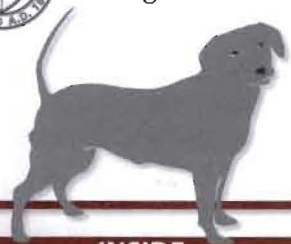




Cornell University  
College of Veterinary Medicine



# DOG Watch

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

Vol. 19, No. 7 ♦ July 2015

## INSIDE

### Short Take

2

The new canine flu that swept the Midwest likely came from Asia.

### Why They Dart Out the Door

3

Excitement beckons, and they're often under-exercised and under-stimulated.

### Options for Dislocated Kneecaps

7

Studies focus on a potential prosthesis and a way to assess a bone deformity.

### Ask the Experts

8

Determine the reason he pulls on leash — and then change it!

## IN THE NEWS ...

### Want To Supersize That Order, Big Dog?

Evidence continues to mount about the extent of obesity among dogs. The eighth annual National Pet Obesity Prevalence Survey from the Association for Pet Obesity Prevention (APOP) found an estimated 53 percent of dogs in the U.S. are overweight.

Could this be one reason? A survey by Revelation Research found that nearly one-third of owners take their dogs to one or more popular QSRs — quick service restaurants — for a snack or meal. With an average of 2.9 chains visited annually, that totals more than one billions trips, the firm says.

It attributes the outings to the growing trend of owners' pampering their pets, but at what price? The APOP survey uncovered a significant "fat pet gap," in which 95 percent of owners of overweight dogs incorrectly identified their pet as a normal weight.

"Confronting obesity difficult," says Ernie Ward, DVM, who founded the APOP. "No one wants to think their pet is overweight." ♦

## A Tiny Camera Travels the GI Tract

*It's embedded in a pill and can quickly reveal parasites, tumors and bleeding that's typical in cases of anemia*

A remarkable new procedure — one hailed as part of the revolution in human diagnostics — enables veterinarians to detect gastrointestinal bleeding more quickly and less invasively than in the past.

Patients swallow a tiny camera embedded in a pill no bigger than a vitamin that records images passing through the intestinal tract.

Capsule endoscopy can identify the bleeding typical in anemia as well as parasites, ulcers and tumors. Unlike conventional endoscopy that requires anesthesia for veterinarians to insert a tube into the esophagus,



Capsule endoscopy can be performed without sedation.

capsule endoscopy can be done without sedation. The images are sent to a wireless receiver and can be viewed in real time or reviewed once the capsule passes out of the dog's body.

**Advanced Diagnostics.** "Over the years our diagnostics have become more sophisticated," says Meredith Miller, DVM, ACVIM, a lecturer in small animal medicine at Cornell University Hospital for Animals. Capsule endoscopy does have limits. "We can't collect samples of lesions, and it is not good for visualizing the colon due to fecal

(continued on page 4)

## When the Kneecap Slips Out of Place

*Skiping can be an early sign of patellar luxation, and surgery may be needed to prevent lameness and pain*

Time is of the essence when it comes to surgically correcting patellar luxation, a common and potentially debilitating disorder affecting dogs' knees. If not corrected, arthritis can develop in the joint over time, resulting in pain and decreased mobility.

It's important for owners to understand that patellar luxation — the dislocation of the kneecap — causes lameness, says orthopedic surgeon Rory J. Todhunter, BVSc, Ph.D., ACVS, professor of surgery at Cornell University College of Veterinary Medicine. "An

increasing grade of patellar luxation means increasing severity. And the higher the grade, the harder it is to fix."

**Difficulty Jumping.** In the early stages, owners might notice that their dog skips on an affected leg when running or walking, and he may have difficulty jumping. Small dogs seem especially prone to the condition, although the incidence in large breeds has been increasing in the past decade, according to the American College of Veterinary Surgeons. In both cases,

(continued on page 6)



