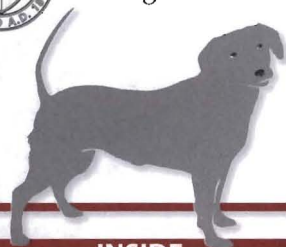




Cornell University  
College of Veterinary Medicine



# DOG Watch

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

Vol. 17, No. 3 ♦ March 2013

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## IN THE NEWS ...

### Chocolate tops the list of toxins at Poison Control

The ASPCA's Animal Poison Control Center has fielded 2 million calls since it began 35 years ago. In announcing the milestone — and working its database — the center determined owners' overwhelming cause for concern: Chocolate has topped the list of ingested toxins for the past decade.

Chocolate contains caffeine-like stimulants called methylxanthines. When dogs ingest them, they can cause vomiting and diarrhea, panting, excessive thirst and urination, hyperactivity, abnormal heart rhythm, tremors, seizures, and even death. Dark chocolate is more dangerous than milk chocolate. As little as 4 ounces of milk chocolate or a half ounce of baking chocolate can cause serious problems in a 10-pound dog.

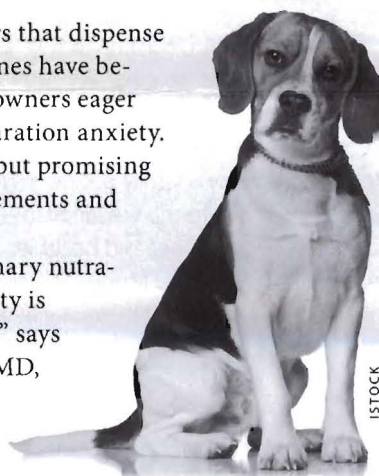
The center's expertise extends beyond cats and dogs. Cases last year involved a pet skunk and an Asian small clawed otter. The center, at (888) 426-4435, offers around-the-clock help for a \$65 fee. ♦

## New Options for Separation Anxiety

*Calming scents, veterinary nutraceuticals and specialized diets show promise in managing stress-related behavior*

Collars and diffusers that dispense calming pheromones have become popular among owners eager to ease their dogs' separation anxiety. Less generally known but promising new options are supplements and specialized diets.

"The area of veterinary nutraceuticals to treat anxiety is becoming quite active," says Katherine A. Houpt, VMD, Ph.D., former president of the American College of Veterinary Behaviorists and James Law Professor emeritus



They miss their 'pack.'

of Animal Behavior at the Cornell University College of Veterinary Medicine. "Dietary supplements with ingredients like green tea, as well as flower essences like Harmonase, are also now available."

Writing in the *Journal of Veterinary Behavior*, behaviorist Theresa DePorter, DVM, says Harmonase Chewable Tablets reduced the fear-related posture called freezing in 20 healthy Beagles when researchers simulated thunderstorms.

(continued on page 5)

## You Can Prevent This Serious Disease

*Diet and general health, along with genetics, play a role in periodontitis, the most common disorder in dogs*

If you've noticed that your dog has bad breath and you're considering eliminating it with dental chews, don't do it. Chances are the source of the odor is periodontal disease, an often painful gum inflammation that can result in bone loss and destruction of oral tissue. If left unchecked, the disease can also pose larger health threats. Masking one of its key symptoms and ignoring the cause can be dangerous. It's time for a veterinary dental checkup.

"Periodontitis has been shown to play a role in such health problems as cardiovascular disease and diabetes," says dental specialist Santiago Peralta, DVM, a lecturer in dentistry and oral surgery at the Cornell University College of Veterinary Medicine.

And it's extremely common — the most prevalent disease in companion animals. The good news, according to the American Veterinary Dental College, is that it is entirely preventable with regular brushing and professional dental care.

**Loss of Teeth.** "If periodontitis, the most serious phase of periodontal disease, is left untreated, it will invariably result in the loss of teeth," Dr. Peralta says. Severe cases can result in a hole in the oral cavity into the nasal passages and a weakening of the jawbone that can lead to fractures. Treatment of more advanced stages may require gum surgery and bone grafts.

