The majority of households in the United States have at least one pet, and there are many health benefits to pet ownership. Pets provide companionship, decrease feelings of loneliness, and increase opportunities for socialization, exercise, and outdoor activity. In addition, pets have been shown to decrease blood pressure, cholesterol, and triglyceride levels in their owners. But there are some health-related risks to owning and caring for pets. Pets can carry germs, and some of these germs can be passed on to people. For example, each year almost 800,000 persons who have been bitten by dogs or cats require medical attention (Centers for Disease Control and Prevention [CDC], 2005). Even so, you are more likely to get sick from contaminated food or water than from pets.

The CDC has created a Healthy Pets Healthy People Web site to provide pet owners with information about diseases pets may carry. Different types of animals carry different diseases, but not all diseases can be transmitted to people. Diseases that are transmitted from animals to humans are referred to as “zoonotic” diseases. Here are some of the more common zoonoses associated with pets.

**Birds**

Birds can spread germs to people, but illness caused by touching or owning birds is rare. Infants, children younger than 5 years old, and those with decreased immune systems are more likely than others to get diseases from birds. Children should not touch baby chicks and ducklings because these birds can pass *Salmonella* bacteria to them and make them very ill.

In people, *Salmonella* causes diarrhea, fever, and stomach pain. These symptoms usually go away after 1 week, but some people must seek medical attention because the diarrhea is severe or the infection has affected other organs. People get *Salmonella* infection by eating contaminated food such as chicken or eggs, but they can also get the infection if they do not wash their hands after touching contaminated animal feces and then touching their hands to their mouth.

Parakeets and parrots can carry *Chlamydia psittaci* bacteria that can be passed to people. *Chlamydia psittaci* causes fever, chills, headache, muscle aches, and a dry cough. Some people develop severe pneumonia requiring intensive-care support, and fatal cases have been reported. Infection is transmitted through inhaling dried secretions from infected birds.

**Cats**

People are not likely to get sick from touching or owning a cat, but can get sick from cat scratches and bites. Cat scratch disease (or cat scratch fever) is a common bacterial disease caused by *Bartonella henselae*. A mild infection develops at the point of injury, and the lymph nodes around the head, neck, and upper limbs become swollen. Symptoms also include fever, headache, fatigue, and a poor appetite. Kittens are more likely to be infected, and about 40% of cats carry this bacteria at some time in their lives.

Toxoplasmosis is a disease that can come from cats, but you are more likely to get this disease from eating raw meat or from gardening in contaminated soil. Toxoplasmosis is a disease caused by a parasite called *Toxoplasma gondii*. People can become infected by swallowing contaminated cat feces after touching their hands to their mouth after gardening or cleaning a cat’s litter box. Very few people who are infected have symptoms because a healthy immune system keeps the parasite from causing illness. But a *Toxoplasma* infection can be serious for pregnant women and those with compromised immune systems. Severe toxoplasmosis causes damage to the brain, eyes, or other organs, and the infection can reactivate later in life. Infants who are infected while still in the womb may have no symptoms at birth, but they may develop symptoms later in life. A few infected newborns have serious eye or brain damage at birth.

**Dogs**

People are not likely to get sick from touching or owning dogs, although dogs can carry germs that make people sick. Dogs can pass the *Campylobacter* bacterium in their feces. *Campylobacter* infection in people causes watery or bloody diarrhea, fever, abdominal cramps, nausea, and vomiting. A rare complication that can develop is Guillain-Barre syndrome. Most people get campylobacteriosis from contaminated food, but they can also become infected through contact with infected animal feces.

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Dogs and Cats

Dogs and cats can transmit hookworm infection to people, but not directly. Hookworm infection is caused by several species of parasites, and infected animals pass hookworm eggs in their stools. If eggs are accidentally eaten, the larvae that hatch out of the eggs can reach the intestine and cause bleeding, inflammation, and abdominal pain. If eggs or their larvae get into the body by walking barefoot or gardening with bare hands, symptoms vary as the larvae can travel through different parts of the body. For example, people can get painful and itchy skin when hookworm larvae move through their skin. Children who often play in an area where dogs or cats have been, especially puppies or kittens, are at higher risk of coming in contact with hookworm eggs and larvae.

Toxocariasis is a zoonotic infection caused by roundworms found in the intestines of dogs and cats. The most common Toxocara parasite of concern to people is the one puppies contract from their mother before birth or from her milk. When the puppy is 3 or 4 weeks old, it produces a large number of roundworm eggs that are passed in its feces. People become infected after accidentally swallowing the eggs. Toxocara infection can cause partial loss of vision andblindness when microscopic worms enter the eye, causing inflammation and scarring of the retina.

Horses

You are not likely to get sick from touching or owning horses, but when doing common chores such as cleaning stalls and grooming them, you may touch manure without knowing it. Horses often carry the bacterium Salmonella, which can be passed on to people. Horses can also carry Cryptosporidium, a parasite that causes watery diarrhea, fever, abdominal cramps, nausea, and vomiting in people. Most people get Cryptosporidium infections from contaminated food and water, but touching contaminated animal feces can also cause the infection.

