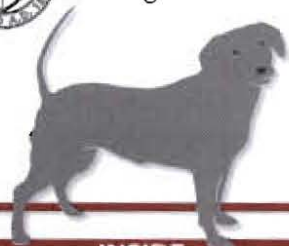




Cornell University
College of Veterinary Medicine



DOG Watch

Expert information on medicine, behavior and health from a world leader in veterinary medicine

Vol. 19, No. 4 ♦ April 2015

INSIDE

Short Take 2

Dogs' association with prehistoric humans provides insights about migration.

How to Handle a Fainting Episode 3

An immediate veterinary visit is a must to uncover the underlying cause.

No. 1 Day Care Concern: Safety 4

Check for cleanliness, references, required vaccinations, staffing – and happy clients.

Ask the Experts 8

A tough-to-train Beagle refuses to come when called unless it interests him.

IN THE NEWS ...

A Defective Gene Could Lead to Help for Blindness

Discovery of a mutated gene that causes progressive retinal atrophy in Swedish Vallhunds offers hope for treating blindness in dogs and eventually in humans, according to research from Michigan State and the University of Helsinki.

The scientists, noting similarities in human and canine ocular anatomy, say that the MERTK gene defect responsible for a recently identified form of PRA in Vallhunds could lead to therapies for other diseases that cause blindness. PRA is believed to be associated with a form of human retinitis pigmentosa, which causes progressive vision loss.

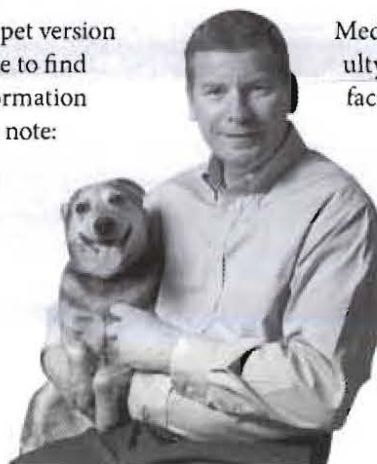
The researchers want to find a way to suppress the MERTK mutation. They also say in their report in *PLoS ONE* that a genetic test can be developed to help in breeding Vallhunds. A PRA test is available now for many other breeds to determine if a dog is a carrier of the inherited disease, affected or clear of it, the AKC Canine Health Foundation says. ♦

Cornell's Canine Health Center Debuts

A network of faculty experts will work on research and public education to advance dogs' well-being

If you've ever wished for a pet version of the Mayo Clinic website to find authoritative, impartial information about dogs' well-being, take note: Cornell University has announced the formation of the Cornell Canine Health Center.

A network of three dozen faculty scientists and clinicians will be devoted to research, public education and outreach to advance dogs' health in the U.S. and around the world. With the center's launch in April, the College of Veterinary



Center Director Colin Parrish, Ph.D., here with his Australian Cattle Dog, Adelaide, envisions a trusted voice for owners, breeders and veterinarians.

Medicine hopes to coordinate faculty, hospital resources, diagnostic facilities and animal health communications experts for the benefit of dogs and their owners, says Director Colin Parrish, Ph.D. "We want to foster and fund the best canine health research, and we want to provide useful, current information to the dog-owning public."

A Ready Audience. With an estimated 70 million dogs in the U.S. and millions more

(continued on page 5)

Telltale Signs: Squinting and Red Eyes

If untreated, corneal ulcers can lead to serious complications, causing the permanent loss of sight

Other than the unlikely use of goggles, one of the best ways to protect your dog's vision is to pay attention to his behavior. If he's squinting or rubbing his eyes, he could have a corneal ulcer. The painful condition is caused by an erosion of the layers of the cornea, the clear membrane that makes up the surface of the eye.

Yet another telling sign is a discharge from the eye. This can range from tearing to a thick secretion. An opaque white, yellow or blue coloration may also be noticeable on the surface of the eye. Eventually, the discoloration and a cloudiness of the cornea can prevent light from entering the

eye. Corneal ulcers can permanently destroy a dog's sight if a veterinarian doesn't promptly treat them.