## EDITOR IN CHIEF

**William H. Miller, Jr., VMD,**  
Dipl ACVD, Professor,  
Clinical Sciences

## EDITOR

**Betty Liddick**

## ART DIRECTOR

**Mary Francis McGavie**

## ADVISORY BOARD

**James A. Flanders, DVM,**  
Dipl ACVS, Associate Professor,  
Clinical Sciences

**Katherine A. Houpt, VMD, Ph.D.,**  
Dipl ACVB, Emeritus  
Professor of Behavior Medicine

**Joseph Wakshlag, MS, DVM, Ph.D.,**  
Dipl ACVN, Associate Professor,  
Clinical Nutrition

**Margaret C. McEntee, DVM,**  
Dipl ACVIM, DACVR,  
Professor of Oncology

**Meredith L. Miller, DVM, Dip ACVIM**  
Lecturer, Small Animal Medicine

**Leni K. Kaplan, MS, DVM**  
Lecturer, Community Practice Service



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](http://www.vet.cornell.edu).



*DogWatch* (ISSN: 1098-2639) is published monthly for \$39 per year by Belvoir Media Group, LLC, 535 Connecticut Ave., Norwalk, CT 06854-1713. Robert Englander,

Chairman and CEO; Timothy H. Cole, Executive Vice President, Editorial Director; Phillip L. Penny, Chief Operating Officer; Greg King, Executive Vice President, Marketing Director; Ron Goldberg, Chief Financial Officer; Tom Canfield, Vice President, Circulation. ©2015 Belvoir Media Group, LLC.

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](http://www.dogwatchnewsletter.com/cs) or call toll free: 800-829-5574.

Express written permission is required to reproduce, in any manner, the contents of this issue, either in full or in part. For more information, write to Permissions, *DogWatch*, 535 Connecticut Ave., Norwalk, Connecticut 06854-1713.

## SHORT TAKE

### Researchers Trace the Lineage of the New Canine Flu to Asia

Scientists have identified a new strain of canine influenza responsible for illness in more than 1,100 dogs and six deaths in the Midwest earlier this year. They say the virus is related to a subtype of influenza H3N2 that first affected dogs in South China and South Korea in 2006 and 2007, and which has been spreading among dogs in both countries since then.

"This canine virus likely arose originally through the direct transfer of an avian influenza virus — possibly from among viruses circulating in live bird markets — to dogs," says virologist Colin Parrish, Ph.D., director of the Baker Institute for Animal Health at Cornell University College of Veterinary Medicine. Dr. Parrish and his colleagues are working to determine the complete identity of the new strain.

"There have been no reports or evidence that H3N2 influenza can infect humans," Dr. Parrish says. "We do know from studies of infected animals in Korea that H3N2 was able to infect cats under certain circumstances, and experiments with the strain circulating in Asia showed that under some circumstances cats living with H3N2-infected dogs could become infected." So far there have been no reports of cats diagnosed with H3N2 in the U.S.

It is still not known how the virus was introduced in the U.S., although it was most likely brought in by an infected dog transported from Korea or perhaps China. Veterinarians caution pet owners in states where the flu has been reported to avoid areas where dogs congregate, such as boarding kennels, parks, daycare centers and shelters. The flu can be transmitted by direct contact between infected dogs and by contact with respiratory secretions from infected dogs and contaminated objects. Dogs appear to shed the virus for three or four days after they are infected, so it is best to keep them isolated for that period.

Owners of dogs showing signs of respiratory disease should keep them at home and not expose other dogs to the virus, say the Centers for Disease Control and Prevention.

"Symptoms usually consist of fever, runny nose and persistent coughing," says Brian Collins, DVM, in the Community Practice Service at Cornell. "Most dogs are only mildly affected, and some have no symptoms at all. A small number of dogs can become severely ill and develop life-threatening pneumonia. As with other infectious diseases, extra precautions may be necessary with puppies, elderly dogs and dogs who are immunocompromised."

Previously, the outbreak of canine flu in Ohio, Illinois, Indiana and Wisconsin — which some characterized as a near epidemic — was believed to be caused by the long-known canine influenza H3N8 virus strain. That virus was identified in the U.S. dog population more than a decade ago when cases of respiratory illnesses developed in racing Greyhounds who died of pneumonia. That H3N8 influenza virus had been circulating in horses since 1963, and scientists believe it "jumped species" to dogs.

Testing of nasal swab samples at the New York State Animal Diagnostic Laboratory at Cornell indicated that the virus was not H3N8 but H3N2. Other tests, carried out with the University of Wisconsin-Madison's Veterinary Diagnostic Laboratory, also identified the new subtype.

