

Destructive Behavior

Generalized destructive behavior is a sign of a dog who had too much house freedom too soon and never learned appropriate house manners. Often mislabeled as separation anxiety, this behavior may occur when the owner's home, even in his presence. In the owner's absence, it tends to be non-specific general chewing, as opposed to the focused destruction of separation anxiety.

The answer to this is management: Remove all opportunity for him to misbehave. Use crates, tethers, baby gates, exercise pens and closed doors to prevent his access to vulnerable items. Keep stuff out of his reach. Provide him with plenty of legal chew objects while you restrict his access to forbidden ones.

Don't forget adequate exercise. A tired dog is a well-behaved dog. "Adequate exercise" means tongue-dragging, chase-the-ball sessions or hours of play with a compatible canine pal. A walk around the block is an exercise hors d'oeuvre for a healthy, active dog - even an older one. Check with your veterinarian to determine how much exercise is appropriate, then go to it.

Poor Socialization

Poor socialization is an inherent problem with backyard dogs, breeder dogs who have spent their entire lives in cages or kennels making puppies, and dogs who lived with senior citizens or otherwise never got out much to see the world. If your Aging Annie is fearful of people, other dogs and/or the world in general, she probably missed out on her all-important puppy socialization lessons. *(continued)*

You'll usually see this behavior before you even take Annie home. At the shelter, rescue group or owner's home, she'll probably be reluctant to come to you, or overreact to sounds and movement in her environment. You may lose your heart to a scaredy dog, but beware! They're not an easy fix. The Beatles were wrong when they said "All You Need Is Love." It won't be enough to fix her fears. An older, poorly socialized dog will probably never be normal. She may learn to be comfortable in your home but will likely always be fearful of new things, despite your best efforts to reassure her.

If you're looking for a "normal" dog to share life's adventures, pass by Annie. If you want a project, contact a good behavior consultant to determine the management and modification necessary to keep Annie safe and comfortable. If you still want a project, take her home.

Lack of Manners

Elder Ernie jumps enthusiastically on your chest to greet you and says hello to visitors with equal gusto. He routinely checks counters to see if anyone left any edibles within reach. He dislocates your shoulder when he hits the end of his leash at top speed, barking madly at a passing dog. He bounces off your coffee table as he charges through your house. Ernie is driving you crazy because no one ever taught him how to behave.

You can teach an old dog new tricks. Load up on management tools, and enroll Ernie in a positive training class as soon as possible. It may take him longer than younger classmates to unlearn his undesirable habits and learn the right stuff, but he can do it.

The secret is to remember that a dog's goal in life is to make good stuff happen. If you can prevent Ernie from being rewarded for the behaviors you don't like and reward him generously for the ones you do, he'll change his ways. Leashes, tethers, baby gates, crates, exercise pens and closed doors will keep him out of trouble. Basic good manners training, reinforcement for desirable behaviors and our old friend exercise will put him on the right track.

Separation Anxiety

Far more challenging than general bad house manners, separation anxiety is a full-blown panic attack over being left alone. Behavior professionals note a high incidence of this behavior in shelter dogs. It's unknown whether shelters induce the stress or dogs end up at shelters because their owners can't deal with this difficult behavior. Perhaps it's both.

Regardless of the cause, it's a tough syndrome to live with. Separation anxiety can manifest itself as extreme destructive behavior, often directed toward escape at doorways and windows. Some dogs will chew through walls and door frames, or jump through closed windows. It may be evidenced in inappropriate elimination - dogs who urinate and defecate all over the house due to unbearable distress. Some dogs bark, howl or scream continuously until someone comes home to relieve their panic. Dogs who have separation anxiety often can't be crated - their panic worsens in close confinement, and they may injure themselves trying to escape.

You can test Venerable Victor for separation anxiety by leaving him alone in a get-acquainted room or other confined space. Leave a cheap throw pillow you bought for this purpose at a yard sale in the room with him. If he becomes frantic, digs at the door, barks, howls and rips up the cushion, consider another dog, or arm (*continued*)

yourself for a behavior modification challenge.

It's a good idea to talk to a qualified behavior professional before adopting a dog with separation anxiety and work closely with one if you choose to proceed with Victor's adoption or discover his separation anxiety after bringing him home. A behavior modification program may be long-term and require the use of doggie daycare or other pet-sitting options, and the administration of behavior modification drugs while you work to help him gradually accept being home alone.

Health Issues

Your Geriatric Genie may, like Mandy, come with built-in health problems that require an immediate expense to repair. Neglected teeth, overgrown nails, matted coats, bad hips, eye problems, heartworm, tumors and incontinence are some of the problems you may inherit. Ask the owner or agency did you know? Freud ended therapy when his Chow stood and yawned. ¹¹ if you can have a complete physical for the dog before you commit to adoption, so you know what you're getting into. They may be willing to absorb or split the cost of an exam, or you may have to pay for it all yourself.

Treatment for multiple or serious health problems could run into hundreds, even thousands of dollars. Like us, older dogs need additional care as their bodies start to fail. Know that this will happen and prepare financially, so it doesn't come as a surprise.

Mandy was one of the gems. She never, ever, took a wrong behavior step. By the time I resolved all her health problems, there was no way I could give her up. The five years I shared my life with her before she succumbed to a stroke at age 12 were a true gift, and I'll always treasure the time we had together. Whether you adopt one of the already polished gems or find a diamond in the rough, you may find the love of your life, as I did, in a canine senior citizen.