Healthy Cornea. "In addition to a discharge, the cardinal signs of a corneal ulcer include discomfort, redness of the white of the eye and the opacity of the cornea itself," says ophthalmologist Eric C. Ledbetter, DVM, ACVO, at Cornell University Hospital for Animals. "The cornea should be clear, and with an ulcer it often becomes opaque."

The cornea consists of the epithelium, which are cells in the outermost layer; the stroma, which are connective tissue; the

(continued on page 6)

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SHORT TAKE

Across the Bering Strait Into Life in the Americas

Archaeological and DNA evidence suggests that humans first crossed the Bering Land Bridge from Siberia to Alaska about 15,000 to 20,000 years ago. Dogs, however, may have migrated across the strait about 10,000 years ago, according to new research from the University of Illinois.

The dogs' association with humans during that time makes them a valuable source for the study of ancient human behavior such as migration, says graduate student Kelsey Witt, who led the analysis with anthropology professor Ripan Malhi, Ph.D. "In cases where ancient human remains are inaccessible for use in genetic analysis, dogs can be used as a proxy," the researchers note in their report, published in the *Journal of Human Evolution*.

"Dogs are one of the earliest organisms to have migrated with humans to every continent, and I think that says a lot about the relationship dogs have had with humans," Witt says. "They can be a powerful tool when you're looking at how human populations have moved around over time."

The researchers' evaluation of genetic characteristics of 84 dogs from more than a dozen sites in North and South America is believed to be the most extensive analysis of early dogs on the two continents. The dogs likely were domesticated in Asia, Witt says.

"What we know about ancient dogs so far is that by the time Europeans arrived, they were pretty widely spread across the Americas. They were used to haul supplies, used as guards, had religious significance for some, used as a food source," Witt's reasoning for that last finding: Some burned dog remains were found with food debris, indicating the dogs were sometimes consumed, particularly on special occasions.

Previous studies of early dogs in the Americas used mitochondrial DNA, which is inherited only from the mother. It's easier to obtain than nuclear DNA, in which 23 chromosomes are from the mother and 23 from the father. The advantage is that mitochondrial DNA offers "an unbroken line of inheritance back to the past," Witt says.

Washington State University provided new DNA samples from ancient dog remains in Colorado and British Columbia. The Illinois State Archaeological Survey provided samples from the Janey B. Goode Site in southern Illinois. The site, named after a Chuck Berry song, is near the American Indian city of Cahokia, which was active about 1,000 years ago. In its February issue, the National Geographic calls it "America's Forgotten City ... once the greatest civilization between the deserts of Mexico and the North American Arctic."

Dozens of dogs were ceremonially buried at Janey B. Goode, suggesting a reverence for dogs, the researchers say. Most dog were buried individually, others in pairs back-to-back.

Researchers also say they found low genetic diversity in some of the dog populations, perhaps because humans may have bred dogs.

Witt urges caution about interpreting the findings of the study, explaining that results could be skewed because the researchers evaluated old, disintegrated DNA. Her next project: working with longer stretches of DNA to replicate similar results. ♦



A ritual burial of two dogs back to back at a site in southern Illinois suggests a special relationship between prehistoric humans and dogs.

ILLINOIS STATE ARCHAEOLOGICAL SURVEY,
PRAIRIE RESEARCH INSTITUTE

How to Handle a Fainting Episode

An immediate veterinary visit is a must to uncover the underlying cause of the loss of consciousness

One minute your dog seems fine; the next he's passed out on the floor. What should you do? Fainting, or clinically speaking, syncope, is the temporary loss of consciousness followed by a spontaneous rapid recovery.

"Rather than an illness in itself, fainting is a symptom of illness caused by a lack of sufficient flow of oxygenated blood to the brain," says cardiologist Bruce Kornreich, DVM, Ph.D., ACVIM, at Cornell University College of Veterinary Medicine. His advice during an episode: "Carefully monitor your dog, never put your hand in his mouth, and contact a veterinarian immediately."