No commercial vaccines are currently available against the H3N2 virus, Dr. Parrish says. Vaccines against the H3N8 virus are available; however, he points out, "There are differences in the genetic sequences of the two strains that suggest that these vaccines would be poorly effective or ineffective in protecting dogs against the H3N2 virus infecting dogs in the Midwest." ♦

## FOR MORE INFORMATION

Cornell's Animal Diagnostic Laboratory offers updates on the new canine flu at <https://ahdc.vet.cornell.edu/news/civchicago.cfm>. It warns that even such contaminated objects as leashes and toys can spread the virus, as can people who have touched an infected dog.

The Baker Institute for Animal Health is studying the virus and also posting updates at [www.vet.cornell.edu/baker](http://www.vet.cornell.edu/baker).



# Why They Love to Dash Out the Door

*Excitement beckons, and they're likely under-exercised and under-stimulated*

You open the front door for an unexpected visitor and your dog bolts. It's frustrating for you, hazardous for your escape artist and may be a sign to add more daily exercise to his life — for starters.

A dog flees because he thinks something good will happen, says Tracy Kroll, DVM, an animal behaviorist in Fair Lawn, N.J. Born runners such as Huskies and Malamutes ache to sprint. Retrievers zoom to be social with the neighbor kids playing outside. And intact males pursue females in heat. Puppies and young dogs — usually the source of owners' calls to Dr. Kroll — typically haven't been taught to behave better. Maybe the dasher's motive is simply this: You've been away all day and now you're heading out at night. The dog scurries out because he wants to go with you.

**Result of Confinement.** We prevent pets' exposure to injury from speeding cars and wildlife by confining them at home all day, but the result can be door darters who are under-exercised balls of energy or under-stimulated curiosity seekers. "The outside is new and unknown territory," says Dr. Kroll, who completed her residency in animal behavior at Cornell University College of Veterinary Medicine. She shares several ways to thwart dashing. No. 1 is to make it physically harder to escape. Two strategies to consider:

◆ **Special doors.** When it came time to find a new home, Dr. Kroll intentionally sought one with a double-door entry — a front door with a vestibule and then another door leading into the house. Now when a visitor knocks, she slips into the entryway and closes a door behind her to keep pets at bay. Problem solved.

◆ **A baby gate or screen.** It may be enough to stop a senior or small dog.

Next, training is indispensable. Teach your dog the command: "Go to your spot." The idea is that the dog will run to the special spot to get a treat instead of dashing to the door. "That way, if the doorbell rings, he runs away from the door to the spot," says Dr. Kroll.

To teach the command:

- ◆ Place a mat, rug or towel at least eight feet from the door within your dog's line of sight.
- ◆ Say "Go to your spot!" and toss a treat onto the designated area. Do



Special doors, gates and fences can help stop door darters, but training is paramount and effective.

BIGSTOCK

this several times so your dog understands what he should do.

- ◆ State the command and pretend to throw a treat. When he gets the spot and stands there, toss him the treat. Repeat the command and fake throws. Eventually, you'll be able to say "Go to your spot" without the fake throws. When he gets to the designated place, provide a treat.

Over time, teach your dog to also sit or lie down and stay. Dr. Kroll likes to move the special rug or towel to other areas around the house so that the dog learns it represents the "spot." That also makes the rug or towel handy when staying in a hotel.

Admittedly, training takes dedication, Dr. Kroll says. "All behavior modification is hard work, but it is effective." The aim is that you're making it rewarding for the dog to stay away from the door, serving as a good alternative to running outside where he expects fun to happen.

**Up the Exercise.** Discouraging door dashers can also entail burning off

*(continued on bottom of page 5)*

## WHAT YOU SHOULD KNOW

Here's an incentive to keep your escape artist current on his rabies vaccination: Rabies is on the increase in dogs, according to the Journal of the American Veterinary Medical Association. Some 84 dogs in 2012 were reported with rabies in the U.S. and Puerto Rico, up 20 percent in one year. Most of the dogs lived in Puerto Rico, Texas, North Carolina, Georgia and Oklahoma. Raccoons, skunks, bats and to a lesser extent foxes are the main rabid wild animals.

