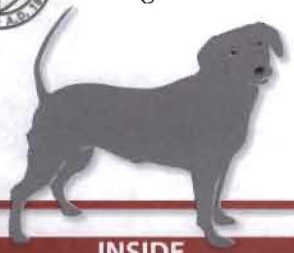
Cornell University
College of Veterinary Medicine

DOG Watch

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

Vol. 16, No. 10 ❖ October 2012



INSIDE

IN THE NEWS ...

A test reveals arthritis before signs appear

Researchers at the University of Missouri's College of Veterinary Medicine have developed a test to detect osteoarthritis in dogs and humans before signs of the disease even appear.

The study was published in the *Journal of Knee Surgery.* Researchers developed the test by analyzing joints and urine of dogs with arthritis. The test is being adapted to human patients. "With this biomarker test, we can study the levels of specific proteins that we now know are associated with osteoarthritis," says James L. Cook, DVM, at Missouri.

The test can be run from a single drop of fluid from a patient's joint, obtained with a small needle. "Not only does the test have the potential to help predict future arthritis," Dr. Cook says, "but it also tells us about the early mechanisms of arthritis, which will lead to better treatments in the future." ❖

Before You Adopt From a Shelter

Ask if its medical practices include vaccinating on entry to avoid outbreaks of communicable diseases

As a pioneer in the emerging field of shelter medicine, Cornell University has embraced two big challenges: enhance each dog's and cat's mental and physical health to improve their chances of adoption, while improving the health of the overall shelter population.

BIGSTOCK

One simple but effective way: begin shelter medicine the minute a stray or surrendered animal enters the door by providing vaccination against the most common infectious diseases. The concept is known as herd immunity, or safety in numbers. It's dictated by the sheer number of animals in the nation's 4,500 shelters — some 10 million annually.

Population-oriented. "I know that we could dramatically reduce the amount of infectious diseases in shelters if we could get more shelters to adopt true population health-oriented programs as opposed to just treating individual animals," says Jan Scarlett, DVM, Ph.D., program director at Maddie's Shelter Medicine Program at Cornell University College of

(continued on page 6)

When Aggression Suddenly Emerges

Pain from a medical problem, such as arthritis or dental disease, could be the likely — and often treatable — cause

Your dog tends to be mellow, maybe a little mischievous, but that's part of his charm. Imagine your shock, then, if you went to pet him one morning, and your sweet-natured pup bared his teeth and growled like Cujo.

Aggression in dogs— biting or threatening to bite another dog or a human — has a variety of widely recognized causes, from breed disposition to lack of socialization. When the onset is sudden, however, there's a good chance that the source could be a health problem and that you need to make an appointment with your veterinarian.

Uncommon Reason. "A medical cause for aggression is relatively infrequent, but it must always be ruled out," says Katherine A. Houpt, VMD, Ph.D., diplomate of the American College of Veterinary Behaviorists and emeritus James Law Professor of Animal Behavior at Cornell University's College of Veterinary Medicine. "The primary cause of medically based aggression is pain, no matter what the source of that pain."

Anyone who has attempted to trim a dog's nails and accidentally cut into the quick can attest to the dog's reflexive reaction to injury. But dogs tend to hide pain that isn't sharp, so it's often more difficult to detect.

Arthritis is a common cause of discomfort in older dogs, and owners of large-breed dogs who are subject to hip dysplasia, including German Shepherds, Labrador Retrievers, Golden Retrievers and Rottweilers, should be especially aware of the possibility that their dog is hurting. Untreated periodontal disease — in the worst case, a

(continued on page 5)

DOG Watch

EDITOR IN CHIEF
William H. Miller, Jr., VMD, Dipl ACVD, Professor, Clinical Sciences

EDITOR
Betty Liddick

ART DIRECTOR
Mary Francis McGavic

Cornell University College of Veterinary Medicine

For information on pet health, visit the Cornell University College of Veterinary Medicine website at www.vet.cornell.edu.