(continued on page 6)



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## SHORT TAKES

### Survey: 'The Love Doesn't Translate'

A survey of more than 50,000 U.S. households last year uncovered a puzzling disconnect between owners' beliefs and their actions. Owners increasingly consider their dogs members of the family — about 66 percent compared to 54 percent in 2006. Yet 10.8 percent report that they took their dogs to the veterinarian only when they were sick.

Given the dog population in this country is 70 million, that means about 7 million dogs went to the veterinarian only when they were ailing. "The love for a family pet doesn't always translate into visits to the veterinarian — visits that can lead to a longer and healthier life," says the American Veterinary Medical Association, which reported results of its survey in its "2012 U.S. Pet Ownership & Demographics Sourcebook."

"Even more concerning," the AVMA says, "is that 3.5 percent of dog owners said that they never took their pets to the veterinarian. The reasons: Nearly half — 48.6 percent — said their dogs did not get sick or injured.

"If so many dogs ... are seeing the veterinarian only when they are sick, chances are many are getting sick when they don't need to be," said AVMA President Doug Aspros, DVM. "The human-animal bond is stronger than ever, but we are very concerned that pets may not be getting the preventive health care they need."

The survey also found that:

- ◆ About 81 percent of dog-owning households made at least one visit to the veterinarian in 2011, down 1.7 percent from 2006.
- ◆ Nearly 90 percent of dog owners said routine checkups and preventive care are either very or somewhat important.
- ◆ Spending on veterinary care for dogs totaled \$19.1 billion in 2011, up more than 18 percent from five years earlier.

"What's important to remember is that preventive pet care can help save you money," Dr. Aspros says. "Potential health



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**Despite results of a comprehensive survey** that found owners regard their dogs as family members, millions of their pets go without regular veterinary care.

problems in pets can be diagnosed early — and costs can be reduced — if our pets visit the veterinarian on a regular basis."

### Recalls continue

Possible mold growth prompted Claudia's Canine Cuisine of Maumelle, Ark., to recall packages of DogCandy Fruit Hound Cake and DogCandy Blueberry Hound Cake, according to the FDA.

Mold was found on several cakes after delivery to 130 PetsMart stores in 36 states. The dog treat company determined that the cakes contained higher moisture content because they were packaged while warm and said new procedures are now in place to prevent a recurrence of the problem.

No pet illnesses were reported in connection with the recalled cakes, the company says. It's taking questions at 501-851-0002 from 8:30 a.m. to 5:30 p.m. CST or by email at [info@claudiascaninecuisine.com](mailto:info@claudiascaninecuisine.com).

### A chewing record?

An American Kennel Club survey found that 15 percent of owners cited chewing as a behavior problem in their dogs. One respondent said the family dog had chewed up "six cell phones, one camera, about 15 remote controls and five pairs of sunglasses." The recommended alternatives: Put chewable items out of reach. Provide chew toys or interactive toys in which you can hide a treat. And in the case of a serious chewer, crate him when you leave the house. Ingestion of foreign objects can result in life-threatening internal blockages. ♦



# The Great Debate: Canned vs. Dry Food

*They're fairly equal in dietary soundness and similarly manufactured, but canned has the edge in palatability*

**W**ith all the marketing claims about the virtues of wet and dry food, it can be daunting to choose between them. Which is better tasting and which is the better value? The answers might surprise you. Nutritionist Joseph Wakshlag, DVM, Ph.D, Associate Professor at the Cornell University College of Veterinary Medicine, provides clarity in this question-and-answer session to help you move past hype to good health for your dog.

## Q. Which is more nutritionally sound — wet or dry food?

**A.** I would say they are pretty equal in terms of nutritional soundness. They go through similar manufacturing processes, although kibble gets extruded and canned gets retorted (heated at high temperature in a retort sterilizer), so they both go through a heating process.

## Q. Which has more calories?

**A.** Dry is more calorically dense and canned is typically higher in fat. If I took water out of the canned food and pulverized it into powder, measured a gram of each for caloric density, canned would be more calorically dense because it's typically higher in fat. If you look at volume for volume, a cup of canned has fewer calories than a typical cup of dry, but people tend to feed the whole can. With canned food, you're buying water.