The U.S. Department of Agriculture's Animal and Plant Health Inspection Service leads efforts to control rabies in wildlife. It focuses on delivery of oral rabies vaccines in baits intended for raccoons along the East Coast.



# ANEMIA... (continued from cover)

material, but we can visualize more of the small intestine than we can with upper GI endoscopy — we are limited by the length of our endoscope.”

Polymerase chain reaction (PCR) testing is another breakthrough in diagnostics. The technique been used in human medicine in genetics and forensics, among other applications, since its discovery in the 1980s. Now veterinarians use the technology to look for the enzyme polymerase in a test tube. The goal is to identify the DNA of potential infectious organisms such as *Mycoplasma sp.* or *Babesia sp.* that can cause anemia.

“PCR testing is much more sensitive than looking for blood parasites via microscopy and more specific than using antibody titers — a measurement of antibodies in the blood,” Dr. Miller says.

Anemia can be life threatening with sudden, profuse bleeding. At other times, it can be a low-key clue to a chronic underlying problem. Veterinarians generally group the condition into two types, regenerative and non-regenerative.

◆ **Regenerative:** With this type of anemia in which blood loss can be fatal, the body can produce new red blood cells. “The two biggest causes of regenerative anemia are blood loss and

hemolysis — where red cells are produced but prematurely destroyed,” says Catherine Cortright, DVM, ACVIM, a former resident at Cornell.

◆ **Non-regenerative:** This more common variety of anemia is characterized by the body’s inability to produce new red blood cells, often because of a problem with bone marrow.

Tests to diagnose the severity and type of anemia are usually performed as part of a complete blood cell count (CBC), starting with the hematocrit, a test that measures the percentage of the volume of whole blood consisting of red blood cells. A sample processed in a centrifuge separates the red blood cells from the plasma, the liquid part of the blood. The normal hematocrit is about 40 to 55 percent in dogs, Dr. Miller says. “Anemia is any hematocrit count below the normal reference range, but we generally grade it as mild when the hematocrit is 30 to 40 percent, moderate when the hematocrit is 20 to 30 percent and severe when the hematocrit is less than 20 percent.”

A CBC can also be used to determine whether the anemia is regenerative or non-regenerative, Dr. Cortright says. “We look under a microscope for the size and color of the cells and the number of immature red blood cells, called reticulocytes. Their presence is a sign that the bone marrow is sending out immature blood cells and trying to regenerate.”

Screening for evidence of internal bleeding or of an underlying infection comes next. If no other reason for a nonregenerative anemia is found, a bone marrow aspirate, a sample taken with a large needle, is done under sedation or anesthesia to determine if a primary bone marrow disease like cancer is present.

## Regenerative Anemia

The blood loss resulting from an injury such as a car accident is the easiest type to diagnose, and treatment is straightforward. Once the dog is stabilized, the

body can resume producing red blood cells. Often a blood transfusion is the only way to achieve this. (See sidebar on facing page.)

The principle is the same for internal bleeding, except that it’s more difficult to detect until a dog shows signs of severe anemia, such as a rapid rate of breathing, lethargy and pale gums.

These are among the causes of regenerative anemia:

- ◆ Hemangiosarcoma, a cancer that often forms a large mass on the spleen. “It’s one of the most common culprits of internal bleeding in dogs,” Dr. Miller says. “Until the mass ruptures, the dog may show no signs of distress.”
- ◆ Ingestion of toxins such as rat poison, which alters the ability of the blood to coagulate. It can lead to life-threatening bleeding into the chest or abdomen.
- ◆ Immune-mediated hemolytic anemia (IMHA), where the immune system erroneously targets normal red blood cells with antibodies. Some 75 percent of cases are idiopathic, meaning that no cause can be found. “It is thought that vaccines may occasionally create a predisposition to develop IMHA afterward,” Dr. Cortright says. “Some breeds are predisposed to the disease. The Cocker Spaniel is the poster child for IMHA.” The disorder occurs most often in female dogs 2 to 4 years old.

A particularly dangerous symptom of IMHA is the tendency to form blood clots that can travel to the dog’s lungs or brain. The treatment, similar to that in humans, is the administration of anticoagulants like aspirin or heparin.