DogWatch® (ISSN: 1098-2639) is published monthly for $39 per year by Belvoir Media Group, LLC, 800 Connecticut Ave., Norwalk, CT 06854-1631. Robert Englander, Chairman and CEO; Timothy H. Cole, Executive Vice President, Editorial Director; Philip L. Penny, Chief Operating Officer; Greg King, Executive Vice President, Marketing Director; Ron Goldberg, Chief Financial Officer; Tom Canfield, Vice President, Circulation.

Postmaster: Send address corrections to DogWatch, P.O. Box 8535, Big Sandy, TX 75755-8535.

For Customer Service or Subscription information, visit www.dogwatchnewsletter.com/cs or call toll free: 800-829-5574.

Emergency help for pets

When the worst wildfires in Colorado history swept the state causing thousands of evacuations, the American Humane Association sprang into action. It deployed personnel, volunteers, supplies and its 16-wheel, 82-foot-long Red Star Rescue Rig to help animal victims.

Red Star Rescue Service was a state-approved first-responder, with the rig providing emergency operations, sheltering and care to lost pets. The effort achieved 100 percent success. "During this deployment, we helped 124 animals and reunited every single one of them to their families," says AHA spokesman Mark Stubis.

The service and the rig — complete with a mobile operating room — have saved more than 64,000 animals in major relief efforts in the past five years. The rig's work in Colorado and in the year to come is made possible in part by a $200,000 pledge from MarsPetcare US, makers of Pedigree Food for Dogs and Whiskas Food for Cats, among other brands.

The association's work began in 1916 at the request of the U.S. Secretary of War to save wounded horses on European battlefields. It continued from the Great Ohio Flood of 1937 to Hurricane Katrina to earthquakes in Haiti and Japan. Red Star teams also worked with 300 search-and-rescue dogs at the World Trade Center and the Pentagon after the 9/11 terrorist attacks.

Now, says Robin Ganzert, Ph.D., AHA president and CEO, the AHA is bracing "for what is shaping up to be another record storm season."

Benefit of dog ownership

Another study has emerged indicating that dog and cat ownership can protect children from developing asthma. Researchers at the University of California in San Francisco found that bacterial communities in house dust from homes with a cat or dog is *distinct* in composition from homes without pets.

"This led us to speculate that microbes within dog-associated house dust may colonize the gastrointestinal tract, modulate immune responses and protect the host against the asthmagenic pathogen RSV (respiratory syncytial virus)," says researcher Kei Fujimura, Ph.D. She adds that the study is the first step toward identifying the microbial species that offer protection against this respiratory pathogen.

RSV, a common infection in infants, can show mild to severe respiratory symptoms. A severe infection is associated with a higher risk of developing childhood asthma. The disease is highly communicable, spread through droplets containing the virus in a cough or sneeze. It also can live on surfaces, hands and clothing.

The researchers presented their findings at this year's annual meeting of the American Society for Microbiology.

An Initiative for Canine Athletes

The American Kennel Club Canine Health Foundation has launched an initiative to award grants to researchers studying sports-related injuries in dogs. The Canine Athlete Initiative will support cutting-edge studies on orthopedic problems, conditioning to achieve maximum performance, preventing injury and innovative rehabilitation techniques.

"We are also educating the public on the joys of participating in canine athletic events, as well as the value of preventive examinations and optimal nutrition to keep all dogs at the top of their game," the foundation says.

Common canine athlete injuries include cranial cruciate ligament rupture, shoulder instability, bicep injury, tendon tears, achilles tendinopathy, hip and elbow instabilities, fractures, dislocations and osteoarthritis, according to the CHF. ❖

BIGSTOCK

Breeds with long, swooping tails such as German Shepherd Dogs are likely candidates for tail fractures.

Treat Minor Tail Injuries at Home

More serious trauma such as significant pain, fractures and bleeding will warrant a trip to the veterinary clinic

A wagging tail is a classic indicator of a dog's mood, but its rapid movement can also put it in harm's way. Injuries to the tail may be minor, needing nothing more than simple at-home care, or they may cause significant pain and bleeding, requiring a veterinary visit.

