



4-1-2010

# Contagious Pets

Kelly Stratton  
*University of Pennsylvania*



# contagiouspets

BY KELLY STRATTON

*Being aware of zoonotic diseases – those that can be passed from animal to owner – is the first step in staying healthy*

The World Health Organization (WHO) defines “zoonoses” as “a group of infectious diseases that are naturally transmitted between vertebrate animals and humans.” More than 200 such diseases have been confirmed notes WHO’s site, [www.who.int/en/](http://www.who.int/en/), and are caused by a variety of agents, including bacteria, parasites and viruses.

It’s true – your attention-seeking, ball-fetching best friend can give you more than wet kisses. He can also infect you with these not-so-pretty bacteria, viruses and parasites. But, with a little common sense and good hygiene, you can protect yourself from contracting a zoonotic disease that your cat or dog has dragged in. Here, we’ll take a look at a few of these potential dangers and how to keep you and your family free from infection.

## Rabies

**What is it?** A viral infection of the brain and spinal cord.

**How is it transmitted?** Most commonly, through the bite of a rabid animal, but scratches, open wounds or mucous membranes that have had contact with the rabid animal’s saliva or other infectious material can be portals for the disease.

“We live in a big endemic area for the rabies virus,” said Dr. Charles Vite, assistant professor, Section of Neurology and Neurosurgery, Department of Clinical Studies. “Our number one threat is probably the outdoor, unvaccinated cat. If they’re exhibiting signs of rabies, such as paralysis of their hind legs, a person will think, ‘Poor cute little kitty. I’ve got to take care of him and make him better.’ And these are potentially dangerous cats to humans.”

“Most people know not to interact with a raccoon that’s acting strangely,” said Dr. Michael Moyer, director, Shelter Animal Medicine Program, “but they will pick up cats and dogs that look sick so they can help them.”

**What it looks like:** “The images we see as the ‘classic rabid dog’ – foaming at the mouth, angry – are more understandable for us than the signs we don’t know about,” said Dr. Vite. “A rabid animal may show up with a jaw that hangs open; however,

it may also be a sign of a curable neurological or even a disorder of the jaw.”

Abnormally acting wildlife is also something to watch out for. “Raccoons and skunks may be more people-oriented when they’re infected,” said Dr. Vite.

**Why do we need to know about it?** In 2006, there were 505 laboratory-confirmed rabid animals in Pennsylvania. Of those, 61 were found in Bucks, Montgomery and Chester counties.

For pets, rabies can be deadly. “If your pet is bitten, but it has been vaccinated, there’s little chance that the pet has contracted the disease,” said Dr. Vite. He also says that if a pet hasn’t been vaccinated and is exposed to rabies, it will likely die.

Rabies can also be deadly for people. The CDC recommends that people who are bitten by a rabid or believed-to-be-infected animal seek out medical help.

Euthanasia or quarantine is recommended for animals with no rabies vaccination history that have been exposed. If a domestic animal bites or scratches a person but the animal is not exhibiting signs of rabies, that animal is quarantined for 10 days to determine whether signs of rabies develop. If, during that period, the animal dies, it is submitted for testing.

“Rabies is the only disease that veterinarians are not geared toward treating,” said Dr. Vite. “It’s a legal and public health issue; not a make-it-better situation. We isolate. Public health takes precedence.”

**An ounce of prevention:** Get your pet vaccinated. Don’t approach animals acting strangely. “Rabbits and guinea pigs can get rabies, too,” said Dr. Margaret Fordham, lecturer, Special Species Medicine and Surgery, “so it’s best to keep those pets inside.”

## Toxocara

**What is it?** A parasitic roundworm in the small intestines of dogs (*Toxocara canis*) and cats (*Toxocara cati*).

**How is it transmitted?** “*Toxocara* is a parasite commonly found in puppies,” said Dr. Thomas Nolan, head, Diagnostic

Parasitology. “Older dogs have lower burdens. Puppies get them from the mother while still a fetus and close to 100 percent of puppies are infected at birth.”

While puppies tend to be the main carrier, humans pick up the parasite from the environment – not their canine companions. Puppies get the larvae from their mothers; the larvae mature in puppies’ intestines; the worms produce eggs, which are excreted in the infected animal’s stool. It’s after the human ingests the eggs from soil or contaminated surfaces (which hatch into infective larvae) that he/she becomes infected.