Syncope (*SING-kuh-pee*) can have many causes, Dr. Kornreich says, most commonly:

- ◆ Cardiac arrhythmia, or irregular heartbeat.
- ◆ Neurologic problems such as epileptic seizures.
- ◆ A drop in blood pressure due to certain heart medications, such as beta blockers, ACE inhibitors and calcium channel blockers, which are also used to treat a variety of other conditions.
- ◆ Low blood sugar (hypoglycemia), sometimes seen in puppies who lack adequate nutrition and fat reserves.
- ◆ Liver disease and system-wide infections.
- ◆ A malfunction of the parasympathetic nervous system (a branch of the autonomic nervous system), causing a drop in blood pressure, heart rate and blood flow to the brain. Excitement, stress and pain can be triggers.
- ◆ Cardiomyopathy-related heart dysfunction, resulting in insufficient pressure to pump blood to the brain.

Fainting can occur in dogs of any age, but those with cardiac or central nervous system diseases, both more common

in older pets, are more vulnerable, Dr. Kornreich says. "Certain breeds are also more likely to experience syncope." They include Dachshunds, West Highland White Terriers, Boxers and German Shepherd Dogs.

If your dog has any fainting spell, note the date, its length of time, any other symptoms and precipitating event. If possible, take a video of the episode.

Because the underlying condition may be chronic, progressive or even life threatening, diagnosis is essential. "Your dog's veterinarian will review your dog's health history and perform a thorough physical examination," Dr. Kornreich says. "This should include baseline blood work to check electrolytes and glucose levels."

Low-blood glucose levels can verify hypoglycemia as a potential cause. If brain disease is suspected, the veterinarian might recommend a CAT scan or MRI imaging. A sample of cerebrospinal fluid, which bathes the brain and spinal cord, may also be obtained to rule out inflammation and/or infection in the cen-

CORNELL STUDIES UNDERWAY

Cornell researchers are investigating the causes of arrhythmias that can cause fainting and the best treatments for them, Dr. Kornreich says. "Cardiology resident Dr. Eva Oxford is looking into the mechanism of arrhythmogenic right ventricular cardiomyopathy, a common disease in Boxers. Other cardiac rhythm-associated research interests at Cornell have included inherited ventricular arrhythmias in German Shepherds and the mechanism of sick sinus syndrome — a condition in which a dog's natural pacemaker in the heart (the sinus node) fails to discharge, resulting in inappropriately slow heart rates in affected dogs."



A Holter monitor that the patient wears records the heart's rhythm and rate over 24 hours, with the owner listing his activities in a diary.

tral nervous system. In addition, to check for heart electrical function, a 24-hour electrocardiogram, obtained via a device called a Holter monitor a dog wears at home, may be recommended.

"Inappropriately fast heart rates can be treated with drugs, while inappropriately slow heart rates can be treated with pacemakers," Dr. Kornreich says. "Central nervous system disease and idiopathic [unknown origin] epilepsy can often be controlled with one or several anti-seizure medications. If a tumor is detected, surgery to remove it may help. If the side effects of medication are responsible for the fainting episodes, the veterinarian may halt these and prescribe alternatives. The prognosis for dogs with fainting episodes varies, depending upon the cause."

After an episode, restrict your dog's activity and keep him quiet until you and his veterinarian determine the cause, Dr. Kornreich says. "We had one canine patient with arrhythmias who collapsed while wading. The life-threatening issue was how to get that 70-pound Labrador out of the water immediately." The lesson here: "If there's any history of fainting, do not let your dog go swimming."

Dr. Kornreich describes a popular YouTube video featuring a Schnauzer fainting in response to greeting his owner, a soldier returning after a long deployment. "Viewers commented on how cute that was, but from a veterinary medical standpoint, it's not cute. There was something wrong, and the dog should have been evaluated immediately." ♦

The No. 1 Day Care Concern: Safety

Check for cleanliness, references, required vaccines, the ratio of supervisors to clients — and happy dogs

Day care for dogs is a growing trend among people working outside the home because it can provide exercise, a watchful eye and companionship to ease separation anxiety. Pet services such as grooming, training and day care are flourishing, estimated to reach \$5 billion of the \$57 billion spent in the pet industry this year.

In the American Pet Products Association's 2013/2014 National Pet Owners Survey, 14 percent of dog owners took advantage of day care in 2012. With the dog population in the U.S. at 83 million, that equals 12 million dogs visiting centers around the country.

"What we need are more day care centers because so many people work, and many dogs have separation anxiety," says animal behaviorist Katherine A. Houpt, VMD, Ph.D., emeritus professor at Cornell University College of Veterinary Medicine.

