



PULSE

news from Paws To People, Bridges to Cures

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A Deaf Dog Can Lead A Normal Life

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Prevention goes a long way toward avoiding hearing loss but when it occurs you need to implement safety protocols

Deafness is often part of aging for dogs, just as it is for humans. You may notice your dog is less active and may not wake up to sound as quickly as he used to do. He may not hear our "sit" command. You notice he doesn't respond to everyday sounds he used to react to, such as a loud motorcycle.



Hearing loss is not inevitable, especially in younger dogs. Many of the reasons for deafness can be avoided with a little maintenance. Common causes of deafness in dogs include: aging (prebycusis); noise induced hearing loss; ototoxicity (drug- or chemical-related damage to the inner ear); external ear canal disease (otitis externa); inner ear infection (otitis interna); ear tumors; genetics.

Ear health is important. Keep the environment clean to discourage ear mites and infectious agents from taking root. Check ears regularly for signs of debris and infection, such as swelling or discharge. A dog constantly flopping his head to shake his ears or persistently scratching at the ears should see a veterinarian to rule out ear infection.

Avoid probing your dog's ears yourself, such as with a cotton swab, to see what might be in the ear. It is easy to push whatever is bothering the dog deeper into the ear or, worse yet, actually damage the eardrum or other internal ear structures.

If you suspect your dog is losing his hearing, go to your vet for advice. Often the dog isn't completely deaf. He is just experiencing hearing loss and may still be able to hear certain ranges of sound.

Protecting the Deaf Dog. Dogs with hearing in only one ear usually get along well. Bilaterally deaf dogs, however, need special precautions.

Deaf dogs should be supervised outside. "I would advise that they be confined to a fenced yard or on leash," Dr. Brian Collins, DVM, section chief of the Community Practice Service at Cornell's College of Veterinary Medicine, "Even the best trained dog won't be able to know you are calling them if they run off and aren't making eye contact." Vibrating collars with remote controls can be used to signal your dog.

At home, use clapping, shouting, whistles, stomping on the floor (he can also feel the vibrations), or other loud sounds to get the dog's attention, especially if he's asleep. "Startled deaf animals can bite as a reflex, no matter how good natured they otherwise are, so be especially careful with them around infants and toddlers," says George M. Strain, a leading researcher on deafness in pets.

Visual cues can get a deaf dog's attention. Flash the lights in a room when entering and use laser pointers near the dog to get attention (do not shine the flashlight or pointer in the dog's eyes).

Train your dog using hand signals instead of verbal commands. For communicating with a deaf pet go to <http://www.lsu.edu/deafness/Hand%20Commands.htm>. *Editor's note: All pups can be trained to include hand signals as part of their basic training from the very earliest age. Dogs raised with the knowledge and practice of both verbal and hand commands have an advantage as they age or in situations where verbal commands cannot be heard.*

Your dog can be trained at any age. Use the basic premise of clicker training with a flashlight blink substituting for the sound of the clicker. Able-bodied deaf dogs can still compete in many activities and live full lives. "It may require extra time and patience on the owner's part, but having a deaf dog is very do-able," Dr. Collins says.



Thanks to Freedom Tails Rescue for this graphic.

Deafness in White Dogs: White Dogs have a greater chance of being born deaf

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Congenital deafness is prevalent in white-coated dogs and is usually noticed shortly after birth. It can occur in brown-eyed dogs but, "there is a strong relationship between deafness and white dogs with blue eyes," says Dr. Brian Collins, DVM, section chief of the Community Practice Service at Cornell's College of Veterinary Medicine.

Two pigmentation genes in particular are often associated with deafness in dogs: the dominant merle gene, which is seen in Collie, Shetland Sheepdog, dappled Dachshund, Harlequin Great Dane, American Foxhound, Old English Sheepdog, the Norwegian Dunkerhound, and others; and the recessive piebald gene, which is seen in Bull Terrier, Samoyed, Greyhound, Great Pyrenees, Sealyham Terrier, Beagle, Bulldog, Dalmatian, and English Setter. Dalmatians in particular have been found to have a 30% incidence of congenital deafness.

