

# Newsletter of the COMMUNITY PRACTICE SERVICE

College of Veterinary Medicine, Washington State University  
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Winter 2008



## How fatty foods can lead to pancreatitis in pets

Pancreatitis or inflammation of the pancreas is a common and painful problem in dogs, especially around the holidays. It can also occur in cats.

The pancreas produces digestive enzymes and hormones, including insulin, necessary for processing sugar in the body. The organ is located under the stomach and the first part of the small intestine in dogs and cats. The danger of pancreatitis is that when the pancreas becomes inflamed, it can leak fluids that damage the surrounding tissues, including the liver. In severe cases, the result can be deadly.

"We see cases year-round, but most canine cases are centered around the holidays," said Dr. Raelynn Farnsworth, a WSU Community Practice veterinarian. While a variety of factors can cause the condition, high-fat foods are a common culprit in dogs. Other sources for dogs and cats include infections, metabolic disorders, certain medications, and trauma or shock.

"Dogs can get it by eating a high fat meal that they are not used to, including foods after a holiday dinner like gravy, turkey, and ham," Dr. Farnsworth said. "At the very least, it can cause vomiting and diarrhea, and can be as serious as something called acute pancreatitis, which can range from a mild, self-limiting illness to a rapidly progressive and fatal disorder."

Signs for pancreatitis are variable, and include an upset stomach, acute vomiting, a very painful abdomen, depression, fever, and dehydration. "The pain may cause some dogs to hunch up into a 'praying' position," Dr. Farnsworth said.

"The signs can begin fairly immediately, or within hours, depending on how inflamed the pancreas gets. Most cases are mild to moderate, but deaths are not a rare occurrence."

Owners with pets displaying signs of pancreatitis should seek veterinary attention immediately. Treatment for the condition is largely supportive, but it can help dogs that are in a lot of pain. Pancreatitis is generally diagnosed through a dog's history, physical exam, laboratory testing to check for pancreatic enzymes and to rule out other diseases, and ultrasound examinations to check for an inflamed pancreas. Supportive care manages the patient's pain, provides IV fluids, and treats concurrent problems like vomiting.

"It is essential to withhold food, water, and oral medications from patients with pancreatitis for generally two to five days in order to reduce pancreatic secretions," Dr. Farnsworth said. "Intravenous fluids are used to hydrate the animal until it is safe to reintroduce foods. For dogs, recovery can take up to a couple of weeks. Once a pet has a bout of pancreatitis, it is predisposed to it from then on, so their owners need to be careful about feeding treats and fatty foods."

Other factors that may predispose dogs to pancreatitis include being overweight and having a metabolic disorder like diabetes, if they are spayed or neutered dogs over the age of seven, or a small body size. "There is some breed predilection in terriers, yorkies, poodles, and miniature schnauzers," Dr. Farnsworth said.

see **PANCREATITIS** page 6

Matthew Mickas, DVM  
Raelynn Farnsworth, DVM  
Nickol Finch, DVM  
Tami Montgomery, RVT  
Melody Gerber, RVT  
Teresa Crawford Carson, LVT

To make an appointment call:  
**509-335-0711**



### In this issue:

Fatty foods can cause pancreatitis in pets .....	1
Separation anxiety in dogs.....	2
Digital radiography incorporated into WSU's radiology services.....	3
The importance of dental care for rabbits and rodents.....	4
Myth busting: The real effects of mistletoe, poinsettias, and other holiday staples .....	5
Grieving? You don't have to be alone .....	5
Winter pet tips .....	6

Community Practice Service is published four times a year by Washington State University, PO Box 645910, Pullman, Washington 99164-5910. Issue No. 15. Phone: 509-335-0738. To subscribe, contact Emmy Widman at [esunleaf@vetmed.wsu.edu](mailto:esunleaf@vetmed.wsu.edu) or 509-335-5389.