Word of Mouth. The paramount consideration after location and cost: safety. "Word of mouth is a better way to find day care than a glossy website," Dr. Houpt says. The industry isn't regulated, so facilities aren't inspected. References that centers offer are likely to be positive, so you should make a point of contacting other clients on your own. The owners you want to talk to are ones who no longer take their dogs there. Check online for reviews.

Expect well-run centers to allow you to inspect them, perhaps at several different times. They also will require a personal interview with your dog to ensure that he'll be happy there.

If you're considering day care, these are the essential elements to check:

Emphasis on Health

Depending on the geographic area, centers will have their own list of required vaccinations, including rabies, leptospirosis, distemper, hepatitis and parvovirus.

The No. 1 health problem in day care: bordetella, also known as kennel cough. The highly contagious viral and bacterial disease is spread through the air and con-



Responsible day care centers keep large and small dogs separate to avoid conflicts.

taminated surfaces. The better vaccine to protect against it: The one administered nasally is more effective than the shot because the virus is contracted through the nose.

Be sure the center asks for proof the dogs are up to date on vaccinations and also have been spayed or neutered. And

BE WARY OF 'DOG DORKS' AND THE 'FUN POLICE'

During your inspection of potential day care centers for your dog, be on the alert for what the ASPCA calls "dog dorks." They're usually under-socialized, and their intensity and energy annoy or scare other dogs. Another caution: the "fun police." These dogs are often herding breeds, the ASPCA says. "They run around trying to control the movements of other dogs and interfere with their playing."

ask if management has liability insurance. You should know who will pay for damages if an injury to your dog results in expensive veterinary bills.

Adequate Staffing

Supervision should be at a ratio of about six dogs per employee, Dr. Houpt says. "You shouldn't have 20 dogs and one person. You should never have just one person."

Constant supervision is a must. "There should be boots on the ground all the time," Dr. Houpt says. Even if staff members watch dogs over a webcam —

probably the same one you can access at home or work — some of them should be with the dogs at all times to rescue one if an incident occurs.

Staff members should have training in dog behavior and body language, pet first aid and CPR. Management should have a plan in place for emergencies, including the immediate

availability of veterinary care.

Happy Canine Clients

In your inspections, see if the dogs are friendly and well socialized. "One growl shouldn't get them thrown out but one snap should," Dr. Houpt says. Obviously, aggressive dogs — whether aggressive to people or other dogs — do not belong in day care. If interaction between a dog and other dogs and people escalates to growling, it can be normal behavior, but only if the advancing dog backs off.

On the other hand, dogs shouldn't appear frightened. Timid dogs aren't suited to day care. If your dog lacks confidence, he won't enjoy it and shouldn't have to spend his days there afraid to come out of his crate or enclosure.

The Facility Itself

The play area should provide 75 to 100 square feet per dog, the ASPCA says. "For
(continued on bottom of page 5)

CENTER... *(continued from cover)*

around the world, an untold number of dog owners seek health information from the Internet but often have difficulty distinguishing the helpful from the misleading and even potentially dangerous. As DOGWatch reported in December 2014, 81 percent of veterinarians surveyed by the British Veterinary Society say clients take their pets to the clinic later than advisable due to misinformation on the Internet.

Dr. Parrish envisions the center as a trusted voice that leverages Cornell's resources and expert faculty to offer up-to-date information on health and behavior for dog owners, breeders and veterinarians.

Consider canine parvovirus as an example. "There's a lot of folklore about the topic, and the new center would provide clear guidelines on vaccination protocols and explain the role of genetic change in the virus and their effects on our ability to protect against this devastating disease of puppies," Dr. Parrish says.

With the knowledge of canine genetics and genomics also strengths at

Cornell, the center will be able to provide the latest information about the use of genetic tests and the best way to breed dogs to avoid the expression of adverse genetic traits, Dr. Parrish says.

Workshops Ahead. When the website is built out, its vetted information will make it rather like "going to the Mayo Clinic website," with focus on dogs instead of humans, Dr. Parrish says. Dog owners, veterinarians and breeders also will be able to attend regular workshops online and in person.

