



Pet Cats & Human Health

As of 2000, it was estimated that there were approximately 4.5 million domestic cats in Canadian homes. Many cat owners live in very close contact with their feline companions. It is common for house cats to have access to areas like the kitchen counter where food is prepared, and many cats sleep in the same bed as their owners. Given the high frequency of very close contact between cats and people, it is easy to see how infection could be transmitted between them. Although the risk of zoonotic disease transmission from cats is very low, it is important to be aware that it exists, and to take some simple precautions to reduce this risk.



Things to Think About Before Getting a Cat

Your veterinarian is a great source of information and advice about the time and financial commitments involved in owning a cat what kind of cat would be best suited for you and from where you should get one. In order to decrease the risk of your cat becoming sick and/or transmitting infection to a person, it is recommended that the cat should be:

- ▶ **Well socialized and accustomed to handling:** this will make the cat less likely to bite or scratch a person.
- ▶ **Examined regularly by a veterinarian:** in order to assess the overall health of the cat, check for external and internal parasites, and clip the cat's claws. Declawing the cat is NOT necessary.
- ▶ **Spayed/neutered:** this will help to decrease fighting with other cats and the tendency to roam, as well as the tendency for male cats to urine mark, and it eliminates the possibility of pregnancy in female cats.
- ▶ **Kept indoors:** to decrease the chances of the cat becoming infected with worms, fleas or bacteria; bringing rodents or birds back into the house; or becoming sick or injured due to contact with other cats or wildlife.

If your cat will be in contact with someone who may be more susceptible to infectious disease (e.g. young children; immunocompromised HIV/AIDS, transplant and cancer patients), it is also recommended that your cat should be:

- ▶ **At least one year old:** this decreases the likelihood that the cat will have intestinal parasites, and makes it easier to judge the cat's overall temperament to ensure it is relatively friendly and docile.
- ▶ **Examined thoroughly by a veterinarian PRIOR to being taken home:** The cat can be kept in isolation at a clinic or at another house for a short time if treatment for a particular condition is necessary.
- ▶ **Already litter trained:** to ensure that stool and urine (and the pathogens in them) are not spread in the house.
- ▶ **Not acquired from a shelter:** because such cats usually have an unknown medical history and may be in contact with other sick animals at the shelter facility, even if they do not appear sick themselves.

Cat Care Tips



Feeding

- ▶ Cats should NOT be fed raw meat or eggs, or commercial diets with raw ingredients. Uncooked meat is often contaminated with pathogens such as *Escherichia coli*, *Salmonella sp.* or *Toxoplasma*, which can infect the person preparing the food for the cat. There is also potential for these pathogens to infect the cat. Although the cat may or may not get sick, it can still spread these pathogens around the house.
- ▶ Feeding a high-quality, balanced commercial cat food will provide your cat with all the nutrients it needs, and help it to stay healthy and fight off disease.

Litter Box Cleaning

- ▶ If you have more than one cat, you should have the same number of litter boxes plus one available for them.
- ▶ In general, stool and litter clumps (if clumping litter is used) should be scooped out once a day to once a week, depending on how often the cat uses the litter box.
- ▶ Litter boxes should be completely emptied, cleaned with scalding water, disinfected and dried approximately once a month. It is important that all visible dust and debris is cleaned out of the box prior to applying a disinfectant such as household bleach. The disinfectant should be left in contact for at least 10 minutes, then the litter box should be thoroughly rinsed with water, dried completely, and refilled with clean litter. Never clean a litter box in the kitchen sink.

It is important to thoroughly wash your hands with soap and running water after scooping out or cleaning a cat's litter box. The risk of becoming sick from a pathogen from a cat's stool is minimal in most people, but it is higher for young children, immunocompromised individuals and pregnant women. If possible, these higher-risk individuals should not handle used cat litter, and should avoid contact with cat stool in general.