## Q. Do we know which is better tasting and why?

**A.** It's personal preference. Foods higher in protein and fat are more palatable, so canned tends to be more palatable. But dogs will eat anything.

## Q. Are there more carbohydrates in dry or canned food than dogs should have?

**A.** No, there is no evidence that carbohydrate is problematic. In fact, most studies are showing carb is just another source of energy with no benefits or detriments regarding health in normal dogs and cats.

## Q. Is the moisture in canned food an advantage?

**A.** For small dogs, canned may be an advantage because they are more prone to urinary tract issues than large dogs.

## Q. Is it important to choose food only from companies that do feed-trial testing?

**A.** Very few companies do those, and most small niche brands don't. It's just one more layer of guarantee for the consumer. Most foods are formulated based on calculation and analysis, particularly since feed-trial testing is expensive.

## Q. Does the lack of preservatives, such as ethoxyquin, make canned better than dry?

**A.** Some canned foods still have preservatives, but they don't get oxidized as quickly as dry. You can find canned or kibble with natural preservatives that tend to be benign. Ethoxyquin is not bad in the quantities used, because we know after tons of toxicity trials that it takes a lot of it to create kidney or liver damage. It's not used much anymore, and if an ingredient that a manufacturer is using has small amounts in it, and they did not put it in themselves, it does not have to be reported on the label.



Consumers face a wide variety of dog food choices.

## Q. Does kibble have any advantage because it's said to help prevent dental tartar buildup, or is that a myth?

**A.** It depends on if your dog chews or not. Most dogs swallow their food whole. Most kibble doesn't have any evidence that it helps tartar. The tooth hits it and it shatters. The tooth does not sink into the kibble, allowing a brushing action up against the tooth. Some kibble is designed to have a fiber matrix that actually allows the tooth to sink into kibble, and those are good for tartar, but there aren't many of those on the market. You should look for a therapeutic brand, the kind only veterinarians can sell, and look for the Veterinary Oral Health Council seal.

## Q. For dogs with skin issues, is one type of food better than the other?

**A.** No, as skin issues have to do with fat content and fatty acid balance. One would look for more long-chain omega-3 fatty acids in the form of fish or other marine animal or fat sources in food regardless of the form.

## Q. Which is the best value — dry or canned?

**A.** Dry, nearly always. ♦



# Be Ready to Act in a Choking Emergency

*Common hazards are plastic toys, splintered bones and softened rawhide chews*

Our dogs don't live in a protective bubble. Many investigate their world by putting objects into their mouths. Some gobble large amounts of kibble. Both scenarios can put them at risk of choking.

Witnessing your dog adopt a wide-legged stance, coughing, gasping and thrusting his head forward can be frightening. It's vital to know how to act to save his life.

"Dogs most commonly choke on plastic toys, rawhide bones that have softened and become lodged in the throat, and other bones that splinter into smaller pieces," says Dan Fletcher, DVM, Ph.D., assistant professor of emergency and critical care at the Cornell University College of Veterinary Medicine. He suggests this first aid:

**No Obvious Distress.** If your dog is conscious and choking but not in obvious distress, monitor him for a few minutes to see if he can dislodge the object on his own. If not, look carefully into his mouth by grasping the top of his muzzle with one hand and holding the jaw with your other hand to look inside the mouth. If you can easily see the object, remove it, or if your dog is small enough, lift his back end up and see if the object will fall out. If your dog resists or struggles, stop immediately as this will put you at high risk of being bitten.

Some animal-related websites suggest holding a small dog in the air by his back legs to dislodge the object. Dr. Fletcher's advice: Lifting the back legs of a small dog off the ground while the animal continues to stand on the front legs may help dislodge an obstruction, but do not suspend the animal in the air off the ground.

If he's ingested a linear object such as string, tinsel or yarn, do not attempt



to pull it from your dog's mouth. "It may have trailed down the intestinal tract," Dr. Fletcher says. "Pulling these objects can cause the intestines to tear or rupture, leading to life-threatening infection in the abdomen. These animals should be taken to the nearest veterinarian immediately."

If the sounds your dog makes progress from coughing and gagging to a wheezing sound known as a stridor, that's a sign that he's unable to get full breaths of air. He may collapse, become unconscious and even stop breathing.