The idea for the canine center initially came about as a way to support dog health research. By coordinating and funding research under one program, as well as fostering new techniques for veterinarians to use in their practices, the center wants to build on Cornell's legacy of achievement, Dr. Parrish says.

Accomplishments over the past decades have included the development of vaccines for distemper and parvovirus; genome studies that increased understanding of canine evolution and domestication, and the first gene therapy to restore sight to a congenitally blind dog.

In addition to Dr. Parrish, who has long studied canine parvovirus and the canine influenza virus, the six-member faculty advisory board consists of ophthalmologist Eric Ledbetter, DVM, ACVO; clinical pathologist Tracy



CORNELL UNIVERSITY PHOTOGRAPHY

Center Director Colin Parrish, Ph.D., has specialized in the study of canine parvovirus and the canine influenza virus.

Stokol, B.Sc, Ph.D.; internal medicine specialist Kenneth Simpson, BVMS, Ph.D.; reproductive biologist Alex Travis, VMD, Ph.D.; Adam Boyko, Ph.D., whose research focuses on the genomic investigation of dogs as a model of genetic disease; and Vicki Meyers-Wallen, VMD, Ph.D., who researches the genetic causes of inherited disorders of sexual development in dogs, defects that have proven very difficult to eliminate from many purebred breeding lines.

The center got its start thanks to a Welsh Springer Spaniel named Bryna, whose orthopedic problems prompted her owner, Barbara Herndon, to turn to a Cornell-educated veterinary surgeon and left her grateful to the college. A donation from Herndon's estate provided money to launch the Canine Health Center, with ongoing support anticipated from other donors as well as foundations and corporations. ♦



CORNELL UNIVERSITY PHOTOGRAPHY

The offices of the Cornell Canine Health Center will be located on campus at the Baker Institute for Animal Health. The institute has carried out research on cancer, genetics, infectious disease and reproductive biology for more than a half century.

WHAT YOU SHOULD KNOW

Visit the **Cornell Canine Health Center** at www.vet.cornell.edu/canine.

DAY CARE... *(continued from page 4)*

example, if there are 25 dogs, the play area should be about 2,500 square feet."

The center should be odor-free, well ventilated and scrupulously clean inside and out, so there's less risk of parasites and disease being transmitted

through feces, Dr. Houpt says. Small and large dogs should have separate areas to avoid conflict.

Dogs should be fed in their own enclosures to reduce the chance of resource guarding. In your inspection, make sure the dogs aren't possessive about toys as

well. That can also escalate into conflicts.

Once your dog has started attending a day care, look for signs he's eager to go there. If he pulls you in the door upon arrival, he likes it, Dr. Houpt says. If his tail and ears are down, he shouldn't be going there. ♦

BEHAVIOR

CORNEA... (continued from the cover)

endothelium, a single layer of cells that primarily keeps the cornea dehydrated for optical clarity; and Descemet's membrane, a thin, strong tissue that protects against infection and injury.

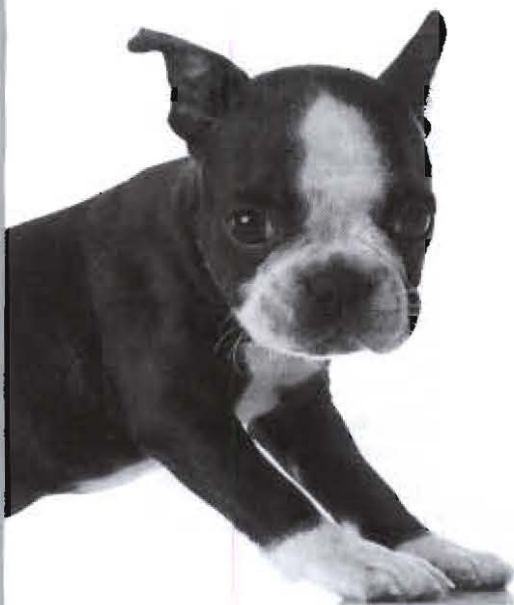
A corneal ulcer is an erosion of the epithelium into the stroma, where fluid from tears gives the cloudy appearance to the eye. Corneal ulcers can develop for a number of reasons. "We always have an evolving appreciation of the underlying causes," Dr. Ledbetter says. They include:

- ◆ **External injury** from fights, accidents, thorns or the dog's rubbing his face against sharp or abrasive objects. This can reduce the cornea's anatomical and physiological defenses, resulting in secondary corneal infections.