Traumas to the tail range from "happy tail"— injuries that occur when a dog repeatedly thumps his tail against a hard surface— to fractures, to breed-specific conditions such as screw-tail in Bulldogs, says surgical specialist James A. Flanders, DVM, at Cornell University College of Veterinary Medicine.

Happy tail, one of the most common types of injuries, is often seen in Golden and Labrador Retrievers, Greyhounds and other breeds with outgoing personalities and long tails. The combination leads to trauma when dogs whip the tail back and forth against a door or wall.

Result of Happy Tail. "They often can traumatize the tip of their tail," Dr. Flanders says. "They might have adapted at home, but if they're taken to a boarding kennel or to the veterinarian and put in a cage and they're still happy, they'll whap their tail against the walls of the cage or kennel and they don't notice the discomfort."

You can treat happy tail or other minor trauma by cleaning the wound and applying antibiotic ointment. If necessary, wrap the tail in gauze and use surgical tape to hold it in place. "If it's an acute injury, where the bleeding is active, it's good to change the wrap fairly frequently, at least once a day," Dr. Flanders says. "Then if it seems to have stopped bleeding and it's not moist under the bandage, you can leave the bandage on for a couple of days. Once it seems to be on the road to recovery, you wouldn't need to bandage it anymore."

In serious cases of happy tail, a bleeding ulcer can develop on the end of the tail. It's difficult to treat because of the challenge of getting and keeping a wagging tail bandaged. One way of protecting it is to put a plastic syringe case over the tip and tape it. Nonetheless, some dogs develop chronic ulcers on the tail and must have it shortened to prevent their recurrence.

Delayed Bleeding. A common cause of a tail fractures is their being caught in a slamming door. Then blood can flow from the injured tissues. The tail is highly vascularized, meaning it has many blood vessels. The tail may appear normal at first glance, but lacerations can bleed heavily when the dog wags his tail, flinging blood.

A fractured tail may heal in something less than a perfect straight line, resulting in a crooked tail. Veterinarians rarely perform surgery to straighten a bent tail. The tail bones are so small that they are not amenable to standard pin or plate fixation that might be used to fix a fractured leg. "Once in a while, a big, heavy tail with a fracture is going to cause enough discomfort over time that we'll recommend amputation to shorten the recovery course," Dr. Flanders says.

Breeds with long, swooping tails such as German Shepherd Dogs are likely candidates for tail fractures, Dr. Flanders says. Nordic breeds like Siberian Huskies are less prone to those injuries because their tails curl over their backs — they're more protected. The breeds also have less chance of developing happy tail.

Cinnamon Bun Appearance. Bulldogs with their curly tails can be predisposed to screw-tail, a skin infection that develops when the bones of the tail are abnormal. The dogs might have several normal caudal vertebrae (tail bones) that are attached to the sacrum (the bone at the base of the spine), but the caudal vertebrae toward the tip of the tail are tiny, atrophied and crooked. The skin covering these crooked bones resembles a cinnamon bun, woven in on itself, creating deep cavities. When the skin secretes its normal oils, bacteria and yeast can proliferate in the folds, causing painful, odorous ulcers if owners don't scrupulously clean and dry the area. In severe or recurring cases, surgeons must amputate the tail.

While tail amputation can change a dog's appearance, it won't affect his innate personality. Dogs who have lost a tail don't seem to notice. When they're happy, they'll wiggle their rear with vigor and project all the character they've always possessed. ❖

The Environment's Impact on Nutrition

Food quality counts but so do the setting, cleanliness, frequency and the stressful presence of a food bully

Bringing out the nutritional best in you dog goes beyond the food in the bowl. Frequency of meals, location, bowl cleaning and other environmental factors also impact the quality of his health.

"One of the biggest problems is that too many owners over feed their dogs, and as a result, too many dogs become overweight and some even become obese," says nutritionist Joseph Wakshlag, DVM, Ph.D., Associate Professor of Clinical Nutrition at Cornell University College of Veterinary Medicine. "Some dogs are real masters at being chowhounds and give you those begging eyes when you sit down to eat. You need to not give in for the sake of their health."