**Removing the Object.** For unconscious dogs, Dr. Fletcher recommends that you open the mouth, pull the tongue out past the canine teeth and look down the throat. If you can see a foreign object, remove it with your fingers or needle-nosed pliers or tweezers. "But if the object is stuck and there is resistance to removal, it should not be forced out," Dr. Fletcher cautions.

Whether an object is removed or not, a dog who collapses needs veterinary care as soon as possible, even if his condition improves. Call the veterinary clinic to tell staffers you're en route so they can be ready for your arrival. Because dogs depend upon air movement

**Discard toys** if your dog has chewed them into small pieces.

into their lungs to cool them, they can quickly overheat if they have airway obstructions. Dr. Fletcher advises keeping the car's temperature cool and avoid wrapping your dog in a blanket.

The veterinarian will do an initial assessment of your dog's airway, breathing and circulation. If he's not breathing and doesn't have a heartbeat, cardiopulmonary resuscitation will be started to restore blood flow and deliver oxygen to the vital organs.

If the obstruction is severe, your dog will be sedated and an endotracheal tube will be placed into the airway to provide air flow to the lungs. If the object has been swallowed or inhaled into the trachea (the windpipe), surgical or endoscopic removal may be necessary.

"Anytime a dog is choking, he should be seen by the closest available veterinarian immediately," Dr. Fletcher says. "Apparent choking is often due to other processes such as lung or heart disease, or infections or inflammation of the airways that can impede breathing and can rapidly progress to become life threatening." ♦

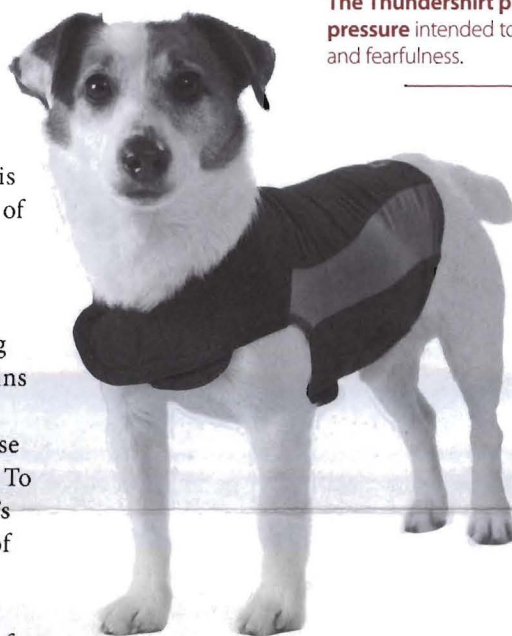


**ANXIETY...** (continued from the cover)

**"Effective Botanicals."** Her conclusion: "This supports past studies demonstrating that the combination of botanical extracts in Harmonease is effective in dogs for the management of stress-related behaviors."

Another recent development is Royal Canin's introduction of Veterinary Diet Calm Formula Dry Dog Food. "This [therapeutic] diet contains ingredients like L-tryptophan and alpha-casozepine that might help ease separation anxiety," says Dr. Houpt. To test the diet, researchers from Japan's Azabu University Graduate School of Veterinary Science fed 44 privately owned dogs first with a control diet, then with the diet under study, each for eight weeks, with a transitional one-week period in between.

After seven weeks on the foods, owners reported on their dogs' behavior in a questionnaire. In addition, the ratio of cortisol (a stress hormone) to creatinine (a product of muscle metabolism) in the dogs' urine was mea-



The Thundershirt provides gentle pressure intended to calm anxiety and fearfulness.

sured to assess their stress response to having their toenails clipped at a veterinary office.

"The study diet seems to improve the ability of individual dogs to cope with stress and may reduce anxiety-related behavior in anxious dogs," the researchers said.

Separation anxiety affects up to 25 percent of all dogs, occurring equally among males and females.

"It is the second most common behavioral issue — the first being aggression," says Dr. Houpt. "New dogs and rescue dogs are particularly susceptible. Beagles are also likely candidates due to their strong tendency to be pack animals."