These genes suppress pigment cells known as melanocytes, found in the vascular system of a dog's inner-ear. These melanocytes maintain potassium levels of fluid surrounding the sensory hair cells in the ear. When sound waves bend those hair cells, they open special channels that allow potassium into the cell which excites the nerve cell that enters the brain in the auditory nerve. Melanocytes unable to maintain potassium levels are responsible for deafness.

Research is on-going to identify the genetic cause of deafness with the hope of developing a DNA test to be used to make breeding decisions.

Study on Pain Medications for Cancer: Participants Needed

Some dogs with cancer experience pain that cannot be adequately controlled with oral medications. Epidural (spinal) injections help, but the duration of relief varies. Repeating the Epidural is risky, as it requires anesthesia or heavy sedation, and it is expensive.

Veterinarians at the Anesthesiology and Pain Medicine Service at the Cornell University Hospital for Animals are investigating a prototype device that consists of an Epidural catheter connected to an accessport implanted under the skin over a dog's back. It requires brief general anesthesia. Pain-relieving drugs can then be injected through the port and catheter into the Epidural space into the spine as frequently as necessary to provide pain relief without the need for anesthesia and its risks and costs.

The researchers are looking for additional dogs for the study. Any dog with pain from cancer that is not controlled with oral medicine may be eligible. If you think your dog could benefit, please call the clinical research coordinator at 607-253-3060 or email vet-research@cornell.edu

EVENTS

October 22--Paws To People Board of Directors' Meeting 1pm at Flying Star Café on Corrales Road in Albuquerque. We will be planning our fundraising events for the coming year.

October 29--Howl and Growl, Boofy's Best for Pets 8201 Golf Course Rd. 1-4pm. Halloween costume contests and trick-or-treating; chances to win fun prizes; pet photos; adoptable pets from local rescue organizations; visit wonderful vendors with lots of goodies for the entire family; and enter the fundraising raffle for a chance at some fantastic prizes. Paws To People will be on hand to add to the excitement.



Ongoing--Recycle Bring your empty Earthborn dog and cat food kibble bags (any size), cans, and treat bags to Boofy's Best for Pets 8201 Golf Course RD NW. Earthborn has a commitment to recycling and they provide a rebate for it. The rebate funds benefit Paws To People.

Ongoing--Gently used Shoe Drive. Benefits Paws To People and Sanctuary@ABQ. Help our non-profits collect 7,500 pairs of used shoes to earn a finder's fee that will let us direct more donation dollars toward projects that better the lives of people and pets. It is easy to help:

- just bundle up those old shoes in pairs (tie laces or rubber band) and contact us to pick them up finder@sanctuaryatabq.org or 505-267-2476
- or drop them off in a collection bin at one of our partner businesses:

Boofy's Best for Pets 8201 Golf Course Road NW, ABQ
Good Shepherd Animal Clinic 4601 Menaul Blvd. NE, ABQ
Any of the three Tremko Karate Kickboxing Studios
2439 San Pedro Blvd., ABQ
1016 Central Ave., Moriarty
150 State Road 344, Suite C, Edgewood
Monterra Apartment Homes 4217 Louisiana Blvd NE, ABQ
Susie N Cleaners & Alterations, 9500 Montgomery Blvd., ABQ



On-going-- One Community Auto

One Community Auto shepherds your donated car, truck, RV, or boat (any condition, operational or not) through rejuvenation and resale and donates a portion of the profit to Paws To People. It is easy to donate. One Community Auto manages the complete process from donor contact, sale and payments. They are bonded and insured. Contact us to learn more: info@BridgesToCures.org



Committed to helping define a new translational approach to medicine by building bridges in order find innovative solutions to how we detect, prevent and cure diseases in animals and humans that take too many too soon.

For more information or to join the fight against disease... visit our website: www.BridgesToCures.org follow us on [Facebook.com/PawsToPeople](https://www.facebook.com/PawsToPeople) or email us: info@BridgesToCures.org



The Hormone That Could Be Making Your Dog Aggressive

Science Blog September 27, 2017. <https://scienceblog.com/496646/hormone-making-dog-aggressive> ABRIDGED.