Dr. Wakshlag encourages owners to work closely with their veterinarians to select diets that provide quality protein and well-balanced ingredients that best suit each dog's age, breed, health and activity level.

"I recently completed a study using pedometer technology with dogs and found a very strong correlation between body condition score and average daily number of steps," he says. "This suggests either that obese dogs walk less than thinner dogs or that walking less predisposes dogs to obesity."

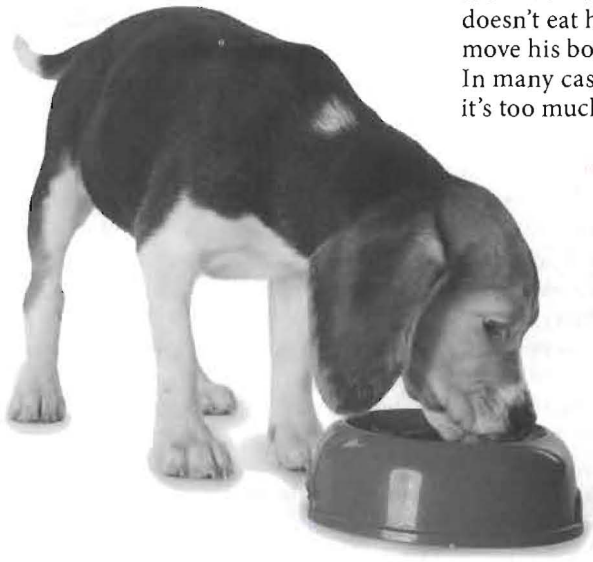
To make mealtime more satisfying and safe for dogs, Dr. Wakshlag identifies six ways to improve their environment:

1) Serve up two meals daily. In general, dogs tend to be gorgers, but you can maximize their metabolism by feeding them a meal in the morning and one in the evening rather than one big meal a day. Dr. Wakshlag also advises to eat your dinner first before feeding your dog to maintain your higher rank, especially with dominant dogs.

2) Don't guess food portions. Bring out the measuring cups and spoons. While suggested food portions are often printed on the bags of commercial dry and canned foods, Dr. Wakshlag says it's vital to measure the food precisely. By knowing the amount you serve, you can adjust the portion if your veterinarian determines you're under or over feeding.

3) Separate dogs at mealtimes — especially if you have a canine food bully or a dog on a therapeutic diet. Stress created by other dogs in the household trying to steal another's food can cause anxiety. Mealtimes should be calm, welcoming events so that dogs eat their food at their own pace. And if a dog doesn't eat his food in 10 minutes, remove his bowl until the next mealtime. In many cases, your dog is telling you it's too much food.

4) Thoroughly soak and clean the bowls. They can be coated with biofilm from saliva if not washed regularly, and this biofilm is a great home for microbes like salmonella. To properly clean the bowl after meals, Dr. Wakshlag recommends soaking it in a bleach solution (one to two capfuls of bleach per gallon of water) for at least 10 minutes. Then wash it in warm water with mild detergent, thoroughly rinse and allow to air dry.



BIGSTOCK

If your dog doesn't finish a meal 10 minutes, he's telling you that the serving is too big.

5) Resist buying gigantic bags of food. You'll get more than you bargained for — increased risk of the food becoming rancid and contaminated. Instead, Dr. Wakshlag suggests storing a small or medium-sized dry food bag inside an air-tight plastic food storage bin. "Emptying the food into a plastic container — even though it is air tight — can still cause food to go rancid," he says. "That's because there are fats sprayed on the food and it lines the inside of the food storage container. If you don't completely empty and clean the food container before adding a new bag of food, it can cause the new food to go rancid quicker."

Rinse the container, add the bleach solution and allow it to soak for 20 minutes, then rinse and dry it completely before adding a new batch of food. "If you just keep the food in the original bag and put it in the plastic bin, you don't have to worry about cleaning the bin," Dr. Wakshlag says. "Just throw the bag away."