Holding a Cat

Very small kittens can be picked up by the loose skin on the back of the neck (called the scruff), but their body should always also be supported by a hand under their rump. An adult cat should never be picked up by its scruff. Instead, pick up the cat with one hand on the chest under the front legs and the other hand under the cat's rump (see picture left). Use the upper hand to hold the cat close to your body, and the other to support the cat's weight. Don't put the cat's paws on your shoulder, as this may encourage it to try to climb up onto your shoulder or back.

Preventing Bites and Scratches

- ▶ Anticipate a cat's behaviour in situations where it might become scared or feel uncomfortable. Do not try to trap or hold a frightened cat if it tries to get away.
- ▶ Children and immunocompromised or elderly individuals should not hold a cat in situation with which the cat is unfamiliar, such as during veterinary appointments.
- ▶ Never play with a cat using only hands or feet – always use an appropriate toy.
- ▶ Always supervise children playing with a cat to ensure they are gentle and quiet.
- ▶ Do not disturb a cat that is eating, sleeping or using the litter box
- ▶ Do not approach stray or unfamiliar cats, even if they seem friendly.
- ▶ Beware of cats that may have petting-induced aggression.



Vaccines and Parasite Control for Cats

Keeping your cat's vaccines up-to-date will help keep your pet healthy, and also make it less likely to get sick from a disease that it might be able to transmit to people. Some vaccines, such as rabies vaccine, are recommended for all cats, while others might only be recommended in certain situations, like if your cat was going to stay at a boarding kennel. Talk to your veterinarian about what vaccines your cat should have. Many of the vaccines only need to be given every three years once your cat is an adult.



Fleas can carry infections from animal to animal or sometimes from animals to people. The larvae of some types of intestinal worms in cats (e.g. hookworms, roundworms) can cause a disease called larval migrans in people, especially children. In Canada, however, these infections are uncommon, even though the worms are very common, particularly in kittens. Your cat and its stool should be examined for parasites at least once a year at its annual check-up, and kittens should be dewormed when they are vaccinated. What your veterinarian recommends for regular parasite control in an adult cat will depend on where you live, the season, whether or not your cat (or other animals in the house) goes outside, and whether or not there is a child or immunocompromised person living with the cat.

Infection Control



Bite and Scratch Care

- Bites and scratches from cats are much more likely to get infected than bites from other animals. Bites in particular can be very deep which makes them hard to clean well, and may allow infection to fester.
- It is very important to wash any wound from a cat immediately and thoroughly with soap and running water. It can then also be treated with an antiseptic.
- **Seek medical attention** for *any* bite wound on a hand, over a joint, that goes down to the bone or involves a crushing injury, if the wound becomes excessively red, painful or swollen, if there is discharge, if the person develops a fever, or if the person is immunocompromised (e.g. HIV/AIDS, transplant or cancer patient).
- All bite wounds should be reported to your local public health unit. Any biting cat, especially if its rabies vaccination status is unknown or out of date, must be isolated for 10 days. If the cat was a stray, call animal control so it can be captured.

Hand Hygiene

Hands should be washed with soap and water after handling any pet, including cats. This is especially important after cleaning a litter box or coming in contact with urine, stool, eye or nose discharge, or a wound on a cat. This simple precaution can reduce the transmission and spread of several of the zoonotic pathogens which are carried by cats.



Zoonotic Diseases of Cats

The following are some of the more common and well-known diseases that cats can transmit to people. Please refer to individual disease information sheets for additional details. It is also important to remember that many of these pathogens may be carried by a cat without actually making the animal sick, and may therefore go undetected.



Infections that cause diarrhea:

- ▶ These include the bacteria *Campylobacter jejuni* and *Salmonella* sp., and the protozoa *Cryptosporidium* sp. and *Giardia intestinalis*. All of these are notifiable diseases in people in Canada. They may cause no illness at all, or they may cause diarrhea, or in higher-risk individuals (e.g. HIV/AIDS, transplant, cancer patients, young children) they may cause much more serious illness. They are transmitted by contamination of food or water that is ingested, or stool contamination of the hands which is transferred to the mouth.

