

HOW CAN TOXOPLASMOSIS BE PREVENTED?

No vaccine is available to protect against toxoplasmosis, but some simple precautions can reduce the risk of exposure and infection. Keep in mind that you're more likely to be infected with *Toxoplasma* from undercooked meat or the environment than you are from your cat.

General precautions

- Wear gloves when gardening or touching soil or sand that may be contaminated with cat feces.
- Wash your hands with soap and water immediately after working with soil or after handling raw or undercooked meat, vegetables, or unpasteurized dairy products.
- Avoid consuming or feeding pets unpasteurized milk or other unpasteurized dairy products.
- Wash fruits and vegetables thoroughly under running water before eating, especially those grown in backyard gardens.
- Cook meat to temperatures capable of destroying *Toxoplasma* and other infectious organisms. This means at least 165°F for poultry (whole cuts or ground), 145°F for whole cuts of meat and for fish, and 160°F for ground meat.
- Thoroughly wash cutting boards, knives, sinks, and countertops with hot, soapy water immediately after cutting meats.
- Cover any outdoor sandboxes when not in use to prevent cats from using them as litter boxes.



Additional precautions for cat owners

- Keep your cat indoors to prevent them from hunting rodents and birds.
- Avoid feeding your cat raw foods.
- Remove waste from the cat litter box daily, before any *Toxoplasma* oocysts in the feces have a chance to become infective. Ideally, the litter itself would be replaced daily, especially if it's the non-clumping kind. However, this frequency may not always be feasible or necessary, particularly if the cat is unlikely to become newly infected, as when kept indoors and fed canned, dry, or well-cooked food. Remember: previously infected cats usually pose little risk to others.
- Wash your hands after scooping out waste from the litter box, and dispose of used cat litter safely, preferably in a sealed plastic bag.
- If your cat has long hair on their rear end and tends to collect fecal material in it, carefully trim the area or have your cat professionally groomed to keep the area clean. Similarly, for cats that are too overweight, ill, or arthritic to adequately groom themselves, you may need to groom the cat (wash your hands afterward) or have the animal professionally groomed.

Additional precautions for pregnant or immunocompromised people

- If possible, avoid handling stray cats or adopting new cats during your pregnancy or illness. If a new cat joins your family during this time, have it thoroughly examined by a veterinarian immediately to ensure it is healthy. The veterinarian also can answer any questions you may have.
- If you own a cat, ask another person to clean the litter box, if possible. If not possible, change the litter daily (to avoid contact with oocysts after they have had sufficient time to become infectious). Use rubber gloves when doing so, and wash your hands thoroughly afterwards.

FOR MORE INFORMATION ON HOW TO KEEP YOUR PET HAPPY AND HEALTHY AS LONG AS POSSIBLE, VISIT:

American Veterinary Medical Association
avma.org/PetOwners

TOXOPLASMOSIS

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Toxoplasmosis is a disease caused by a microscopic parasite called *Toxoplasma gondii*. Nearly all warm-blooded animals are susceptible to *Toxoplasma* infection, including most pets, birds, livestock, rodents, people, and other mammals. However, pet cats and other cat species are the only ones in which the parasite can reach the adult reproductive stage and produce tiny egg-like “oocysts.” This makes cats key players in spreading *Toxoplasma*.

In the early stage of infection, cats can pass millions of *Toxoplasma* oocysts in their feces (poop). After about 1 to 5 days in the environment, the oocysts become infective.

People and animals can become infected by swallowing soil, plants, or water contaminated with these oocysts. Once inside the body, parasites from the oocysts form microscopic cysts and become dormant. These cysts may remain in place for the rest of the animal’s life, with no ill effects.

In all animals but cats, the parasite’s life cycle generally stops there. However, in cats, something extra happens. Once the parasite enters the intestines, it starts to produce more oocysts, which are then shed in the cat’s feces for about 1 to 3 weeks, and the cycle begins again.