6) Scrutinize ingredients listed on floor-cleaning products before buying them. Dr. Wakshlag says cleaning products containing bleach are effective in killing viruses on the kitchen floor. However, dogs have sensitive noses and some may be repelled by the products' odor. He recommends not cleaning the floors immediately before meal times — it has the potential to dampen your dog's appetite.

His final advice: "Keep your pets out of the kitchen when preparing food. It can be dangerous to have them underfoot. You can trip on them, or they can get their front paws burned by leaping up on the stove. I encourage people to not feed their pets in the kitchen and instead feed them in a separate area." ❖

BEHAVIOR ... *(from cover)*

receding or abscess of the gums that makes eating difficult— is another source of distress that may lead to aggression in dogs of all ages.

Eliminating the Behavior. Successfully treating the medical problem — pulling a diseased tooth, for example— should eliminate the behavior. Painkillers are usually effective in treating pain-based conditions that can't be cured or that the owner can't afford to treat surgically, such as hip dysplasia.

A well-known cause of sudden onset aggression is rabies. "Fortunately, we haven't had rabies in dogs in long time since most states require rabies vaccination," Dr. Houpt says. "But you still have to consider that as a possibility."

Disorders of the brain, including trauma from accidents, are the other prime reason for behavioral changes. The following are the most common:

- *Hydrocephalus:* Toy breeds and bracycephalics are particularly prone to this congenital condition, also known as water on the brain. The ventricles of the brain become enlarged and the cerebrospinal fluid can't escape, resulting in a loss of brain tissue.
- *Lissencephaly:* In this congenital brain disorder, the cerebral cortex is smooth rather than having the usual folds. Lhasa apsos and Chihuahuas are among the breeds predisposed to the condition.
- *Brain tumors:* Dr. Houpt has encountered many owners who are convinced that their dogs have a brain tumor because "he's 2 years old and suddenly has begun to bite," but dogs mature socially at 2 years old and are likely to show aggression for the first time then. On the other hand, "If you have a 10- or 15-year-old dog and suddenly he's showing aggression, then it could be a brain tumor," Dr. Houpt says.
- *Canine cognitive dysfunction:* Sometimes called canine Alzheimer's, this debilitating brain disease creates confusion and disorientation that may lead to altered relationships with household humans and pets. A formerly friendly dog may become aggressive, tense and anxious.

BIGSTOCK

Normally cheerful and affectionate Springer Spaniels can become aggressive during partial epileptic seizures.

- *Epilepsy:* Many dogs with epilepsy are disoriented for a period of time after their seizures subside and may become aggressive, especially if startled; and some types of epileptic seizures, often referred to as partial seizures, affect behavior directly, causing periods of aggression. Springer Spaniels, Cocker Spaniels, Chesapeake Bay Retrievers, Bull Terriers, Poodles and Golden Retrievers are predisposed to these types of seizures, which, like the other types, usually respond to anticonvulsant drugs.

Owners don't always accurately assess their dog's change in behavior. Some don't notice the early warning signs of aggression or aren't concerned by those signs until the behavior escalates— say, from growling to biting. But, Dr. Houpt says, "In general, if we have an animal, especially an older one, that presents for aggression with no known cause, we always perform at least a good physical examination, a chemistry screen and a complete blood count to rule out medical causes before we try behavior modification and drugs." ❖

CASE HISTORIES SUPPORT A LINK TO HYPOTHYROIDISM

Hypothyroidism, a shortage of thyroid hormone, is often cited as a cause of aggression, particularly in young dogs. A great deal of anecdotal evidence exists for the linkage. Case histories in which a dog was treated for low thyroid levels and stopped being aggressive support this hypothesis. There have been no published studies, however, and there doesn't seem to be much clinical evidence. Nevertheless, behaviorist Katherine A. Houpt, VMD, at Cornell says, "We always test young dogs for hypothyroidism because that's treatable, whereas changing the dog's genetic makeup is not."

SHELTER... *(continued from the cover)*

Veterinary Medicine. "We're on the brink of convincing shelters and training enough veterinarians in the area of population health."