- ◆ **External irritation** from ingrown eyelashes, dirt trapped beneath the eyelid from dirt tracked into the house and exposure to caustic or harmful chemicals, such as shampoos and household cleaners.

- ◆ **Bacterial infection** of the eye. A culture is often needed to determine the correct antibiotic to be used for a bacterial infection.

- ◆ **Foreign bodies**, such as grass seeds and other debris, can adhere to the surface of a dog's eye or become trapped behind the eyelids.

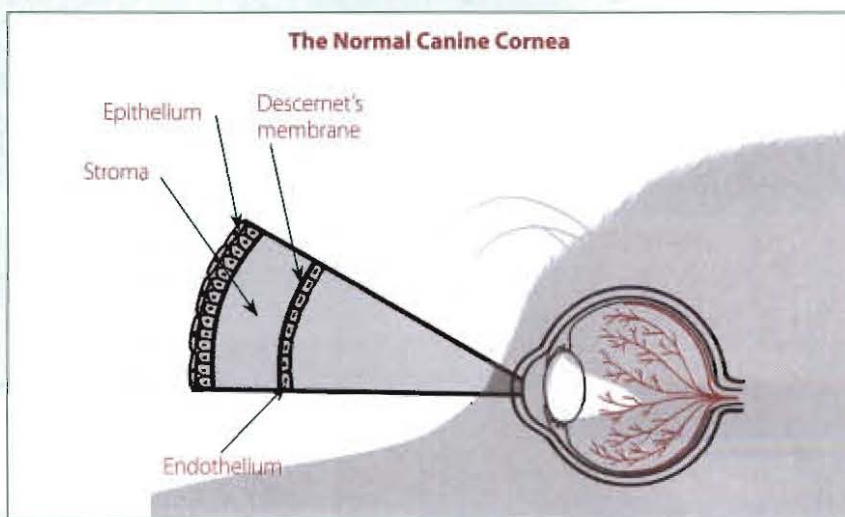


BIGSTOCK

THE ANATOMY OF THE CORNEA

The cornea, the clear coating of the eye that admits light, has layers of specialized skin cells, including:

- ◆ The epithelium, the outer layer of tissue covering the cornea, keeps foreign material, such as dust, water and bacteria, from entering the eye. It also absorbs oxygen and cell nutrients from tears and distributes them to the rest of the cornea. Its tiny nerve endings make the cornea sensitive to pain when rubbed or scratched.
- ◆ The stroma are connective tissue cells composed of water and flattened plates of collagen fibers, which provide strength, elasticity and form to the cornea.
- ◆ The endothelium is a single layer of cells whose primary function is to keep the cornea dehydrated to help maintain vision.
- ◆ Descemet's membrane beneath the stroma consists of a thin layer of transparent tissue — collagen fibers differing from those in the stroma — covering the inner surface of the cornea. It's named after the 18th-century physician Jean Descemet.



ALAYNA PAQUETTE

- ◆ **Facial nerve paralysis** may render the eyelid unable to completely close, losing the ability to blink, which is an important function in protecting the eye. Causes of facial nerve paralysis include lesions of the middle ear or petrous temporal bone, a dense pyramid-shaped bone at the base the skull. It can develop from inflammation and the result of surgery and trauma.

Some breeds are more susceptible to corneal ulcers, particularly short-faced

Boston Terriers and other short-faced breeds are more susceptible to corneal ulcers because their prominent eyes put them at risk of eye injury.

dogs, because their prominent eyes put them at greater risk of eye injury, Dr. Ledbetter says. Those breeds include Boston Terriers, Bulldogs, Lhasa Apso, Pekinese and Pugs. The dogs have extremely shallow eye sockets, and any blow to the head, even a fairly minor one, can result in an eye injury. Eyelid problems, such as infections and dry eyes, are also common in these so-called brachycephalic breeds.