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## Separation anxiety in dogs

As the holidays near, many vacationing pet owners make arrangements for their animals to stay behind while they attend family gatherings. Naturally, some owners worry how their pets manage while they are away, even if placed with caring friends or boarding facilities. Those with especially close bonds may worry their pet will experience separation anxiety.

Separation anxiety is rare in cats, though it is a recognized problem in dogs. "Separation anxiety is a common behavioral problem that clients inquire about, but it is not a condition that we see frequently during the average day in the hospital," said Dr. Matthew Mickas, head of the Community Practice Service at the WSU Veterinary Teaching Hospital. It is thought that approximately 15 percent of pet dogs suffer from this type of distress.

Parents with babies or small children are likely familiar with separation anxiety, and how it can rear its ugly head even when the child is only left for a moment. Dogs may react similarly by panicking when their beloved owners take out the trash, go to the mailbox to get the newspaper, or even when they grab their keys and coat before leaving.

"Dogs often do not distinguish a reference for time," Dr. Mickas explained. "Dogs with separation anxiety issues may react negatively whether a family member is gone for an eight hour work day or a brief visit to the neighbor's house or the grocery store."

Unlike babies who often cry at their perceived abandonment, dogs can get destructive. They may tear down blinds and curtains, ruin clothes or shoes, and dig, chew, or scratch at doors or windows trying to reunite with or look for their owners. They may also disturb the neighborhood with excessive barking or howling, and may inappropriately urinate or defecate throughout the house as a result of their anxiety.

"The damage can be quite significant to a home, and the dog may also injure itself in the process of escaping or searching for a family member," Dr. Mickas said. Unfortunately, separation anxiety is not a stage dogs will eventually outgrow. Most often, it becomes apparent before a vacation or trip. Early signs include dogs following their owners from room to room, not sleeping without their owners, avoiding being outdoors alone, becoming excited, depressed, or anxious when their owners try to leave, and being overly enthusiastic when the owner comes home.

But owners can take steps to help their dog overcome anxiety. While genetics may play a role in the condition for some dogs, environmental factors are also important.

"Anxiety can start fairly early, and is a matter of the dog having a primary attachment figure. The problematic behavior begins when that person goes away," Dr. Mickas said. "Owners can unknowingly stimulate the behavior through excessive excitement at the time of arriving or leaving home. We all love our pets and it is natural to want to give and get affection when we get home. Unfortunately, dogs with separation anxiety need to be approached differently."

Owners can help their dogs by keeping their arrivals and departures calm and low-key. "Be calm and try to maintain the least amount of contact until your dog is quiet and calm," Dr. Mickas said. "Although your dog will try to engage you, maintain minimal contact until the pet settles down. When that happens, engage and calmly reward your dog for the positive behavior. When it is time to leave the house, take the dog's mind off the fact that you are leaving. Get your pet mentally active with toys or treats, and maybe create a safe and comfortable 'happy place' for him, like a crate or room, to stay in when you leave. A good enrichment activity or exercise can be beneficial. In addition, you can make small trips in and out of the home with increased lengths of time to help condition your dog. This helps dogs become less anxious with departures and arrivals."

If a dog becomes destructive or damages the house on a particular occasion, owners should try to remain calm upon arrival and during the situation. "Yelling or some type of physical punishment is definitely not recommended and is counterproductive toward modifying your dog's behavior," Dr. Mickas said. "If your dog is excited to see you and is all over you as you return home, they won't understand yelling or physical punishment. Your dog might have become destructive the first 10 minutes after you were gone, and won't understand why you are upset hours later."

In fact, most dogs suffering from separation anxiety act out within 15–30 minutes of their owner's departure. Some owners may think getting another pet for their anxious dog to play with is a good idea, but this will likely not work because the dog is fixated on a person, not just being alone.

If the problem continues, or if an owner must leave for a time, consult with a veterinarian about short-term medication that can help dogs with anxiety and a specific behavior modification plan and techniques. If a dog must be boarded, contact the facility in advance and provide the staff with medication if needed and the dog's individual behavior plan for when the owner leaves. Some dogs may have a clinical problem with anxiety and may require long-term medication and a behavioral plan set forth by a veterinarian.