Drugs such as corticosteroids or a combination of immunosuppressive medications are used to treat IMHA by suppressing the immune system. Treatment can be complicated, and it’s estimated that the condition is fatal in 50 to 60 percent of cases. With other



**Cocker Spaniels are among breeds predisposed** to immune-mediated hemolytic anemia, where the immune system erroneously targets normal red blood cells with antibodies.



types of hemolytic anemias, those unrelated to a compromised immune system, it's possible to identify a predisposing condition.

### Non-regenerative

The inability to produce red blood cells that characterizes non-regenerative anemia has myriad possible causes, including:

- ◆ Anemia of inflammatory disease, which is most frequently seen. Chronic kidney disease, which often strikes older dogs, is one example. It results in a depletion of erythropoietin, the hormone that signals the bone marrow to make new red blood cells. However, Dr. Miller says, "We have made strides in treating anemia due to kidney disease. We used to treat with human erythropoietin, which led to significant immune reactions in up to 50 percent of pets treated. We now use darbepoetin, a synthetic form of erythropoietin that is tolerated much more safely in our pets."
- ◆ Chronic endocrine disorders like hypothyroidism or Addison's disease.
- ◆ Medications affecting bone marrow. Low white blood counts may occur with chemotherapy. Estrogen-containing creams may be associated with bone marrow suppression, as can some antibiotics and pain medications, including including aspirin and acetaminophen.
- ◆ Diseases such as various forms of cancer, infectious parvovirus and the bacteria Ehrlichia can also lead to bone marrow suppression.

Often non-regenerative anemia is so mild it doesn't cause clinical signs and can be resolved by treating — if not curing — the underlying condition. Dogs who become anemic over a period of time can fare better than those who have a sudden onset because the body has had time to adjust to the decreased red blood cell count.

### WHEN DOGS 'GET A FREEBIE' FOR TRANSFUSIONS

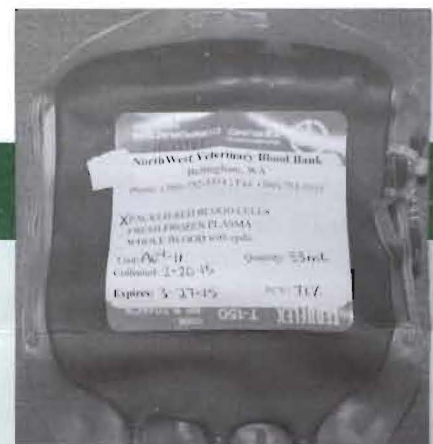
Sometimes a blood transfusion is the only way to help a dog who is bleeding profusely or showing signs of severe anemia. Donor red blood cells temporarily increase oxygen capacity and stabilize the dog until the underlying cause can be found and treatment instituted.

Few alternatives are available in these cases, says Meredith Miller, DVM, ACVIM, at Cornell. Intravenous fluids can help improve circulation of the remaining red blood cells but are helpful only if there are sufficient red cells. Similarly, oxygen therapy tends to be ineffective because an adequate number of red cells is needed for oxygen to reach vital tissues.

Most veterinary emergency hospitals keep a stock of blood products to be sure transfused blood is a match and has been screened for infectious diseases. However, dogs, unlike cats, generally do not have naturally occurring antibodies to common blood groups other than their own, so in a true emergency, where blood-typing equipment and blood products are not available, blood from a donor healthy dog can be transfused into a severely anemic dog.

"The first transfusion is what we call a 'freebie,'" says Catherine Cortright, DVM, ACVIM, a former resident at Cornell. "Dogs won't have a transfusion reaction." For any subsequent transfusions, however, they need to be cross-matched.

"With the continued advancements in veterinary medicine," Dr. Miller says, "many cases of even severe anemia may be treated with an excellent long-term prognosis." ♦



**Cornell University Hospital for Animals** keeps blood products on hand for transfusions to stabilize dogs after blood loss.

Mike Connell, Cornell

### SAFETY

### DARTERS... (continued from page 3)

excess energy and boosting stimulation. You could take your dog on more walks, runs and trips to the dog park. Play more fetch. "Anything your dog enjoys applies here," Dr. Kroll says. "Mine likes chew sticks, his ball, his favorite stuffed 'woobie' — and the cat!"