Cat scratch disease (bartonellosis, benign lymphoreticulosis, bacillary angiomatosis):

- ▶ An infection caused by a proteobacterium, *Bartonella henselae*, which infects up to 40% of cats, but does not make cats sick. It is believed to be transmitted to people when a bite or scratch from a cat is contaminated by the cat's blood or flea excrement (which contains digested blood) from an infected cat. Infection often causes fever and very swollen lymph nodes, but it can be more serious or even fatal in immunocompromised individuals.

Other cat bite wound infections:

- ▶ It is estimated that 20-50% of cat bite wounds become infected. Usually multiple kinds of bacteria are present in each wound and infection can be very severe. Cat bites can also create deep puncture wounds which may result in infection of deeper tissues such as bones and joints.

Larval migrans caused by hookworm and roundworm larvae:

- ▶ This condition can be caused by various species of hookworms and roundworms, some of which infect cats. Eggs of the parasites are passed in the stool of infected animals, and release larvae which can penetrate a person's skin or are accidentally ingested. The larvae then migrate under the skin (cutaneous), through various internal organs (visceral) and occasionally the eye or brain (ocular or neurological), causing irritation and inflammation (larval migrans). The ocular form can result in blindness. Infection is most likely to occur in young animals and children.

Rabies:

- ▶ A viral infection of the nervous system which is almost always fatal once clinical signs appear. Cats are usually infected by direct contact with a rabid animal, most often a skunk, fox, raccoon or bat. Transmission occurs when the saliva of an infected animal comes in contact with a wound (such as a bite or scratch) or mucous membrane (eyes, nose, mouth). Rabies is a reportable disease in humans and animals in Canada.

Ringworm (dermatophytosis):

- ▶ A fungal skin infection caused by one of several species of *Microsporium* or *Trichophyton*. It usually causes no signs in cats, but when it does it can look like almost any feline skin disease. In humans it can cause distinct areas of red, raised, itchy skin with pale centers, which therefore look like "rings." The fungus is transmitted by contact with the skin, fur or dander of an infected cat, particularly if the person's skin is damaged or moist.

Toxoplasmosis:

- ▶ An infection caused by the protozoal parasite *Toxoplasma gondii*. Exposure to *T. gondii* is common in people and in cats, but clinical disease is uncommon in healthy individuals. Infection in pregnant women, however, can cause abortion, premature delivery or still birth. Cats shed oocysts (parasite "eggs") in their stool that become infective after about 24 hours, but *many people are more likely to be exposed to oocysts in soil or by eating undercooked meat*. Transmission from cats is likely comparatively uncommon.

Recognizing Illness in Cats

The most common signs of illness in cats are lethargy and decreased appetite. A cat that is not feeling well will often hide, and may not be easy to coax out into the open if it is not hungry. If you think your cat is sick, it should be brought to a veterinarian as soon as possible. Just like for people, it is usually easier (and ultimately cheaper) to have your cat examined and treated when the signs of illness are still mild, instead of waiting to "see what happens" and risk the animal's condition becoming more severe.



Other signs of illness in cats include the following:

- Changes in stool colour and consistency (either harder or softer (i.e. diarrhea))
- Changes in urine colour (especially if it appears to contain blood)
- Inability to urinate or defecate, or excessive straining or crying in the litter box
- Unkempt fur from not grooming, or excessive licking of one area of the body
- Excess discharge from the eyes or nose, often accompanied by sneezing
- Drinking more than usual
- Vomiting more than usual,* or unproductive retching