For more information or to make an appointment for your pet, contact the WSU Community Practice Service at 509-335-0711.



## Digital radiography incorporated into WSU's radiology services

Just as digital cameras have advanced modern photography, digital radiology systems have changed the way radiographs or x-rays are taken in both human and veterinary medicine.

Recently, the WSU College of Veterinary Medicine has taken advantage of such technology and installed computed radiology (CR) and digital radiology (DR) systems in the Veterinary Teaching Hospital. The two systems acquire an image differently, but when the processing algorithms are adjusted appropriately, either system can produce images of very high quality.

"Digital radiology provides a more timely and quality service for our clients," said Dr. Greg Roberts, a board certified veterinary radiologist and WSU clinical assistant professor of radiology who has about 20 years experience imaging animals and specializes in imaging horses. "It provides a wide latitude for exposure and gives us an increased capability to look at soft tissue and bone density on the same image by providing more shades of gray. It is hard to get a traditional film-screen radiograph with both of these."

CR is a cassette-based system that captures an image on a special plate that is subsequently processed in an image reader. "This increases the time commitment, but makes the system more flexible because images can be acquired in multiple rooms simultaneously, including surgery suites, and all brought back and processed in one plate reader," Dr. Roberts said. "DR, on the other hand, consists of a flat panel detector that is directly wired into a computer. It provides nearly instantaneous feedback to the radiologist. With it, I can look at the image in 12 seconds on a computer monitor. DR's one disadvantage is it can only be used in one place at a time.

"Having both types of systems allows us to be more versatile and helps train students with the different modalities," he said. "With either digital system, the number of retakes to get a good image is reduced because post processing allows us to correct for minor over- and underexposures that would require repeating a conventional film screen radiograph."

With both CR and DR, conventional x-ray equipment is still used to obtain an image, but because a computer processes the image and displays it on a screen, it eliminates the need for film processing and storage, such as with traditional radiography. Having images stored on computers also allows for images to be shared easily with veterinarians involved in treating a patient.

"Going to these systems has improved our efficiency and gives us a better end result," Dr. Roberts said, who was responsible for installing the technology at the college. "It doesn't replace our other imaging modalities, but it compliments them."

In addition to standard radiography and ultrasonography, WSU's radiography service is renowned for its other imaging capabilities. In fact, WSU is one of the most advanced veterinary hospitals in the world with sophisticated systems, including magnetic resonance imaging (MRI), computerized tomography (CT scan), and nuclear scintigraphy (bone scanning).

"This past summer, a new scintigraphy machine was installed in the hospital with new capabilities, such as motion correction, which provides better and crisper images," Dr. Roberts said. "It allows us to more specifically localize abnormal bone remodeling in horses. It also provides new capabilities for small animals, such as the ability to evaluate glomerular filtration rate (GFR) in dogs, which is an indication of their kidney function. But despite all of our technology, about 80 percent of imaging is still radiographs. It is still the heart of what we do."

WSU's radiology team currently includes three veterinary radiologists, Drs. Roberts, Russell Tucker, and John Mattoon. Four full-time veterinary technologists also support the team, as well as fourth-year veterinary students that rotate through the service.

"Students learn how to obtain appropriate diagnostic images and interpret them," Dr. Roberts said. "The emphasis is on radiographs because

they will be dealing with them in private practice, but they are exposed to other imaging modalities as well."

Animals that come to the WSU Veterinary Teaching Hospital in need of imaging are first seen and are in the care of veterinarians in the medicine or surgery services before being sent to the radiology service. Veterinarians from private practices around the Northwest can also consult with WSU's radiology team and submit images through the mail or electronically by sending images to a server.