You could also consider feeding your dog his daily kibble in puzzle balls. Or stuff his meal in a Kong and freeze it before giving it to him. He'll spend time foraging for food, just as most wild animals do.

In the end, it's not enough to assume that your dog will always stay indoors.

All it may take is a pizza delivery, a fire or natural disaster to send even the most angelic pet running. To increase the chances that he will be returned, make sure he has a microchip and collar with an ID tag.

Dogs do dash, so we have to be on the alert — because they are. ♦



## KNEES... (continued from the cover)

genetics are believed to play a significant role.

In patellar luxation, the kneecap dislocates because the groove in which it rests is too shallow, or the muscles at the front of the leg — the quadriceps — pull the patella toward the inside of the knee. In some cases, luxation might also occur because of trauma to the supporting tissue that holds the patella to the thighbone.

In some affected dogs, both kneecaps might luxate to a different degree. The condition can be described as either medial or lateral. Medial means the patella dislocates toward the inside of the leg. Lateral refers to luxation toward the outside. “Almost all small breeds are susceptible to medial patellar luxation,” Dr. Todhunter says. “Large breeds experience more lateral patellar luxation, and it can be associated with hip dysplasia. But large breed dogs also succumb to medial patellar luxation.”

Due to the genetic nature of early onset, non-traumatic patellar luxation, animals with the condition should not

be used for breeding to avoid passing the trait to subsequent generations, Dr. Todhunter says. Large breeds with hip dysplasia should also not be used for breeding to help reduce the likelihood of both conditions.

Those who develop the condition due to a genetic malformation can show symptoms as early as 4 months of age. However, signs of grade 1 cases

might be detected only upon veterinary examination.

**Joint Damage.** With a medial luxation, dogs tend to hold their leg out to the side while the kneecap is dislocated. They resume walking normally once the patella slides back into place. Some dogs even learn how to swing their leg in a manner that hyper-extends

## GRADING THE LUXATION FROM MILD TO SEVERE

Veterinarians classify patellar luxation into four grades, with the highest indicating greater severity:

**Grade 1:** In this mildest case, the patella can be dislocated when the veterinarian puts pressure on it. When the pressure ceases, the patella slides back into place.

**Grade 2:** The patella will occasionally dislocate on its own and remain so until the leg is hyper-extended and rotated so that the patella returns to the groove.

**Grade 3:** The patella is dislocated the majority of the time, though it can be manually pushed back into the groove.

**Grade 4:** The patella is permanently dislocated and cannot be manually repositioned. The dog is always lame.

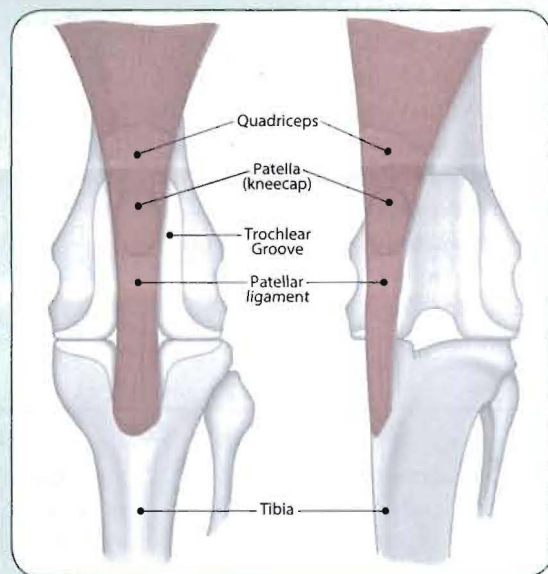
## ANATOMY OF THE KNEE JOINT

The patella, or kneecap, is a small bone that normally rides in the trochlear groove within the femur (thighbone) in the knee. It is embedded in the patellar ligament. The patellar ligament attaches the quadriceps muscle of the thigh to the top of the tibia (shinbone). When the quadriceps muscle contracts, it pulls on the patellar ligament and causes the leg to extend. When the quadriceps muscle relaxes, it allows the knee to bend.

