

# 6 Out of 10 Human Infectious Diseases Start in This 'Unlikely' Place

It's surprisingly common, even though people don't often talk about it. Sometimes the 'giver' doesn't show a single sign of illness themselves. If you've had this exposure and develop any of these symptoms, do yourself a favor and seek medical attention.

Reviewed by [Dr. Becker](#)

## STORY AT-A-GLANCE

- More than 6 out of 10 infectious diseases in humans originated in animals
- An infected animal's saliva, blood, urine or feces may spread zoonotic disease, as may being bitten by a disease-carrying tick or mosquito
- Examples of zoonotic disease include giardiasis, cat-scratch disease, toxoplasmosis, hookworm and roundworm
- Pet reptiles are a major source of zoonotic illness in the U.S. All turtles, along with lizards, snakes, frogs, salamanders and newts, may carry salmonella
- In most cases, the benefits of pet ownership far outweigh the risks, but there are some commonsense measures you can take to minimize your risk of zoonotic disease

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A surprising number of diseases can be spread from animals to humans and vice versa. They're quite common in fact, and it's estimated that more than 6 out of 10 infectious diseases in humans originated in animals.<sup>1</sup>

Zoonotic disease may be spread from family pets, petting zoos, fairs or encounters with wildlife. Such diseases are also spread by close contact with animals while on the job, such as handling livestock.

In some, but not all cases, a bite is necessary to transmit the disease. In other cases, a scratch or consuming a contaminated animal product (such as milk or meat) can lead to infection. An infected animal's saliva, blood, urine or feces may spread zoonotic disease, as may being bitten by a disease-carrying tick or mosquito.

## 5 Zoonotic Diseases You Should Know About

The following zoonotic diseases are among the most common in the U.S. If you've been in contact with animals and develop any of the described symptoms, seek medical attention.

1. **Cat-scratch disease** — Bartonellosis, also known as "cat-scratch disease," is caused by Bartonella bacteria. It's thought that 40% of cats, particularly kittens younger than 1 year may carry the bacteria, although they're

not likely to show any signs of illness as a result.<sup>2</sup>

If you're bitten or scratched by a cat carrying this bacteria, cat-scratch disease may develop, which cause symptoms such as fever, headache, poor appetite, pain, numbness, weakness and fatigue. Swollen or painful lymph nodes may also occur.

2. **Giardiasis** — Giardia is a type of parasite that may infect dogs or cats. It's often spread via the feces of an infected animal or through exposure to contaminated water. Giardiasis causes diarrhea, greasy stools, abdominal cramps, nausea and vomiting.

If your pet has chronic gastrointestinal (GI) issues, it's worth having her tested for giardia. Many animals with chronic GI issues such as persistent diarrhea or malabsorption test positive for giardia.

To prevent giardiasis in your pet (and therefore in you), don't house your pet in close quarters with other infected animals.

Clean up your pet's poop outdoors, and don't allow her access to areas where other animals relieve themselves. Also, don't allow your pet to drink from outdoor water sources.

3. **Hookworms** — Hookworms are microscopic parasites that your pet may pick up by ingesting contaminated feces or soil. Puppies and kittens can also be infected via their mother's milk if she has a hookworm infestation.

You can also pick up hookworm by coming into contact with soil contaminated with infected animal feces (even if you don't ingest it, as hookworm can penetrate your skin).

A rash will typically develop at the site where the hookworm larva penetrate your skin (often on your hands or feet).

In humans a hookworm infection may resolve on its own within about six weeks, but it can be fatal in animals or cause anemia, diarrhea, malnourishment and weight loss, so seek veterinary attention if you notice these symptoms.

4. **Roundworms** — Roundworms are large and spaghetti-like in appearance. Your pet may become infected by eating contaminated feces, and puppies and kittens can be infected by their mothers during pregnancy.

You can also pick up a roundworm infection from your pet or by coming into contact with contaminated soil. These worms spread quickly and may give your pet a pot-bellied appearance along with mild diarrhea and dehydration.