The first signs may appear at around 18 months. "The most common behaviors are often destructive — digging, chewing and scratching, especially at doors and windows, in an attempt to reunite with their owners," Dr. Houpt says. "Dogs may also resort to howling, barking and whining."

**Medical Causes.** Triggers can include the owner's leaving the house or a change in schedule. "One of my recent clients went back to work after an extended period of time on sabbatical," Dr. Houpt says. "Her middle-aged Sheltie began licking his paws obsessively whenever he was alone. It turned out to be primarily a dermatological issue, which illustrates the importance of ruling out medical issues before attempting to treat behavioral issues."

Other dogs with separation anxiety — even those previously housetrained — may exhibit house-soiling behavior. "In such cases, your veterinarian must first determine whether your dog has bladder, kidney or gastrointestinal issues," says Dr. Houpt.

Because each case of separation anxiety is unique, owners need to consult their dog's veterinarian for a complete assessment and behavior modification program. Most important, says Dr. Houpt, "Remember that your pet is not behaving destructively to be vindictive. He's not trying to 'get you back' for leaving. He's panicked and desperate. We sometimes have owners set up a camcorder while they're away. They often react more empathetically when they see their frantic dog for themselves." ♦

## MEDICATIONS AND MANAGEMENT MAY HELP

"When one of my clients changed jobs, her 6-year-old Pointer Mindy began to vocalize, pace and urinate in inappropriate places whenever she was gone," says Katherine A. Houpt, VMD, at Cornell. She put Mindy on a medication called fluoxetine (Reconcile). "Other anti-anxiety or anti-depression medications, such as clomipramine (Clomicalm), can also help. These are available via prescription from your veterinarian. However, owners should note that medications often take several weeks to have an effect."

Other tactics that may provide a calming effect:

- ◆ Collars and diffusers that disperse pheromones with the scent of a lactating female dog (such as Adaptil).

- ◆ A snug garment called a Thundershirt, designed to reduce anxiety.

- ◆ Long-lasting chew toys that the owner offers only when leaving.

- ◆ Behavior modification techniques, including performing leave-taking activities, such as picking up keys without leaving. And when leaving, doing so without fanfare. "Similarly, upon your return, don't greet your dog until he's calm," Dr. Houpt says.

One technique that doesn't work is punishment, Dr. Houpt says. "Dogs won't connect their behavior with the punishment unless you catch them in the act, and you may end up making the behavior worse."



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

The problem begins when plaque, the soft, sticky substance consisting of food debris and bacteria, accumulates under the gum line, or gingiva. The plaque eventually hardens into calculus, known as tartar. When tartar accumulates under the gums, it promotes additional plaque formation and disease progression.

Gingivitis, as the initial inflammation of the gums is known, is reversible if plaque is removed and its chronic accumulation is controlled or prevented. "The best way to remove plaque is by mechanical means," Dr. Peralta says, "and frequent toothbrushing is the gold standard. Ideally, the teeth should be brushed every day, but a minimum of three times a week is required for brushing to be of any benefit because the presence of dental plaque under the



DR. SANTIAGO PERALTA, DVM, DAVDC

A dog with significant gingivitis.

gum line for more than 24 to 48 hours gives the disease a chance to start."

The progression from gingivitis to periodontitis, the stage at which tissue

attaching the teeth is destroyed and bone is lost, depends on several factors in addition to the continued presence of plaque. They include diet, genetics and general health:

◆ **The role of nutrition.** Contrary to popular belief that wet food contributes to periodontal disease or that chewing raw bones ensures dental health, Dr. Peralta says the most important consideration is the nutritional content of the food. "Dogs who receive a well-balanced, good-quality diet are more likely to have competent immune systems and therefore are less likely to develop periodontal disease than animals whose nutritional status is suboptimal."

◆ **Genetic susceptibility.** Dogs who have been bred to have abnormally shaped upper jaws and altered bites, including brachycephalic breeds such as Pugs, Bulldogs and Boston Terriers, are predisposed to the development of periodontal disease. Sighthounds such as Greyhounds and Afghans — who have narrow jaws — are susceptible, too. In toy and miniature breeds — such as Dachshunds, Yorkshire Terriers, Miniature Schnauzers and Miniature Poodles — bacteria can more easily get trapped between teeth that are crowded, making them more difficult to clean. Owners of these breeds need to be especially vigilant about toothbrushing.