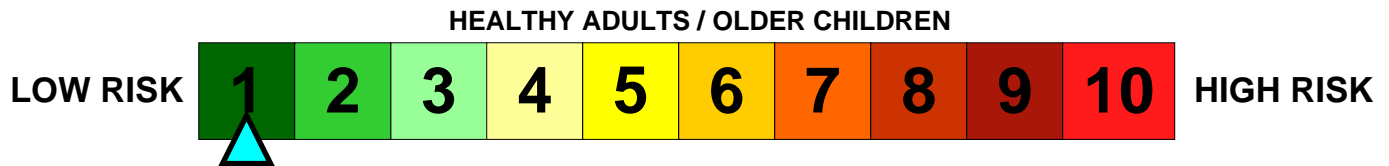


* It is normal for many cats to occasionally vomit a hairball. Some may do so more frequently than others depending on how much hair they swallowing when grooming.

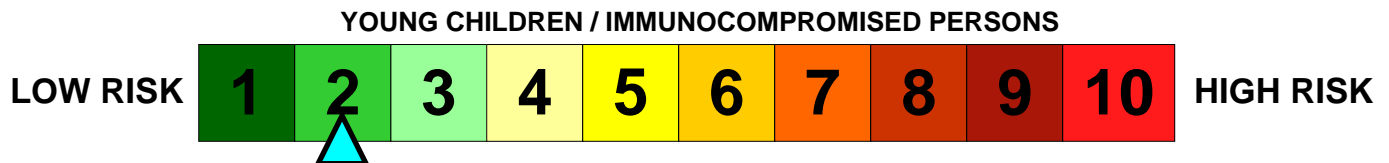
Although it is true that a sick cat with a fever will often have a warm, dry nose, many healthy cats also have dry noses. Furthermore, a cat can still be very sick even if its nose is cold and wet.

Zoonotic Disease Risk

For the general public (healthy adults and older children), the risk of contracting a disease from most pet cats is:



Groups at higher risk of acquiring a zoonotic disease from a cat include immunocompromised individuals (e.g. HIV/AIDS, transplant and cancer patients), infants and young children less than five years of age, and the elderly. There are also precautions that should be taken by pregnant women around cats in order to protect the fetus. For these groups, the zoonotic risk posed by most domestic cats is likely:



Precautions for Immunocompromised Cat Owners & Young Children

- ▶ Keep the animal's claws well trimmed. Plastic nail caps can also be applied to help prevent scratching. Declawing a cat is unnecessarily invasive.
- ▶ Have someone else clean the cat's litter box. Otherwise wear thick rubber gloves and be very diligent about hand washing afterwards. The litter box should also be kept away from food preparation and sleeping areas.
- ▶ Keep the cat in good health by having regular examinations by a veterinarian, as well as up-to-date vaccinations and regular stool exams to check for parasites. Ensure that the cat is free of fleas. Avoid contact with kittens.
- ▶ Keep the cat indoors at all times so it does not hunt birds or rodents, or fight with other animals.
- ▶ Feed a high-quality commercial cat food that does not contain any raw ingredients.
- ▶ Do not let the cat lick the person in question, particularly on the face, nor should they handle the cat if it seems ill.
- ▶ Always supervise young children when they play with a pet. Teach them to be gentle and quiet so the animal is not frightened. Also teach them never to approach an animal they do not know.
- ▶ Hand washing with soap and water after handling a cat or contacting any urine, stool or other bodily secretions is one of the simplest and most important means of infectious disease control.

Precautions for Pregnant Women With Cats

- ▶ The risk of exposure to *Toxoplasma* from a mature house cat is very small. Nonetheless, pregnant women should avoid contact with cat stool, especially if it is more than 24 hours old.
- ▶ Preferably someone else should clean the cat's litter box. Otherwise a pregnant woman should wear thick rubber gloves and ensure that she washes her hands thoroughly afterwards, particularly before handling food of any kind.
- ▶ Cleaning the litter box daily will also help because oocysts in fresh stool at room temperature usually do not become infective for 1-3 days.