Dogs with what is known as "leash aggression" may bark, growl or lunge at other dogs during walks, setting the scene for a tense and potentially dangerous interaction. So why do some dogs lash out on the leash while others don't? Hormones may be partly to blame, according to new research led by the University of Arizona's Evan MacLean.

Although a number of studies have looked at the role of testosterone and serotonin in aggression in dogs and other mammals, those hormones may be only part of the story, according to MacLean's findings, which are published in a special issue of the journal *Frontiers in Psychology*.

MacLean and his collaborators looked specifically at oxytocin and vasopressin — hormones that are also found in humans — and found that they may play an important role in shaping social behavior.

Better understanding the biology behind canine aggression could help with the development of interventions, said MacLean, an assistant professor of anthropology and director of the University of Arizona Canine Cognition Center. "Dog aggression is a huge problem. Thousands of people are hospitalized every year for dog bites, especially kids, and aggression is one of the main reasons that dogs get relinquished to shelters," MacLean said. Oxytocin, which is significant in childbirth and nursing, is sometimes called the "love hormone," as its levels in humans have been shown to increase when we hug or kiss a loved one. Vasopressin is a closely related hormone involved in

water retention in the body. In contrast to oxytocin, it has been linked to aggression in humans, with previous research suggesting that people with chronic aggression problems have high levels of vasopressin.

MacLean and his collaborators recruited pet dogs of varying ages, breeds and sexes, whose owners reported struggles with leash aggression. For each aggressive dog recruited, the researchers found a non-aggressive dog of the same sex, age and breed to serve as a comparison.

"It would be reasonable to think that if vasopressin facilitates aggression, you could develop pharmaceuticals that could target the vasopressin system to help in cases where dogs are really aggressive," he said. "Oxytocin and vasopressin are being used extensively as therapeutics in humans right now. Regulation of the oxytocin system has been implicated in things ranging from autism to schizophrenia to post-traumatic stress disorder, and there are clinical trials looking at administering oxytocin as a drug to create some kind of behavioral response. It's interesting to think that maybe some of these same therapies we're trying with people could be useful in dogs."

A piece of good news for pet owners and their pups: One way to boost dogs' oxytocin levels and decrease vasopressin is through friendly dog-human interactions. And the effect extends to people as well.



A Loss, Two Dogs and End of Life Decisions

by Barbara Basset

Recently, I lost one of my pups. I think sometimes that it's harder than losing a human, because dogs give you such unconditional love. We mourn them for what they are — our chosen friends. We had made the decision to help her on her journey, but she had other plans.



When my loveable dachshund Lulu passed in the night, for me it had been expected; I was planning to help her the following day. But what was it like for my other dogs, when she made her own decision to go? For a few days they had seen the decline in Lulu and stayed close to her, but when I awoke, they were sitting on the floor with her. They were keeping a respectful distance from her, but you could tell they knew she was gone.

Even though I knew Lulu's life was coming to an end, the last days are just as important. Quality of life, freedom from pain and suffering and the individual's right to determine the course of action or lack thereof in the hours or days leading up to their death is vital. Nonverbal patients, such as a comatose trauma victim, or a geriatric patient with advanced dementia, or a companion animal with end stage disease all have the right to die in a manner that is compatible with their "wishes" or instincts. I had planned to assist Lulu, and she was on medications, but she made her decision to spare me and left on her own.

The veterinary community has more experience with quality of life in non-verbal patients, euthanasia and fiscal conservancy in treatment of the critically ill or geriatric patient. However, recent advances have made life extension more accessible in veterinary care, as they have in human medicine. We have insufficient information on the contexts by which a non-verbal individual, might opt for a different end of life decision than the ones provided by caregivers, providers or other entities. Paws to People has provided \$6,500 to fund a data collection research examination of important issues surrounding End of Life Decision Making for both humans and pets. This research crosses both veterinary and human health care, and can provide vital information for both animals and humans.



As I picked up Lulu and took her in to clean her up for her journey, one of the other two ran down the stairs as if nothing more was to be done. A "feed me" bark came from below while the other stood next to my foot while I attended to Lulu. I wrapped Lu in her blanket and some pink silk and then placed her on the bed. Jeep, the dog who stayed by my side, cautiously went to her side with sniffs and a gentle nudge. Then he too, ran down the stairs. My best friend and her husband rushed over and we buried my little friend.