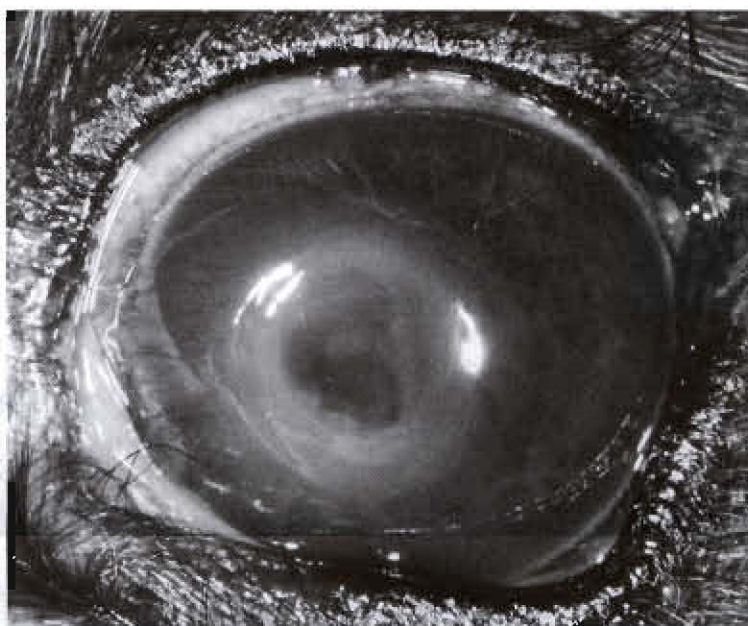
A bacterial eye infection in any dog should put a veterinarian on high alert, Dr. Ledbetter says. "You need to treat it much more aggressively, because those are considered emergencies."

Rupture of the Eye.

A bacterial infection can erode through the cornea. If the erosion continues to Descemet's membrane, a deep ulcer called a descemetocoele forms. "Descemetocoeles are very fragile and may lead to rupture of the eye with subsequent leaking of fluid, collapse of the eye and possibly leading to blindness and loss of the entire eye," Dr. Ledbetter says. "A surgeon can perform grafting to try and correct the rupture, but that may be a step too late. Once they rupture, they may not retain vision, so a primary goal of treatment is to prevent that from happening."

When surgical grafting is performed, "The tissue is usually harvested from the dog's own eye, but synthetic and other biological graft material are also available," he says. "Some eyes can be saved with surgery."

In an ophthalmic exam, veterinarians will stain the eye with fluorescein,



The veterinarian stained the dog's eye with fluorescein and used a blue light to reveal an infected corneal ulcer.

ERIC C. LEDBETTER, DVM, DACVO

an orange substance that under a blue light that can reveal foreign bodies and damage to the cornea. They might also test for tear production, obtain cultures and perform a microscopic examination of tissue.

Other common diagnostic tests might include cultures, a study of cells or histopathology — a microscopic examination of tissue. "Goal No. 1 of

treatment should always be to attack and eliminate the underlying cause whenever possible," Dr. Ledbetter says.

After the cause is found and removed — or in the case of a wound, healed — the next step is to prevent secondary infections and apply a topical antibiotic or administer an antiviral medication if the cause viral. Antibiotic drops are effective only for a few hours and must be applied frequently, so often longer-lasting ointments are applied.

Pain Control. In some cases Dr. Ledbetter prescribes medication, such as Atropine, to control pain. A side effect of Atropine is that it makes a dog light sensitive for days after the medication is halted. Atropine is also known to have a bad taste, and if it gets in the dog's mouth during application, drooling can occur and administering the medication again could become more difficult.

Veterinarians re-examine patients two to three days after treatment to ensure healing is progressing. If it's not, additional treatments or surgery may be necessary.

The fees for treating a dog with a corneal ulcer will vary from clinic to clinic. "The costs are much lower when getting appropriate treatment earlier than if treating secondary complications, such as infections," Dr. Ledbetter says. "Then the costs will rise substantially."

And the prognosis: "In general, if it's an uncomplicated ulcer, then the prognosis is good. With secondary causes or if the problem is repetitious, then it can be guarded or poor. The critical message should be to seek appropriate care early in the course." ♦

WE SEE MORE COLORS AND FOCUS BETTER, BUT THEY EXCEL IN TWO OTHER SENSES

Dogs don't see as well as we do, at least for distance and focus. Estimates are that their vision ranges from 20/50 to 20/150, compared to optimum 20/20 in people. That means what we see in detail at 50 or up to 150 feet, they see well only at 20 feet.