Infectious diseases like parvovirus, for example, can quickly travel from dog to dog in shelters. "We advise vaccinating for the most common infectious agents, including parovirus and distemper, at entry," Dr. Scarlett says. "It does take time for an animal who has never been vaccinated to build immunity, but if a vaccinated dog is exposed to disease, it can either reduce the extent of disease or prevent it entirely, depending on the agent in question.

"If a dog is vaccinated, it stops the transmission to other animals. All it takes is one nasty parvovirus outbreak to occur, and all the money a shelter saves by waiting to vaccinate until an animal is adopted is down the drain. The cost to curb a parvovirus outbreak is far more expensive than the cost to prevent it by having all animals vaccinated upon entry."

Maddie's Shelter Medicine Program at Cornell, directed by Elizabeth Berliner, DVM, provides training for veterinary students in shelters.

Risks for Puppies. Parvovirus is a highly contagious disease spread among dogs by direct or indirect contact with their feces. More than 1 billion virus particles can be present in a teaspoon of feces, and the virus can be shed in the stool for seven to 12 days after exposure in dogs. The disease causes severe vomiting and in some cases, respiratory or heart failure, especially in young puppies.

"Making matters worse is that this virus is among the hardiest of pathogens in the shelter environment," says Dr. Scarlett. "Something so simple but so vital is to know what disinfectants kill the parvovirus and which ones do not. For example, regular bleach will kill the parvovirus, but quaternary ammonium products will not. Shelters need to have this type of information and have written cleaning protocols."

Dr. Scarlett also advocates separating puppies from adult dogs and separating different litters to reduce the chance of outbreaks of infectious diseases, including canine distemper.

In addition to disease control, Cornell's shelter medicine team provides guidance to rural and urban shelters on behavior. Kelly Bollen, MA, CABC, who serves as a consultant to the program, stresses to shelters that social stimulation involves more than feeding and cleaning up after animals twice a day.

"They need their caretakers to spend quality time with them — petting, brushing, talking to them," she says. "This is especially important for young puppies and kittens who are still in their critical period for socialization (3 to 12 weeks for dogs and 3 to 7 weeks for cats)."

Soothing Music Helps. For shelter animals who must be quarantined while recovering from infectious diseases, Bollen advises shelters to play classical music in those areas because the music has a calming effect on the animals. Specifically, she recommends "Through a Dog's Ear" CDs, special music created from the collaboration of a veterinary neurologist, audiologist and Julliard School-trained pianist. "Other auditory stimulation can include playing a news

THE SUCCESS STORY OF LOLA AND HER PUPPIES

Veterinary students enrolled in the shelter medicine curriculum at Cornell University often volunteer to foster shelter animals. It gives them hands-on experience in providing clinicial care, says Elizabeth Berliner, DVM, Director of Clinical Programs for Maddie's Shelter Medicine Program.

Take the case of a yellow Labrador Retriever named Lola, who arrived at the SPCA of Tompkins County in New York State with eight newborn puppies. Animal control authorities had seized Lola and her puppies in an animal cruelty case, Dr. Berliner says.

Lola had been hit by a car a few days earlier but kept in a bathroom without medical attention while attempting to wean her puppies. "When the authorities rescued Lola, her puppies were emaciated and starving, and a couple of puppies were vomiting toilet paper that they had eaten," Dr. Berliner says. "Lola had an open fracture of her right forelimb that was severely infected and she had a temperature of 104.5 degrees (normal range is 101 to 102.5 degrees)."

The Cornell medical team stabilized Lola, treated her infection and performed the necessary leg amputation. Then veterinary students took Lola home for four weeks to supervise her recovery and help her learn to walk on three legs.

"We were also able to save her puppies, all of whom have been adopted," Dr. Berliner says.

station like NPR so the animals stay exposed to the sounds of human voices," she adds.