To find out more about WSU's radiology service and imaging capabilities, or for referring veterinarians who would like to submit images, visit [www.vetmed.wsu.edu/depts-vth/radiology](http://www.vetmed.wsu.edu/depts-vth/radiology) or call the WSU Veterinary Teaching Hospital at 509-335-0711.



A radiograph of a dog's elbow taken with WSU's CR technology.

**Want to know more about the Community Practice and small animal specialty services, or receive our quarterly newsletter online?**

Visit the WSU Veterinary College Web site at [www.vetmed.wsu.edu/depts-vth/smallAnimalServices.aspx](http://www.vetmed.wsu.edu/depts-vth/smallAnimalServices.aspx), or subscribe to the online newsletter at [www.vetmed.wsu.edu/news.asp](http://www.vetmed.wsu.edu/news.asp).

Also feel free to call 509-335-0711 for veterinary appointments or emergency care.

## The importance of dental care for rabbits and rodents

Dental care is an important part of good animal husbandry for people who own rabbits and rodents, such as guinea pigs and chinchillas. These animals require special dental care in part because their teeth constantly grow throughout their lifetime. The most common problem, according to Dr. Nickol Finch of Washington State University's Exotic Animal Service, is a condition called malocclusion of the molars.

Malocclusion is a term that describes teeth that don't grow correctly and don't wear down normally, as they would in the wild. Eventually, the molars develop sharp points, or abnormal growths coming from the teeth. The upper molars develop points on the cheek side while the lower molars develop points on the tongue side. This disparity can result in cuts in the gums and tongue that can lead to infections and abscesses. These problems make it very painful for an animal to eat. Animals in this condition often decrease their feeding behavior, causing numerous attendant problems.

If an owner notices these problems, often seen as decreased eating, drooling, or grinding of the teeth, he or she should seek veterinary attention for their pet. A dental examination is used to diagnose any problems that may have arisen. One place this can be done is the WSU Exotic Animal Service in the Veterinary Teaching Hospital, headed by Dr. Finch.

Part of the examination may include a skull radiograph or head x-ray. Dr. Finch may take up to five x-rays and rotate the animal's head to clearly view all the teeth. Her goal is to get a set of teeth in the picture as she looks for abscesses.

"Molars continue to grow into the skull too, and they can block the tear ducts," she said. "The animal can end up with a chronic draining of the eye onto the face and nose. We can see if that blockage is happening on the x-ray."

In order for a veterinarian to conduct a dental exam on a rodent or rabbit, anesthesia is required to secure the patient. "If you try to restrain their head without anesthesia, they feel trapped and fight aggressively," Dr. Finch said.

She also explained that a rabbit's mouth is not very big in comparison to its body. "If you think about an average three pound rabbit, their mouth will only open an inch to an inch and a half, which is not a lot of room for a veterinarian to work."

If dental problems are diagnosed, a dental trim may be required to make the animal feel better and to halt progression of dental disease. If points have formed, teeth trimmings may be required several times a year to keep up with their growth.

Even if dental problems are not found, an annual or biannual dental checkup is a good idea to keep a rabbit or rodent's mouth

healthy. Preventative home care may also help with dental problems. One essential step is to feed dietary fiber, such as hay.

"Many owners believe they should feed their animals pellets, but the problem with pellets is there's not a lot of fiber in them. It doesn't take a lot of chewing to grind them up and it actually changes the way the animal moves its jaw to chew," Dr. Finch said. "Without the normal grinding motion, rabbits and rodents develop overlong points on their teeth. When these animals eat hay or grass as they would in the wild, they grind across their teeth, instead of up or down like with pellets, which helps whittle their teeth to a more normal configuration."

Dr. Finch recommends feeding grass hay sold by ranchers or at pet stores. For young animals less than six months old, owners should feed alfalfa hay and then switch to grass hay as their pet matures.

"Feeding hay is the single biggest thing an owner can do to avoid dental problems," she said. "I have some rabbits that come in every four to six weeks for a trim, because they are stubborn and don't want to eat hay. But once they do, they usually can go longer in between trims. I have one rabbit that goes three months in between trims. This saves money because each tooth trim can run between \$50 to \$150 depending on how bad an animal's teeth are and how long it takes to trim them," Dr. Finch said.