The patella will dislocate from its groove during extension of the leg under these conditions:

- ◆ If the trochlear groove is too shallow (most common).
- ◆ If the dog's leg bones are overly curved, or bowed.
- ◆ If the patellar ligament's point of attachment on the tibia is rotated off-center.

In some cases, patellar luxation might also occur because of trauma to soft tissue, a tear in the tibial attachment, disruption of the patellar ligament or patellar fracture.



**A normal canine knee**, left, and one with patellar luxation in which the kneecap has shifted from its normal position in the trochlear groove.



the joint, thus snapping the patella back into position after dislocation. However, over time, the joint can become increasingly damaged and the surrounding tissues stretched, making it easier for the kneecap to dislocate.

Although some dogs with mild cases might reasonably live with the condition for years — or even their entire lives — others will develop irreversible arthritis. Patellar luxation can also contribute to other injuries, such as torn cruciate ligaments, the ligaments in the front and back of the knee that provide stability.

Veterinarians can determine if a dog's difficulty walking is related to patellar luxation or another underlying cause. They diagnose a luxating patella by palpating the kneecap. X-rays can help determine the extent of the problem and reveal joint damage.

If your dog is diagnosed with patellar luxation, surgical correction will likely be recommended unless the condition is mild enough to not pose a significant threat of complications later. The higher the grade of luxation, the more important it is for the surgery to be performed promptly to

## RESEARCHERS PURSUE SURGICAL ALTERNATIVES

New surgical options for correcting dislocated kneecaps in dogs could improve the success rate of treatment. Some surgical remedies focus on correcting bone malformations with a reshaping technique known as distal femoral osteotomy. Due to the procedure's complicated nature, researchers at Tufts University are seeking to establish a more accurate and repeatable method for measuring femoral deformity so that the surgery is performed accurately and only when necessary.

Meanwhile, veterinary researchers in Italy have been studying the use of a patellar groove prosthesis in surgical correction of patellar luxation. A study published by the group this year indicated the implant, as opposed to standard surgical remedies, has the potential to decrease the lameness associated with severe femoro-patellar arthritis and to improve patellar stability.

minimize the likelihood arthritis will develop within the joint.

Cornell offers several surgical techniques to correct patellar luxation and help prevent its reoccurrence. Depending upon the abnormality or injury, they include:

- ◆ Deepening the trochlear groove to enable the patella to remain in place more easily.
- ◆ Tightening the joint capsule — a fluid sac enclosing the joint — and

soft tissues surrounding it for better stability.

- ◆ Realigning the point of attachment of the patellar ligament if displaced on the tibia (shinbone).
- ◆ Immobilizing the joint by fusing the adjacent bones, a procedure performed in severe cases.

The cost of surgery varies, Dr. Todhunter says. If performed by a board-certified surgeon, owners should expect to spend between \$2,000 and \$3,000. In addition, Dr. Todhunter says, "The condition can recur, especially in animals with higher grades." However, the dislocation will likely be considerably less severe than the original incidence.

If arthritis has already developed within the joint, the condition might continue to progress over time and cause intermittent pain in the leg. Your dogs' veterinarian might prescribe anti-pain medications, joint supplements or special therapeutic joint diets to slow the progression of arthritis and help control any discomfort.

However, if the surgical procedure is performed before arthritis develops or other injuries occur in the knee, the prognosis is excellent. Dogs tend to recovery quickly as long as the surgical-associated pain is well controlled, often with only minimal need for pain management. Your dog should regain full use of his leg. ♦

## THE MOST AFFECTED: SMALL BREEDS

Patellar luxation is most often seen in small breeds, with the kneecap dislocating toward the inside of the leg. Lateral luxation, with the kneecap dislocating toward the outside, is more common in large breeds. This is only a partial list of the many breeds with a genetic predisposition to patellar luxation:

- ◆ American Cocker Spaniel
- ◆ Bichon Frise
- ◆ Chihuahua
- ◆ Chow Chow
- ◆ Great Pyrenees
- ◆ Lhasa Apso
- ◆ Maltese
- ◆ Pomeranian
- ◆ Shih Tzu
- ◆ Toy Poodle
- ◆ West Highland White Terrier



Small breeds such as Pomeranians are particularly prone to patellar luxation, but the incidence is increasing in large dogs as well.