The Cornell shelter medicine team also encourages shelters to see the value in spaying and neutering dogs, even as young as 6 weeks of age, before making them available for adoption. "For years, veterinarians recommended waiting until kittens or puppies were at least 6 months of age to have them neutered or spayed," Dr. Scarlett says. "But we conducted one of the first studies of the long-term effects and concluded that the risks were minimal if shelters would spay or neuter kittens and puppies who weighed at least 2 pounds and were at least 6 or 8 weeks of age."

"By educating shelters to neuter, vet, de-worm and vaccinate these young animals before they are adopted, we are helping control overpopulation," she says. "Plus, it's a real deal to adopt a pet at a shelter for say, $70, who has already been neutered, vetted, de-wormed and vaccinated. In some parts of the country, it would cost up to $200 alone to spay or neuter a dog or cat."

First in the Nation. The shelter medicine program — begun in 1999 when Cornell became the first veterinary school in the U.S. to offer a formal class in shelter medicine — also conducts research studies, sponsors conferences, offers consultations in person and by phone, and is producing a new generation of veterinarians equipped to address the many issues surrounding the care of companion animals in shelters.

Cornell's shelter medicine veterinary staff goes beyond animal shelters and into the classroom and the field. They train veterinary students enrolled at Cornell and those from other colleges. They also offer a one-year graduate level specialty internship in shelter medicine for veterinarians and ongoing continuing education opportunities for shelter staff.

"I love this work, as it allows me to pull together the two aspects of my work I enjoy the most: service and teaching," says Elizabeth Berliner, DVM, Director of Clinical Programs at Maddie's Shelter Medicine Program at Cornell and lead veterinarian for the Humane Society Veterinary Medical Association's Rural Area Veterinary Services program. "By taking the veterinary students into animal shelters, we provide opportunities to improve the lives of shelter animals while also providing clinical, service-learning opportunities for our students. " The students love it, the shelters are so grateful, and the benefits to the animals are immeasurable." ❖

SEEKING A GUARANTEE FOR ALL HEALTHY ANIMALS

Cornell's shelter medicine program got off the ground thanks to an initial grant totaling nearly $2 million from Maddie's Fund. Cornell recently received confirmation for a $1.4 million renewal valid for the next three years.

Maddie's Fund, a charitable foundation created in 1999 by Dave and Cheryl Duffield in honor of their beloved Miniature Schnauzer, has awarded more than $96 million to animal welfare organizations and veterinary schools to give cats and dogs in shelters new opportunities to find loving, permanent homes.

Its goal is to create a no-kill nation where all healthy shelter animals are guaranteed to be placed in homes. To achieve this goal, Maddie's Fund officials:

- **Work closely** with Cornell and other veterinary schools to incorporate shelter medicine into the curriculum and to provide hands-on training to students.
- **Create systems** to collect and report shelter statistics on a national scale.
- **Encourage animal** welfare groups to work together in their communities to devise ways to improve shelter adoptions.

To learn more about Maddie's Fund, please visit www.maddiesfund.org.

FOR MORE INFORMATION

Maddie's Shelter Medicine Program at Cornell University takes a comprehensive medical and behavioral care approach to improve the health and adoptability of cats, dogs and other companion animals. It offers resources for veterinarians, animal shelter staff and pet owners at www.sheltermedicine.vet.cornell.edu.

TOP 10 REASONS PETS END UP IN SHELTERS

PetHealth Inc., a Canadian company, recently surveyed 800 animal welfare organizations in North America to learn why owners surrender their pets to animal shelters. The top reasons:

1. **Too many pets** — 18 percent
2. **Unwanted/incompatible** — 10 percent
3. **Moving/deployed** — 10 percent
4. **Stray/found/abandoned** — 8 percent
5. **Inability to care for** — 8 percent
6. **Financial/home insurance policy restrictions** — 6 percent
7. **Euthanasia request** — 5 percent
8. **Unwanted litter/pregnant female** — 4 percent
9. **Allergic to pet** — 4 percent
10. **Family health/death of owner** — 3 percent

Katherine A. Houpt, VMD, Ph.D., diplomate of the American College of Veterinary Behaviorists and emeritus James Law Professor of Animal Behavior at Cornell University College of Veterinary Medicine, provided the answer to the first question.

