Protozoal Infections

Protozoans are single-celled organisms. The three most common protozoal diseases in pets and humans are *cryptosporidiosis*, *giardiasis*, and *toxoplasmosis*. Cryptosporidiosis and giardiasis can cause diarrhea in both pets and people who usually become infected by a common source—for example, contaminated water—not by each other. To prevent the spread of infection, schedule annual fecal examinations for your pets and medicate infected pets as directed by your veterinarian. Other preventative measures include wearing gloves while handling feces-contaminated material, washing hands afterwards, and boiling or filtering any surface water used for drinking.

Toxoplasmosis is caused by the parasitic protozoan *Toxolasma gondii*. People with weakened immune systems or infants whose mothers are infected during pregnancy can develop severe illness. People commonly become infected by undercooked or raw meat, or by inadvertently consuming contaminated soil on unwashed or undercooked vegetables. Unfortunately, pregnant women or immunosuppressed individuals are often mistakenly advised to remove cats from the household to reduce the risk of toxoplasmosis. However, people are highly unlikely to become infected from direct contact with their cats.

Cats can become infected by eating infected rodents, birds, or anything contaminated with feces from another infected cat. An infected cat can shed the parasite in its feces for up to two weeks. The parasite must then mature for one to five days before it becomes capable of causing infection and can persist in the environment for many months continuing to contaminate soil, water, gardens, sandboxes, or any place where an infected cat has defecated.

Basic hygiene can prevent toxoplasmosis. Wear gloves when handling potentially contaminated material (for example, when gardening or handling raw meat), and be sure to wash your hands afterwards. Avoid eating undercooked meat and thoroughly wash fruits and vegetables before eating. Surface water should be boiled or filtered prior to drinking, and children's sandboxes should be covered when not in use to prevent wandering cats from defecating in them. Scoop litter boxes daily while wearing gloves and wash your hands afterwards. Pregnant women or immunosuppressed individuals are safest when other household members clean the litter box.

Viral Infections

Most viruses infect only their natural host species. Human viruses, like those that cause the common cold, infect only humans, while feline immunodeficiency virus, feline infectious peritonitis virus, and feline leukemia virus infect only cats. However, one virus that can be passed from pets to humans is rabies. Rabies is a viral disease resulting from the bite of an infected animal. Cats are highly susceptible to rabies, which attacks the central nervous system, causing a variety of signs. Rabies is almost always fatal. In people, rabies infections usually occur when an infected animal bites a person. In order to protect human health, rabies vaccination of cats is required by law in many areas. Even if your cat is kept indoors it is important to keep rabies vaccines current because cats occasionally escape outdoors, and because rabid animals such as bats and raccoons occasionally enter houses. To further reduce your risk of rabies, avoid contact with wildlife and stray animals. See a doctor immediately if you have been bitten by an animal.

Newport Hills Animal Hospital

ZOONOTIC DISEASE:

CAN MY PETS MAKE ME SICK?

While most infectious diseases affect only our pets and most human infectious diseases affect only humans, it is important to be aware that there are diseases called *zoonotic* diseases, which can be transmitted between pets and people. You are much more likely to contract an infectious disease from another human than you are from your pets, however, simple precaution, common sense and good hygiene can further reduce the risk.

How are zoonotic diseases transmitted?

Transmission of zoonotic disease can potentially occur when a person comes into direct contact with secretions or excretions—such as saliva or feces— from an infected pet. Many zoonotic diseases may be contracted through contact with water or food that has been contaminated by an infected pet. Some zoonotic infections may be transmitted via fleas and ticks (known as vectors) to a person or a cat or dog from another animal.

Who is at risk?

Most zoonotic diseases pose minimal threat, however, some humans are particularly at risk. Those with immature or weakened immune systems such as infants, individuals with acquired immunodeficiency syndrome (AIDS), the elderly, and people undergoing cancer therapy are more susceptible to zoonotic infections than others.

What are some common zoonotic diseases?

Bacterial Infections

Cat scratch disease also called bartonellosis, is by far the most common zoonotic disease associated with cats with 25,000 people diagnosed every year. Bartonellosis may be transmitted by the bite or scratch of an infected cat or by a flea bite of an infected flea. Infected people experience fever, headache, swollen lymph nodes, sore muscles and joints, fatigue and poor appetite. Healthy adults generally recover with no lasting effects, however, it may take several months for the disease to go away completely. People with compromised immune systems may suffer more severe consequences.

Salmonellosis, another common bacterial disease, can cause diarrhea, fever, and stomach pain beginning one to three days after infection. Salmonellosis usually resolves on its own. Some people require medical attention because the diarrhea is severe or the infection is affecting other organs. People usually get salmonellosis by eating contaminated food, such as undercooked chicken or eggs. Cats and other animals—even those that appear healthy— can carry and pass salmonella bacteria in their stool. Salmonella bacteria are more commonly harbored by cats that feed on raw meat or wild birds and animals. Feline infection can be prevented by keeping cats indoors and feeding them cooked or commercially processed food. Human infection can be prevented by wearing gloves when cleaning litter boxes, (especially if used by a cat with diarrhea) and washing hands thoroughly afterwards.

Parasitic Infections

Fleas are the most common external parasite of dogs and cats. While fleas cannot thrive on humans, their bites can cause itching and inflammation. Flea-infested pets may become infected with tapeworms when fleas are ingested while grooming. Children, albeit rarely, can become infected with tapeworms from inadvertently ingesting fleas.

Some intestinal parasites, including roundworms and hookworms can cause disease in people. Children are particularly at risk due to their higher likelihood of contact with contaminated soil. *Visceral larva migrans*, a potentially serious disease that can affect the eyes and other organs, results from inadvertent consumption of roundworm eggs (e.g. when soiled fingers are placed in the mouth).

Cutaneous larva migrans, an itchy skin disease, is caused by contact with hookworm-contaminated soil. Proper hygiene, including washing hands before meals, cleaning soil from vegetables, and reducing exposure to feces (e.g., by covering children's sandboxes when not in use) can prevent infection. Anti-parasite medications for kittens and puppies along with annual fecal exams for adult pets can reduce environmental contamination and the risk of human infection. Our doctors recommend using Sentinel on a monthly basis to control fleas and prevent heartworm and intestinal parasites in dogs.

Fungal Infections

Ringworm is not caused by a worm at all; it is a skin infection caused by a group of fungi. Infected cats most often come from environments housing large numbers of animals. In cats, ringworm usually appears as a dry, gray, scaly patch on the skin. In humans, ringworm often appears as a round, red, itchy lesion with a ring of scale around the edge. Ringworm is transmitted by contact with an infected animal's skin or fur either directly or from a contaminated environment. Infected cats continuously drop fungal spores from their skin and fur; these spores, which remain capable of causing infection for many months, are difficult to eradicate from a household. Children are particularly at risk of infection. To reduce environmental contamination, confine infected cats to one room until they are free of infection, then thoroughly clean and disinfect the household.