**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:

DogWatch Editor  
535 Connecticut Ave.  
Norwalk, CT 06854  
or email [dogwatcheditor@cornell.edu](mailto:dogwatcheditor@cornell.edu)

**COMING UP ...**

**CLINICAL TRIALS**



**COUNTING  
CALORIES**



**LYMPHOMA**



**SHEDDING**

## Determine the Reason He Pulls on Leash — and Then Change it!

**Q** I had Norwegian Elkhounds all my life, and except when they'd see an occasional, unruly big dog across the street, they were easily trained and a pleasure to walk — even two at a time. Now I'm a senior and have a Poodle-Terrier, thinking his size would be easy for me to handle. Wrong. He pulls on the harness, or stops suddenly or lunges at speeding cars. I'm afraid he's going to make me fall.

A trainer told me to reward him when he walks calmly. I did, but because I'd trained him to sit for treats, he'd sit down in the middle of the sidewalk. Then we'd go back to pulling. Can you please tell me how to get him to walk nicely?

**A** Pulling on the leash is a common problem, and one that can endanger the owner, especially one in his golden years. I am familiar with this problem because my 200-pound son could skijor [ski], pulled by my 15-pound Westie. The solution is training, gadgets and reducing his motivation to pull.

Is your dog running for the sake of feeling the wind in his ears or is he goal directed? Is he running to get to the dog park or to his favorite place to explore? If you can find the reason, you might be able to change his motivation. If he is running for the sake of running, you can provide aerobic exercise before the walk. Playing fetch is a good way. Even if he doesn't return the ball, he will probably run after it. Get six tennis balls for him to chase.

There is always treadmill exercise, which many dogs like. (Be very careful never to tie him to the treadmill.) If he has a doggy friend, he will expend a lot of exercise playing. Be sure to allow him time to sniff and explore as well as heel on his walks. If possible, let him run free in an enclosed space.

A training trick that might help him take a reward without sitting is to hold a long-handled spoon with peanut butter or liverwurst on it so that he can lick and walk simultaneously. The late Dr. Sophia Yin

has a training plan for teaching dogs not to pull in her book "Perfect Puppy in Seven Days."

Gadgets are the easiest solution. Right now your Terrapoo is wearing a harness just like those sled dogs in the Iditarod. It is no wonder he pulls because it is natural for animals to pull against a chest band restraining them. My solution is to use a plain buckle collar for controlled walks and the harness for walks in which pulling is allowed.

Several types of harnesses and collars designed to stop pulling are available. The classical one is the Gentle Leader, which has a loop around the neck and another around the nose. The leash attaches to the nose loop so that if the dog lunges forward, the loop around his nose will tighten and turn his head toward you. It is the same principle as a horse halter. We could not control a 1,000-pound animal with a strap around the neck, but if the horse is wearing a halter, even a 120-pound weakling like me can control the animal.

There are many varieties of head collars like the Gentle Leader. For example, the Halti is somewhat easier to fit and is fine for controlling pulling. The important thing about using these head halters is to make sure the dog does not mind it. Train him to love it before you use it on walks. Your dog should learn to put his nose through the loop to get a treat until the sight of the device makes him wag his tail in anticipation. Most dogs will use their paws to dig at the nose loop or rub their nose against their legs to try to slip it off.

If properly fitted, it can't be rubbed off, but you should discourage the digging by pulling up on the leash. As soon as he stops digging or rubbing, release the tension. He should soon learn he is more comfortable when he doesn't bother the loop. Please don't use a prong collar. It hurts the dog.

If you really want to use a harness, several can control pulling. One is the Gentle Leader Easy Walk Harness. Another is the Freedom No-Pull Harness. Most have a front ring to attach the leash rather than one on the dog's back. Use a plain leash with any of these devices. And enjoy your strolls with your canine companion. ❖

**CORRESPONDENCE**

The Editor  
*DogWatch*  
535 Connecticut Avenue  
Norwalk, CT 06854-1713  
[dogwatcheditor@cornell.edu](mailto: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](http://www.dogwatchnewsletter.com/cs) or write to: *DogWatch*, P.O. Box 8535, Big Sandy, TX 7577-8535.

**OR CALL TOLL FREE: 800-829-5574**