**What it looks like:** Symptoms in humans may be produced by the presence of the larval worms migrating to different parts of the body. *Toxocara* infections can cause Visceral larval migrans (VLM), which causes swelling in the organs and/or central nervous system; Ocular larva migrans (OLM), an eye disease that may cause inflammation and scar the retina; Covert toxocarosis, which produces mild symptoms like fever, gut pains, lethargy and weakness; and Asymptomatic toxocarosis.

**Why do we need to know about it?** “Infectious eggs can live in the soil for two years and they’re sticky,” said Dr. Nolan, “so at dog parks a dog can pick them up easily and carry them on his fur. Or, if a child is playing in the dirt, he or she can pick them up from the soil.”

Young puppies that haven’t been de-wormed may die from *Toxocara*. Dr. Nolan advises puppies be wormed every two weeks, beginning at two weeks of age until 12 weeks.

**An ounce of prevention:** Clean your pet’s living area, pick up after him and administer a heartworm medication as prescribed. Wash vegetables, wash hands and teach children not to eat dirt. New puppies should be bathed and taken to the vet.

## Leptospira

**What is it?** A spiral-shaped bacterium.

**How is it transmitted?** Spread through the urine of an infected animal, *Leptospira* leeches into water and soil where it can survive for months. If, during that time, humans or animals come in to contact with the contaminated source, they can become infected. Mucous membranes are the portals through which the bacteria can enter; drinking contaminated water can also cause infection.

**What it looks like:** In pets, signs vary and are nonspecific, though fever, vomiting, diarrhea and refusal to eat are signs reported in dogs. In people, symptoms are often like the flu, but leptospirosis can develop into a more severe, life-threatening illness with infections in the kidney, liver, brain, lungs and heart.

**Why do we need to know about it?** Leptospirosis can be a serious bacterial infection for both animals and people but it is treatable. If you suspect that your animal is infected, call your veterinarian. She will test for *Leptospira* antibodies and determine the best treatment. Early detection increases the chance for a quick recovery and minimal organ damage.

**An ounce of prevention:** Getting your pet vaccinated and keeping rodent issues at bay can protect your animal.

Note, however, that the vaccination does not provide 100 percent protection because there are many strains of *Leptospira*.

Wash your hands frequently throughout the day, especially after handling your pet.

## The bottom line

According to the CDC’s “Healthy Pets Healthy People” site ([www.cdc.gov/healthypets/](http://www.cdc.gov/healthypets/)), “it is important to know that you are more likely to get some of these germs from contaminated food or water than from your pet or another animal you encounter.”

That’s not to say you can slack on regular hand-washing and other precautionary steps.

“If you have young children, older members in your family or someone who is immune-compromised, you should be especially careful,” said Dr. Fordham. “General guidelines are to promote hand-washing, parental supervision when children are playing with their animals or outside and keeping animals’ cages clean.”

“In contrast to veterinarians, MDs don’t necessarily see a lot of these diseases and might not have been trained very well to recognize them,” said Dr. Dieter Schifferli, associate professor of Microbiology. “If pet owners are made aware of zoonoses, they will be able to communicate this information to their family doctors when appropriate.”



## What about Lyme Disease?

Lyme disease has become a common summertime concern in certain parts of the US, including southeastern Pennsylvania. It is considered a vector-borne disease rather than a zoonotic disease because humans do not contract the bacterium directly from canine companions. Instead, it’s usually outdoor activities that expose owners to ticks that carry the organism.

“In this area, it’s the black-legged tick – the deer tick – that carries the disease,” said Dr. Meryl Littman, associate professor, Medicine. “It’s important, during the warmer months and into fall, that dog owners regularly check their pets and themselves for these ticks.”

If you find a tick, remove it. “People think to grab tweezers, but there are even better spoon-shaped plastic tick-remover tools available,” said Dr. Littman. “Scoop the tick up and out in one motion and don’t handle the tick with bare hands; wear plastic gloves.”

While most dogs don’t have symptoms of the disease after they’ve been bitten, some may develop a limp or experience kidney issues. Treatment of asymptomatic Lyme-positive dogs is not necessarily warranted since 90 to 95 percent of the time these dogs don’t get sick with Lyme disease.

Regular use of products that prevent the tick’s attachment to your family pet help prevent the disease as well as many other more serious tick-borne diseases.

In people, Lyme disease can cause arthritis, fever, headache, fatigue, cardiac and neurologic problems. “If a person finds an engorged tick on themselves, they should ask their physician for one dose of Doxycycline. If taken within 72 hours of tick removal, they usually don’t get Lyme disease,” said Dr. Littman.

For more information on Lyme disease, visit <http://www.cdc.gov/ncidod/dvbid/lyme/>.