Farm Animals

Cows, sheep, pigs, and goats can pass diseases to people. Cows and calves can carry Escherichia coli O157:H7 and pass the bacteria in their feces. E. coli infection in people causes watery or bloody diarrhea, fever, abdominal cramps, nausea, and vomiting. Illness may be mild or severe with young children more likely to have severe symptoms, including kidney failure. Most people get E. coli from contaminated food such as undercooked ground beef, but contact with contaminated animal feces can also cause the infection.

Pigs can carry the bacterium Yersinia enterocolitica, a bacteria that causes different symptoms depending on the person’s age. Young children usually have fever, stomach pain, and diarrhea; while adults may not get sick. Those who do may feel pain on their right side, have a fever, or have joint pain lasting for several months. People become infected through contact with infected feces or by eating pork that is undercooked.

Pocket Pets

“Pocket pets” refer to small animals, such as rodents, that are kept as pets. Other common pocket pets include rats, mice, rabbits, gerbils, hamsters, guinea pigs, and ferrets. Pocket pets can carry Salmonella that pass from the feces and spread to people.

Fish and Amphibians

Fish, frogs, and toads — and the water they live in — can carry bacteria that can be transmitted to people. Salmonella infection is a disease that can be transmitted by amphibians and aquarium water.

Reptiles

Reptiles such as turtles, lizards, and snakes can carry Salmonella. Because Salmonella are naturally occurring bacteria in turtles, they pose a high risk of spreading salmonellosis to children. Reptiles and amphibians should be kept out of homes that include children younger than 5 years old or immunocompromised persons.

The U.S. Food and Drug Administration banned the sale of turtles less than four inches in 1975. Since the ban, it is estimated that 100,000 cases of Salmonella infection are prevented annually. Despite the health risk, turtles have become popular pets in recent years.

Rabies

Rabies is the most serious disease animals can transmit to people. People usually contract rabies from a bite of an infected animal. Dog, cats, cattle, horses, and other animals can pass this deadly viral disease to people.

It may take several weeks or even a few years for people to show symptoms after getting infected with the rabies virus. More often, symptoms of the disease occur 1 to 3 months after the virus infects them. An early sign of rabies may be fever or headache, but this quickly changes to nervous system signs such as confusion, sleepiness, or agitation. Once these signs occur, the person usually does not survive.

Preventing Zoonotic Infections

Simple measures can be taken to protect you and your family from zoonotic infections. First, keep your pet healthy. Feed your pet a balanced diet and do not allow it to eat raw food or drink out of the toilet. Have your pet routinely cared for by a veterinarian. Regularly scheduled shots and treatment for worms reduces the chance of illness in your pet and passing an infection on to humans.

Keep your environment clean of animal feces. Bury dog feces, or place feces in a plastic bag and then put it in the trash. Litter boxes should be cleaned daily and the dirty litter placed in a plastic bag. If you are pregnant, have someone who is healthy change your cat’s litter box. If this is not possible, wear gloves to clean the litter box. Cover a child’s sandbox when not in use so cats do not use it as a litter box.

Wear gloves when gardening or handling soil.
Children should not play in areas that have been contaminated with dog or cat feces.

Avoid rough play with cats and dogs to prevent scratches and bites. If you are scratched by a cat or dog, immediately wash the area thoroughly with soap and running water. If any animal bites you, see a health care provider right away.

Never approach an unfamiliar animal, even if it appears friendly. Never adopt wild animals as pets as they can carry diseases that are dangerous to people.

Thoroughly wash hands with soap and running water after contact with animals and their feces. Since farm animals pass manure in the same places where they rest and eat, thoroughly wash hands after touching objects (fences, buckets, tools, straw bedding, etc.) that have been in contact with the animals.

To prevent disease transmission from pocket pets, hands should be washed immediately after handling them or their cages and bedding, and after cleaning up their droppings. Young children need supervision when handling pocket pets and their cages, and when washing their hands. Pocket pets should not be kissed or held close to the mouth.

Do not handle pets in food preparation areas; thoroughly wash hands before handling food.

Some people have an increased risk of getting sick from animals. These include infants and children less than 5 years old, pregnant women, and the elderly. Others at higher risk are people who are undergoing treatment for cancer, those who have received organ transplants, and people with HIV/AIDS. A person who is at higher risk of disease from animals should avoid contact with reptiles, amphibians, baby chicks, and ducklings, and be extra cautious when visiting farms and petting zoos. Children should be taught to always wash their hands after playing with animals, after playing outdoors, and especially before they eat.

Summary

Owning and caring for a pet should be an enjoyable experience. Be a responsible pet owner and keep your pet healthy. By keeping your pet healthy and following a few simple preventive measures, you can protect you and your family against zoonotic diseases. 

Reference