In addition to hay, rabbits can be offered tough, fibrous tree branches, leaves, and twigs, such as from apple trees or willows. But choose trees or bushes that have not been treated with pesticides or fertilizers, or are considered toxic to animals. For a list of toxic trees and plants, visit [www.plannedparrothood.com/plants.html](http://www.plannedparrothood.com/plants.html).

For more information or to schedule an appointment, contact the WSU Veterinary Teaching Hospital at 509-335-0711.



Giz the bunny

## Myth busting: The real effects of poinsettias, mistletoe, and other holiday staples on pets

During the holiday season, several items can cause problems for pets, especially pets that like to nibble. These include festive foliage like mistletoe, holly, and poinsettias, and foods like chocolate and macadamia nuts.

It is always best to keep potentially hazardous items away or out of reach of pets and out of their mouths. But some holiday staples like poinsettias (*Euphorbia pulcherrima*) and the American mistletoe (*Phoradendron spp.*) have notoriously bad reputations. Contrary to

popular belief, the danger these plants present to pets are not very great, says Dr. Patricia Talcott, a WSU associate professor and board certified veterinary toxicologist for the Washington Animal Disease Diagnostic Laboratory.

"Poinsettia is a highly overrated toxic plant," she said. "In reality, few serious cases of animal poisoning actually occur. In the majority of reported exposures, signs of poisoning ranged from non-existent to mild and short lived. The signs that can occur include oral irritation, increased salivation, pawing at the mouth, and perhaps some vomiting. I have never personally consulted on a case in 18 years that was more severe than that."

In the same respect, American mistletoe is recognized as a toxic plant to pets, but poses little significant danger to their overall health. This plant is typically used in holiday decorations and is different from the European variety (*Viscum spp.*), which is generally used in folk-medicine products.

"I receive a few telephone calls about mistletoe during the holiday season," Dr. Talcott said. "The majority of cases are asymptomatic, but those clients that do report problems in their pets generally report mild signs that are not long in duration. It is not a common scenario for pets to eat a lot of mistletoe, but when a combination of leaves and berries are ingested, vomiting and depression are the two most common clinical problems.



With higher exposures, heart and lung signs have been reported, along with erratic behavior. In humans, hallucinogenic effects have been reported."

Amaryllis (*Hippeastrum hybrids*) and English holly (*Ilex aquifolium*) plants can also cause vomiting, diarrhea, and hypersalivation in pets that ingest them, but again, these plants generally do not present life threatening problems. English holly, however, can also cause mechanical injuries to the mouth from the sharp points on the leaves.

In addition to holiday plants, pets may be tempted to try a few holiday goodies, such as macadamia nuts or chocolate. Chocolate contains a substance called theobromine, a caffeine-like compound that, in large doses, can cause seizures and potentially kill a dog or cat. Macadamia nuts are not as big a threat to pets, but can produce alarming clinical signs.

"Clinical disease from macadamia nuts is described only in dogs. It can cause a paralytic-type syndrome in which a dog experiences hind limb weakness and has difficulty getting up," Dr. Talcott said. "This can be scary for owners because their dog looks paralyzed. Other abnormal signs can include depression, vomiting, lack of muscle coordination known as ataxia, muscle tremors, or joint swelling. We don't know what the toxic principle is, so we don't know what quantity can cause toxicity in all dogs, but in some cases, as little as two or three nuts can produce problems. An estimate of the minimum toxic dose in a dog is approximately one macadamia nut per 2.2 pounds of body weight.

"Fortunately, all dogs recover and all the signs recede within 48 hours," she said. "Their prognosis is great, with or without treatment. But pets can suffer from a double whammy by eating chocolate-covered macadamia nuts, so owners should be careful to keep treats like that out of reach of their pets."