The first night, things pretty much went as usual, dog-wise, but the ritual of carrying Lulu upstairs was over. The next night, the dogs were not their usual boisterous, barky selves. They just seemed subdued. As the days went on, I noticed a dynamic happening in the house. Jeep normally likes "his" sofa, and Sweetie stayed with me on the loveseat. Jeep started to come over to me more and more requesting to sit on my lap for a cuddle. This wasn't normal. He did his best to be independent macho dog, refusing to be picked up unless caught after a game of chase, and only for a few seconds.

After a few days of cautious cuddling, he started meeting me at the door and demanding to lick my face. Meanwhile, Sweetie had become feistier, letting Jeep know that she was heir-apparent. She started barking more at Jeep, and being a bit of a brat. She regularly pushed Jeep away from his food dish, and if he'd take off for a run through the room, she'd bark and try to stop him.

When an animal dies with other animals in the house, you should be mindful not to change their routines. Changes only add to their grief. If your dog wants more cuddles, give them, and if they don't, don't make them. Positive training is a beneficial way to help your pet learn its new position in the family and move on from loss. Make sure they get their exercise and understand that they can pick up your mood. If you're very emotional about your loss, they will know. It may sound odd, but I reacted in front of them as I would a child — measured.

If your loss leaves you with only one pet, consider another based on the remaining pets actions. Remember, they may be used to having a companion, and while you go off to work, they'll now be alone. Or they may prefer to be alone. Just keep an eye on their behavior.

Finally, accept the changes in your pets. I now have a more cuddly, loving Jeep, and a more demanding, Alpha-imitating Sweetie, and Lulu made her own end-of-life decision. And it's all good.

Barbara Bassett, an office manager by day, freelance writer by night, the guardian dog mom of Jeep and Sweetie and a member of Paws to People's board of directors. She's a big fan of joining human and animal medicine to build a better future for everyone.

Pumpkin's Packed With Nutrition

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This time of year pumpkin is pretty easy to come by and, best of all, it's good for your dog. Both raw and cooked pumpkin is safe for dogs. (If your dog or cat has diabetes or chronic kidney disease, always ask your vet first.) As far as our healthy pooches go, seeds and flesh of fresh raw pumpkins are safe provided, of course, it's not a rotten pumpkin that's been sitting on the porch for four weeks.

Pureed pumpkin has about three to five grams of fiber per cup. As with people, added fiber can be helpful with constipation. The bulk stimulates the gastrointestinal walls to contract.



Paradoxically, pumpkin can also help with diarrhea, especially large bowel diarrhea. The fiber in the pumpkin draws excess fluid firming up stools. If you want to use pumpkin as a digestive aid, consult this option with your veterinarian. You do not want to tip your pet from one extreme to the other.

Pumpkin has nutritional benefits for pets without health problems as well. It's an excellent source of potassium, which is important for muscle contractions. Calcium and iron are other important minerals found in pumpkin. In addition, pumpkin contains large amounts of various vitamins.

Vitamin A helps maintain a healthy immune system and aids in healthy vision. Vitamin C aids enzyme activity, helps with collagen for healthy joints, and is an antioxidant. Vitamin E also aids enzymes, and acts as an antioxidant, helping to slow down aging in your pet. Alpha and beta carotene are additional substances from pumpkin that act as antioxidants.

For the dogs packing extra pounds, pumpkin can help in a weight-loss program. Dogs fed one to four tablespoons of pumpkin (depending on weight) will tend to feel full and do less begging. The added fiber means fewer calories. Most dogs like pumpkin, so they will find that extra dollop a real treat.

It's important to look for plain canned pumpkin. Check ingredients carefully. You just want pumpkin on the label. You do not want pie-filling pumpkin which has spices and other items, such as sugar, already added. Not only does your dog not need those additives, they may make him feel ill.



You can also cook your own pumpkin. Remove the seeds and cut baked pumpkin into wedges. Your dog can get a chewing workout by gnawing and eating the wedge. Or puree your own pumpkin then, can or freeze it.