

Children and Hygiene: Tips for Reducing Zoonotic Disease Risk

- Keeping your own pets healthy and parasite-free is a great way to reduce the risk of zoonotic disease. This includes scheduling regular veterinary visits, staying current on vaccines, and using effective parasite control.
- Frequent hand washing is critically important in preventing transmission of many zoonotic organisms.
- Petting zoos and other interactive animal habitats are valuable educational tools, but children (especially infants and children younger than 5 years) must be properly supervised to help reduce their risk for exposure to zoonotic diseases.

What Are Zoonotic Diseases?

Zoonotic diseases are illnesses caused by organisms such as viruses and bacteria (also called *pathogens*) that can be transmitted between animals and humans. Direct contact with a sick animal is not always necessary for a zoonotic pathogen to be transmitted. For example, humans can be exposed to roundworms through contact with feces-contaminated soil, even if the infected animal is nowhere around. Some zoonotic diseases, like rabies and salmonellosis, are relatively well known, whereas others, like leptospirosis, are less familiar. Although rabies is a very frightening disease because it causes fatal illness in humans and animals, there are many other zoonotic diseases that can make a person sick but not necessarily cause death.

Why Are Children at Risk for Exposure to Zoonotic Diseases?

Anyone can contract a zoonotic infection, even a healthy adult, but children are understood to be at greater risk for several reasons. Compared with adults, children tend to have more direct contact with areas that can be contaminated by animal waste, such as the ground, grass, sandboxes, and standing water. Children are also less likely to wash their hands before eating, and they are more likely to put their

hands into their mouths (nail biting, thumb sucking, etc.) during the course of regular daily activities.

Additionally, the immune system of a child may not be able to effectively fight off an infection if exposure occurs. The same may be true for adults whose immune systems are compromised by disease (e.g., AIDS), immunosuppressive treatment (e.g., chemotherapy), or other causes (e.g., pregnancy, advanced age).

What Types of Animals Can Transmit Zoonotic Pathogens?

Any animal is capable of transmitting a zoonotic pathogen. For example, the rabies virus can be transmitted by cats, dogs, goats, sheep, and a variety of other domestic and wild animals. Certain animals, however, tend to be associated with specific zoonotic diseases. Cats, for example, can transmit *Bartonella* bacteria that cause “cat-scratch disease.” *Salmonella* bacteria can be transmitted to humans through contact with several animal species, most notably reptiles (like turtles and lizards), birds, and some rodents. Dogs

More Information

Want more information? The CDC and AVMA offer advice about proper hand-washing procedure and other ways to protect your family from zoonotic diseases:

- **AVMA: Pets and Zoonotic Diseases (FAQ)**—www.avma.org/public/PetCare/Pages/Pets-and-Zoonotic-Diseases-FAQs.aspx
- **CDC: Infants and Young Children—Animal Safety Tips**—www.cdc.gov/healthypets/child.htm
- **CDC: Wash Hands When Leaving Animal Exhibits**—www.cdc.gov/healthypets/resources/exhibits-hand-washing.pdf

Choices and Considerations

and cats can have intestinal parasites, like roundworms and hookworms, that can be transmitted to humans and cause illness.

Because it can be difficult to know exactly which animals can put a person at risk, it is best to exercise good hygiene and some other important preventive measures when around any animals—even your own pets.

How Can Children Be Protected From Zoonotic Diseases?

Petting zoos, classroom pets, and other interactive animal habitats are valuable educational tools for children, but the potential risk for exposure to zoonotic diseases in these environments should not be dismissed. Because children are particularly vulnerable, it may be safest to prevent their contact with certain animals, such as amphibians, reptiles, baby chicks, and ducklings, to help reduce the risk of exposure to pathogens potentially carried by these animals. In fact, the Centers for Disease Control and Prevention (CDC) has recommended this precaution as an option for children under the age of 5 years. However, avoidance is not always possible or practical, so organizations like the CDC, National Association of State Public Health Veterinarians, and American Veterinary Medical Association (AVMA) are trying to educate the public about the best ways to protect children, adults, and pets from exposure to zoonotic diseases.

The good news is that you don't necessarily have to get rid of your pet lizard or abandon trips to farms or petting zoos to protect your loved ones from zoonotic diseases—although, if your home contains young children or immunocompromised people, you should consult your veterinarian about the potential risks. Some basic precautions can significantly reduce the risk of anyone becoming ill:

- Apparently healthy animals can still transmit certain zoonotic diseases, but keeping your own pets healthy is a great place to start. This means scheduling regular wellness visits with your veterinarian, keeping vaccines up-to-date, and staying on top of parasite prevention. Even if you aren't convinced your pet is at risk for fleas,

roundworms, and other parasites, using preventive medications is highly recommended. Discuss these points with your veterinarian to make sure your pet is being adequately protected.

- Wash hands thoroughly after handling pets, before eating or drinking, before preparing food, after using the restroom, after removing dirty shoes or clothes, and after leaving an area where animals are kept—even if you don't remember touching anything. Children should be taught when and how to properly wash their hands.
- Soap and water are preferable for hand washing, especially when your hands are visibly dirty. However, alcohol-based sanitizers can also be used.

Frequent hand washing is critically important in preventing transmission of many zoonotic organisms.

- After washing your hands, don't dry them on your clothing.
- Teach children to avoid direct contact with wild animals. Wild animals should not be approached or touched, and they certainly should not be kept as pets.
- Keep litterboxes clean, and pick up after your dog. Ideally, wear gloves when handling animal urine or feces.
- Don't eat, drink, or smoke in areas where animals are kept.
- Don't let animals lick your mouth, and don't share your food with them.
- When at a petting zoo or other place where touching animals is encouraged, always remind children to (1) wash their hands afterward (even if they didn't touch anything), (2) not eat or drink anything until they have left the animal area and washed their hands, and (3) avoid putting anything into their mouths. Children younger than 5 years should be closely supervised, and toys and pacifiers should not be permitted into areas where animals are housed.