## Grieving? You don't have to be alone

Have you lost a beloved animal companion? Perhaps you know someone who has. The WSU College of Veterinary Medicine has a Pet Loss Hotline for those who would like to reach out for a caring listener. WSU's Pet Memorial Program offers families a wonderful way to memorialize and celebrate the life of their pet while supporting the education of future veterinary care provid-

ers. To contact the Pet Loss Hotline, call 509-335-5704 or e-mail [plhl@vetmed.wsu.edu](mailto:plhl@vetmed.wsu.edu).

For more information about the WSU Pet Memorial Program or to make a donation, contact Tim Osborn at 509-335-9516 or [tosborn@vetmed.wsu.edu](mailto:tosborn@vetmed.wsu.edu). Information can also be found online at [www.vetmed.wsu.edu/depts-prd/memorial.aspx](http://www.vetmed.wsu.edu/depts-prd/memorial.aspx).

## Winter weather pet tips

- All animals need shelter from the wind, rain, and snow. If an animal gets wet in cold weather, its ability to maintain its body temperature decreases, especially if the wind is blowing. Hypothermia and frostbite affects animals as well as people. To help outdoor pets, it is a good idea to place a door on their shelter or house, and provide some warm bedding to help combat the cold.
- Keep in mind that young, old, or sick animals are less tolerant of temperature extremes and need extra care in cold weather.
- Use plastic bowls rather than metal bowls in cold weather to prevent lips and tongues from sticking, and make sure pets have access to fresh, clean, liquid water. Even if the bowl seems full, make sure ice hasn't formed over the top that would prevent pets from drinking, or consider purchasing a heated pet bowl to prevent water from freezing.
- A pet that spends a lot of time outdoors in the cold may need extra calories because it will use more energy to keep warm. Make sure pet food left outdoors is not being eaten or soiled by rodents, wildlife, or other animals.
- After walking a dog in winter weather, be sure to wash off rock salt or deicers that may stick to their feet. Indoor dogs may appreciate a sweater and booties to keep comfortable in the cold when outdoors. Hunting dogs should be checked

over daily for sporting injuries and foreign objects such as grass awns that may become lodged in their feet, ears, eyes, and nose.

- Outdoor cats seeking heat may climb onto a warm car engine, and may be seriously hurt or killed if they haven't moved the next time the car is started. Rap on the hood of your car before starting the engine to scare away any visitors.
- Antifreeze, which tastes sweet, is very toxic to pets. Even a small amount (1/2 teaspoon per pound) can kill, so clean up any spills and check to make sure your car is not leaking any on the ground. If you suspect your pet has ingested antifreeze, seek veterinary attention immediately.
- Finally, remember to provide pets with plenty of attention and a quiet space to go to and feel safe during noisy and busy holidays.



## PANCREATITIS | *continued from page 1*

To prevent further instances of pancreatitis, owners should feed their dogs a low-fat diet and check with their veterinarian about appropriate treats because many commercially available dog treats are high in fat.

Many dogs that suffer a bout of pancreatitis recover fine, but cats may not fare as well. Cats tend to develop chronic pancreatitis, rather than acute pancreatitis. Often by the time a problem is noticed in a pet with chronic pancreatitis, the pancreas has caused enough damage that additional complications arise, making the patient harder to treat.

"Cats are really hard to diagnose and treat. Pancreatitis is usually such a chronic problem with them that it is hard to tell what is going on, but finally they get sick enough where we can

tell," Dr. Farnsworth said. "Additional complications include septicemia, a complicated bleeding problem called DIC, and abscesses that form on the pancreas. Later on, these patients can develop diabetes if the pancreas is scarred enough."

A cat's history, physical exam, and blood tests are used to diagnose pancreatitis in cats, and treatment is similar, but they may be harder to treat and take longer to recover if there are additional complications.

Like dogs, cats may need a low-fat diet to help prevent recurrence. For more information or to make an appointment for your pet, contact the WSU Community Practice service at 509-335-0711.