Seek veterinary care to get rid of them, as if the infection is transmitted to someone in your household, particularly a child, it could lead to serious organ inflammation, vision problems or damage to the central nervous system.

5. **Toxoplasmosis** — Toxoplasmosis is another parasitic disease that can be spread to humans and animals via contaminated soil, water, meat or feces. Cats are among the most common carriers of this infection (often without showing any symptoms).

Exposure is most dangerous to pregnant women and people with a suppressed immune system.

Cats that spend time outdoors are more likely to acquire toxoplasmosis especially if they hunt small prey. If your outdoor kitty is eating rabbits or rodents or is getting other raw meat from animals that could be toxoplasmosis-positive, she can become infected.

This is why many doctors recommend pregnant women do not scoop or sanitize their cat's litter box. If you have a toxoplasmosis-positive kitty, she's apt to be shedding the infection into her stool.

If you have a cat and are pregnant, or your immune system is compromised for any reason, either assign litter box chores to another family member or be vigilant about wearing gloves when you handle the box.

## Zoonotic Disease Outbreaks in the US

The U.S. Centers for Disease Control and Prevention (CDC) maintains a database of zoonotic outbreaks, which are defined as two or more people getting the same illness from the same pet or other animal.<sup>3</sup> In 2016, for instance, multiple people have gotten sick with salmonella infection from contact with live poultry.

In 2015, several salmonella outbreaks were linked again to live poultry along with small turtles and pet crested geckos. In past years, salmonella was also linked to pet bearded dragons, hedgehogs and water frogs.

Pet reptiles are a major source of zoonotic illness in the U.S. All turtles, along with **lizards**, snakes, frogs, salamanders and newts, may carry salmonella. The bacteria are naturally occurring in these reptiles and amphibians, and even a negative salmonella test is not a guarantee of safety.

Turtles don't shed salmonella all the time, so it's possible to get a negative salmonella test even if the turtle is infected. In the U.S., it's estimated that reptiles, including turtles, are responsible for 74,000 cases of salmonellosis every year.<sup>4</sup>

## How to Minimize Your Risk of Zoonotic Disease

In most cases, the benefits of pet ownership far outweigh the risks, but there are some commonsense measures you can take to minimize your risk of zoonotic disease.

Certain populations, including pregnant women, young children and people with compromised immune systems should take extra precautions when spending time around animals. In 2016, an elderly woman acquired severe sepsis from bacteria isolated from her dog's mouth.<sup>5</sup>

If there are high risk or immunosuppressed individuals in a home with any animal, there's a risk for bacterial exchange. Depending on the vibrancy and resiliency of the human's immune system, disease potential ranges from minimal to fatal. Here are some commonsense approaches to reducing exposure:

- Avoid keeping reptiles as pets if you have children under 5 years
- Pregnant women should avoid contact with pet rodents, as exposure to lymphocytic choriomeningitis virus in some rats could cause birth defects
- Pregnant women should also avoid adopting a new cat or handling stray cats to prevent potential toxoplasmosis infection
- Wash all vegetables thoroughly before you serve them to any family member, human or fur covered

- If you garden, wear shoes and gardening gloves. Wash your hands and other exposed skin if you come in contact with soil
- Prevent pets and other animals from using your child's sandbox as a toilet. It's important to keep playground sand and sand boxes covered when not in use
- Practice good tick protection. Do regular tick checks on yourself, your kids and your pets. If necessary, use safe tick repellants to prevent tick attachment

## Sources and References

[Pet360](#)

<sup>1</sup> [CDC, Zoonotic Diseases \(Archived\)](#)

<sup>2</sup> [PetMD, March 14, 2016](#)

<sup>3</sup> [CDC, Selected Multistate Outbreak Investigations Linked to Animals and Animal Products \(Archived\)](#).

<sup>4</sup> [CDC, Turtles Kept as Pets \(Archived\)](#).

<sup>5</sup> [Case Reports 2016;2016:bcr2016215450](#)

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