**YOU CAN'T AVOID IT — BRUSHING IS A MUST**

Frequent toothbrushing is the only proven method for the prevention or control of periodontal disease. Chews, diets, water additives and other commercially available products are just aids at best.

Most dogs initially dislike toothbrushing, but if you start slowly, the sessions can be bonding experiences — similar to coat brushing or any other types of grooming that provide the dog with attention:

- ◆ It's best to introduce the procedure early on — soon after his permanent teeth are in — but adult dogs can get accustomed to brushing, too.
- ◆ Be patient and upbeat, keeping sessions short, and lavish your dog with praise.
- ◆ Begin by dipping your finger into low-sodium chicken broth and letting him lick it.
- ◆ Put a little canine toothpaste on your finger for him to lick. Never use human variety toothpaste. It's not intended for ingestion because dogs can't rinse and spit. Move your fingers, coated with toothpaste, slowly around your dog's teeth and gums.
- ◆ When he's comfortable with that step, wrap gauze — dipped into chicken broth or topped with toothpaste — around your finger. Gently rub a few teeth at a time until he's used to the procedure.
- ◆ Next introduce a canine toothbrush by putting something he likes on it — toothpaste if he's come to enjoy that. Slowly put the brush into his mouth and brush a few teeth. Gradually increase the number of teeth you're brushing at every session, always remembering to stop before the dog — and you — get irritated.

**The good news:** You're not expected to floss your dog's teeth.



◆ **Overall health status.** Any disease that can have a negative impact on the immune system, whether directly or indirectly — for example, diabetes, Cushing's disease, chronic kidney disease and cancer, among many others — will make a dog more susceptible to periodontal disease.

Periodontal disease may start at a young age and go unrecognized for years. Early onset and rapid progression are most common in toy and small breeds. But because progression can often be slow, many owners recognize its presence only when the dog is older and the disease may no longer be as treatable.



**Sight hounds with narrow jaws, like Greyhounds,** and flat-nosed dogs bred to have abnormally shaped upper jaws and altered bites are predisposed to periodontal disease.

BIGSTOCK

lowering the bacterial count in the mouth. The problem remains unresolved, Dr. Peralta notes, and the bacteria become resistant.

Some owners worry about the use of anesthesia, especially with older dogs. "If a dog is old but overall healthy, the anesthetic risk is low," Dr. Peralta says. And, according to the American Veterinary Dental College, "The risk of chronic oral infection ... is far greater than the risk of an

anesthetic complication." Veterinarians administer blood tests and other diagnostic tests beforehand, and use up-to-date monitoring equipment during the procedure. Modern types of anesthesia are much less dangerous than the varieties used in the past.

In addition, as a result of local anesthetic blocks, which minimize the depth of general anesthesia required, "Many patients are awake and standing within 15 to 20 minutes of completion of the procedure and go home the same day," according to the AVDC.

With dogs who aren't in the best of health, Dr. Peralta advises discussing the risk versus benefit of dental treatment with your dog's veterinarian. "Because advanced periodontal disease can have a huge impact on quality of life and overall health and contribute negatively to other ongoing diseases, most patients will benefit from periodontal treatment, even if they have other serious medical conditions."

In the end, however, it's up to you to keep up your end of the dental care bargain. "Periodontal treatments performed by a professional are intended to reverse or halt established disease but do very little in terms of prevention if an oral home-care regime is not implemented," Dr. Peralta says. ♦

Even highly trained professionals may not readily recognize the extent and severity of periodontal disease by doing an oral exam. It can be fully documented only by dental probing and full-mouth X-rays, which require dogs to be anesthetized. "Performing a so-called dental cleaning without probing and full-mouth X-rays is many times of little to no benefit for the dog," Dr. Peralta says.

If no major problems have been identified after the tooth-by-tooth diagnosis, the teeth are scaled ultrasonically above and below the gum line and then polished. In addition to the cosmetic effect of giving teeth a smoother, shinier and whiter appearance, polishing removes any plaque that might have been left behind. If advanced disease has been identified, extractions or surgery to access the roots of the tooth by cutting the gums may be necessary.