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:

Dog Watch Editor
803 Connecticut Ave.
Norwalk, CT 06854
or email dogwatcheditor@cornell.edu.

COMING UP ...

FATTY TUMORS
❖
EASING HOLIDAY STRESS
❖
PANCREATITIS
❖
EPILEPSY

Q My dog, Luke, has developed a bad habit — he urinates and defecates in inappropriate places on our walks. I've tried unsuccessfully to stop this behavior, but nothing has helped. How can I train Luke to change his behavior?

A *Your dog is probably eliminating involuntarily because he has a very full bladder and/or colon. Most dogs are fairly predictable in their elimination patterns, defecating within 30 minutes of eating. This is the result of the gastro-colic reflex, in which food in the stomach increases the activity of the colon. Walking may stimulate the large colon to move. Considering this, you might try timing the walk to ensure that your dog relieves himself in an appropriate place.*

Afterward, praise him and give him a treat. Keep in mind the type of place that Luke prefers for defecation because dogs can be choosy about it, preferring grass, bare soil or something else. It is harder to predict urination. Most dogs need to urinate about five times a day. It is better if you take him out on a schedule rather than rely on him to tell you when he needs to go outside. Again, you should also reward urination (not the marking that male dogs do, even castrated ones) with praise and a treat.

Feeding meals on a schedule rather than letting the dog graze will regulate both his defecation and his urination, because dogs drink mostly after they eat. You should try to have separate walks for elimination and exercise. You might even use a different collar for each walk. Also, I recommend giving him some "sniff" time so that he can enjoy the outing.

Q I recently had a scare with my 5-year-old Pug, Barney. One afternoon he had difficulty breathing and stretched his neck, inhaling in loud gasps. His distress — and fright — seemed so great that I honestly was afraid he was going to die.

I rushed to the veterinarian and learned he had had reverse sneezing. The vet said to give him a half of a small Benadryl pill, and that seemed to help. But now I worry about repeat bouts and am concerned about leaving him alone.

Would you please tell me how common this condition is and its causes so I can eliminate them? I know the condo complex where I live had had the lawn sprayed the day Barney was ill.

Dr. Gretchen L. Schoeffler

A *When reverse sneezing, dogs will typically extend their head and neck while taking rapid, noisy, extremely exaggerated inspirations. Unlike dogs in true respiratory distress, these episodes are random and brief, and dogs are completely normal between bouts.*

Reverse sneezing is usually triggered by irritation to the nasopharynx (back of the throat). This irritation commonly results from allergy or inhalation of an airborne irritant; however, it is occasionally associated with the presence of a foreign body, mass or other abnormality.

Occasional bouts of reverse sneezing are common in dogs and do not require veterinary treatment. Since many dogs reverse sneeze because of allergies or inhalation of airborne irritants, the frequency of attacks may be reduced by reducing exposure to aerosols, sprays, perfumes, tobacco smoke, air pollutants, room fresheners, dusts and powders.

If your dog experiences frequent repeated attacks or develops additional clinical signs, this may signal a more serious problem and warrants an examination. Your veterinarian may recommend further diagnostic tests (CT scan and rhinoscopy) for a better look at the structures within the nose, mouth and the upper airway.

Reverse sneezing is usually self-limiting and does not typically require medication. You may limit the length of the episode by stroking the throat or briefly covering the nostrils to encourage swallowing. A good distraction such as a loud noise may also be effective. ❖

Gretchen L. Schoeffler, DVM, DACECC
Cornell University

CORRESPONDENCE
The Editor
DogWatch®
800 Connecticut Ave.
Norwalk, CT 06854
dogwatcheditor@cornell.edu

SUBSCRIPTIONS
$39 per year (U.S.)
$49 per year (Canada)

Single copies of back issues are available for $5 each. Call 800-571-1555

For subscription and customer service information, visit www.dogwatchnewsletter.com/cs or write to: *DogWatch*, P.O. Box 8535, Big Sandy, TX 7577-8535.

OR CALL TOLL FREE: 800-829-5574