Infection doesn’t always cause disease. In fact, most infected people and animals have no symptoms or signs at all. Even so, certain at-risk groups may develop severe or life-threatening disease. These include fetuses, the very young, the immunocompromised (individuals with weakened immune systems), and certain marine mammals (like sea otters and seals).

You can help protect yourself, your cat, and others by learning how toxoplasmosis is spread and taking simple steps to prevent that from happening.



HOW IS *TOXOPLASMA* SPREAD?

In addition to spreading through cats’ feces, the parasite can be spread in other ways as well.

- Cats most often catch the parasite by eating infected prey (like rodents or birds) with *Toxoplasma* cysts in their tissues. This can happen for other prey-eating animals, too.
- People and animals can become infected by consuming foods like these:
 - Raw or undercooked meat (especially pork, goat meat, lamb/mutton, and game meat)
 - Unpasteurized milk (including goat’s milk) or milk products
 - Unwashed fruits and vegetables contaminated with soil containing infective oocysts
 - Raw oysters, clams, and mussels obtained from contaminated seawater
- People can become infected through gardening and other activities involving direct contact with soil or water contaminated with cat feces and oocysts.
- Children may become infected by playing in sandboxes that cats have used as litter boxes.
- People and animals that become infected for the first time during pregnancy can transmit the parasite to their unborn babies through the placenta.
- People who handle cat litter may accidentally swallow oocysts if their cat has recently been infected.
- Rarely, people may catch the parasite through blood transfusions or organ transplants.

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HOW DOES *TOXOPLASMA* AFFECT CATS?

About 15% to 40% of cats in the U.S. have antibodies against *Toxoplasma*, meaning they became infected with the parasite at some point in their lives. For cats allowed outdoors, the most likely source of infection is prey animals containing tissue cysts. For indoor-only cats, it’s raw or undercooked meat containing these cysts.

Signs of *Toxoplasma* infection depend on a variety of factors such as the cat’s age, immune status, and stage of infection. Most infected adult cats appear healthy. However, kittens and some cats may develop disease, with signs like the following:

- Fever
- Lethargy
- Loss of appetite
- Diarrhea or vomiting
- Coughing or difficulty breathing/pneumonia
- Personality changes
- Neurological problems, like seizures, incoordination, or tremors
- Eye problems

For unborn and newborn cats infected through their mothers, outcomes are typically severe, with effects like these:

- Abortion or stillbirth
- Severe neurological defects, including brain damage
- Eye damage, including impaired vision
- Poor growth and developmental delays

HOW DOES *TOXOPLASMA* AFFECT PEOPLE?

The U.S. Centers for Disease Control and Prevention (CDC) estimates that over 40 million people in the U.S. are infected with *Toxoplasma*. This infection may last for a lifetime.

While most people don’t even know they’re infected due to a lack of symptoms, some pregnant women and many immunocompromised people are at risk of severe complications.

Women infected prior to pregnancy usually will have immune protection (antibodies) against the parasite, and are not considered at risk of becoming ill or passing the infection to their unborn child. The situation is different for women infected for the first time while pregnant. In those cases, infection can



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cause complications that mostly affect the developing fetus, such as miscarriage, stillbirth, or birth defects similar to those described for feline fetuses and newborn kittens. These complications tend to be more severe if the mother is infected during the first trimester, rather than later on. Although most infected infants show no symptoms at birth, many are likely to have symptoms later in life.

Immunocompromised people, such as those with HIV or receiving certain chemotherapy, may experience severe disease, regardless of when they were first infected. Symptoms can include fever, confusion, headache, seizures, nausea, and poor coordination.

The good news is that it’s certainly possible for these higher-risk groups to have cats and enjoy the many benefits they bring, without needing to give them up. In fact, simply handling cats is unlikely to cause an infection. If you’re pregnant or immunocompromised, be sure to discuss any concerns with your health care provider and veterinarian and to follow tips for preventing infection.