**The Effective Treatment.** Dr. Peralta emphasizes that the regular veterinary tooth cleaning — the removal of deposits from the surface of the teeth — rather than the administration of antibiotics is the only effective treatment. He particularly discourages the use of "pulse therapy," administering doses of drugs intermittently with the aim of

## WHAT YOU SHOULD KNOW

The first indication of periodontal disease you're most likely to detect is bad breath. Even at more advanced stages, the signs of the disease aren't always obvious, in part because dogs instinctively hide evidence of mouth pain. Some behaviors to look for include:

- ◆ Difficulty picking up and licking food and/or water
- ◆ Pawing at the face
- ◆ Decreased appetite
- ◆ Increased or excessive drool
- ◆ Avoiding hard food
- ◆ Reddened, bleeding or recessed gums
- ◆ Loose or missing teeth





**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 on this page.

**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 ...**

**HIP DYSPLASIA**



**CHEWING**



**PET TRUSTS**



**BEST FOOD  
FOR PUPPIES**

**Keeping order in the pack**

**Q** I've read numerous articles about precautions regarding the introduction of another dog into a multiple-dog household, but I've never read anything about what might happen when the dominant dog leaves the household.

Friends of ours own three German Shepherd Dogs. The oldest, first-owned and dominant, is a female named Nika. The other two are 1- and 7-year-old males. Our friends' son, who originally owned Nika when he lived at home, plans to take her to his new home. The two males have been successfully boarded together, but what might our friends expect after Nika is no longer there to keep order in the pack at home? Also, what measures might they take if a problem arises?

**A** When the currently dominant dog leaves your friends' home, they need to look for "social status aggression" between the two remaining dogs. This can occur if a new dog is introduced into the household or if a dominant animal leaves the household. It occurs more frequently when dogs of equal or nearly equal social status are involved. Usually this is resolved without injury, as the dogs use social posturing and minor skirmishes to sort out the dominance hierarchy.

This type of aggression is usually most intense when food, resting areas, highly desirable toys and/or owner attention are involved. The aggression can be resolved if a stable dominance hierarchy is established among the dogs.

The dogs' owners will need to gain control over both dogs so they will be less likely to exhibit inappropriate behavior toward each other. This can be done through reward-based training to allow the owners to have dependable control over the dogs to stop a fight before it begins. They should not try to stop a fight with their hands, or they can be badly injured. Loud noises such as banging two metal pots together, an alarm whistle or fog horn sometimes startle the dogs so they can be separated. Vinegar poured on the dogs can also cause them to let go.

Also, the owners will need to help support the pack hierarchy so that the dogs interact appropriately. This can be done by identifying the domi-



HELEN PEPPE PHOTOGRAPHY

**Staring, along with rigid posture**, is a sign of dominant behavior.

*nant dog and discouraging the subordinate dog from challenging him.*

Watching the interactions of the dogs as they enter and exit doors, and their postures during meals and play can help to determine the dominant dog. Once he has been identified, the owners should pet that dog first, give him treats first, allow him the better resting areas, etc. The dogs should be fed in separate rooms so each can relax and enjoy his meal. In this case, the 7-year-old will probably be dominant as long as he is in good health. The younger dog may challenge this authority as he reaches 2 years old — the age of social maturity. In general, male dogs have a more stable hierarchy than females so there may be no problem.

The lists below include some behaviors and postures of dominant and submissive dogs. They should help the owners determine which dog to treat as the dominant one and which one to treat as lower ranking.

**Submissive Postures and Behavior**

- ◆ Avoidance of eye contact
- ◆ Horizontally pulled lips, lowered head and tail
- ◆ Ears rotated back
- ◆ Crouched body position
- ◆ Submissive urination

**Dominant Postures and Behavior**

- ◆ Staring
- ◆ Vertical retraction of lips
- ◆ Head held high with tail above horizontal
- ◆ Ears rotated forward
- ◆ Tense, rigid posture
- ◆ Standing over subordinate dog with head or paws over neck or body of subordinate
- ◆ Pushing, bowling over the subordinate
- ◆ Mounting ◆

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