Dogs are also limited in discerning colors, especially red and green, because of a difference in the color receptors — called cones — in their retina, the light-sensitive layer of tissue at the back of the inner eye. They have two types of cones. We have three.

But dogs have us outmatched in low-light vision. They can see better at night, which provided an advantage in their evolution as hunters. What's more, the anatomy of dogs with eyes on the sides of their head affords them a wide visual field — a 240-degree binocular field, compared to our 200 degrees. And as for their senses of smell and hearing? We're outmatched again, as science and personal experience have shown.



Katherine A. Houpt, VMD, Ph.D., here with her West Highland White Terrier, Yuki, provided the answer on this page. Dr. Houpt is a diplomate of the American College of Veterinary Behaviorists and emeritus professor at Cornell University College of Veterinary Medicine.

Please Share Your Questions
We welcome questions of general interest on health, medicine and behavior. We regret however, that we cannot comment on specific products and prior diagnoses. Please send correspondence to:

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COMING UP ...

ANEMIA



LYME DISEASE



NOISE PHOBIA



REHABILITATION

A Tough-to-train Beagle Won't Come Reliably When Called

Q I have a 4-year-old Beagle I adore in so many ways but not this one: He sometimes refuses to come when called. When I got him at the age of 2 from a rescue group, I thought he might be deaf. I'd call, and he'd look away and hold that pose in profile. He now comes but only when it seems to suit him.

I've tried some online suggestions about using a long rope to call him for treats while he's on his leash. He wasn't that interested. I think for safety's sake I need him to learn to come when called. Please help!

A You are right he should come for safety's sake — both his safety and that of the rabbit he is chasing. Beagles can indeed be adorable, but they are notoriously and even statistically hard to train. In addition, the Off-Leash Recall (the Come command) is much more difficult to teach compared to Sit, Stay and Down.

The first rule: Never punish your dog for not coming, even verbally because he will be less likely to return or even let you approach. I know how frustrating it is when a dog won't come. My own dog turns and looks at me and then runs faster — in the opposite direction. I like to think when she knows I am there, she is more confident in her journey, but she may be thinking "Can't catch me!"

The next step: Work on his Come command in the house. Increase his motivation by cutting down on meals. He should not have free-choice food for this purpose, which will also help you control his weight. Beagles do tend to become portly. Now that he is hungrier, he will be more interested in treats. You want a delicious tiny treat that is gone in an instant.

Some dogs adore cantaloupe or watermelon. Others find bananas irresistible. Most dogs prefer meat. You can buy freeze-dried liver or chop up chicken into tiny bits. You can cut a hot dog into

many pieces (60 is the record). A pouch clipped to your waistband is a handy place to keep treats.

Start training in the house where he is most likely to come. Ten times a day call him and give him a tiny food reward for obeying. You might alternate that with the Stay command. When you have had him Stay, the Come command releases him from the Stay, and he gets three rewards — release from Stay, proximity to you and a treat.

When he is perfect in the house, train him outside on a 30-foot leash. If he does not come, you can pull him toward you, but reward him for coming toward you even though it may not have been voluntary. Every time you take him for a walk, call him to you and reward him for coming six to 10 times per walk. The next step is to use fishing-line — it is lightweight so he doesn't know he is tethered — and call him. When he is perfect at fishing-line recall, then and only then, you should try off-leash recall. The safest thing is to test him in a fenced area, a tennis court or empty dog park.

You could use clicker training to help him know what it is you expect him to do. It involves conditioning the dog to associate the click with a food reward. To do this, give him a food treat and click just as he is eating it. Repeat 10 to 20 times, and he should have learned that the sound means something good.

The click is not a signal to perform a behavior. The sound becomes rewarding itself and gives you time to give your dog a food reward. The sound also tells him he has done the right thing. Practice clicking when he sits to perfect your timing. Then begin to click when he walks one step toward you when you say Come. After a few repetitions of clicking for one step, click only after he has taken two steps. See clicker.com for more information.

One more hint: Always use the same word. Don't say "Come" sometimes and "Here" the next. Also, do not use his name. You may get several dogs when you say "Come," but that is better than not getting your Beagle. Good luck! ♦

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