

Transmission of Common Cat Diseases and Parasites

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Understanding how diseases are transmitted is important as it can help to reduce possible exposure to cats as well as humans in the case of zoonotic diseases (infections which cats can transmit to people).

- **Direct contact** – Such as licking, touching, biting, sexual intercourse
- **Indirect contact** – Water, soil, grass, contaminated food (including prey)
- **Cutaneous** – Transmission via intact skin or a wound
- **Caregivers** – Contact between an infected cat which is then transmitted to the non-infected cat via a caregiver (pet owner, veterinarian etc)
- **Fomites** – Inanimate objects such as clothing, food bowls, litter trays, surgical equipment
- **Vertical** – Pregnancy (transplacental) and birth
- **Aerosol** – Cat to cat transmission such as coughing, sneezing, breathing
- **Inhalation** – Breathing in the pathogen from the air
- **Vector-borne** – Fleas, ticks, mosquitoes
- **Oral** (indirect contact via the mouth) – Eating, drinking contaminated food or water
- **Fecal-oral** – Pathogens from fecal particles pass into the mouth of another cat via food, water, unwashed hands, contaminated food and insects
- **Fomites** – Non-living objects such as food bowls, cat toys, grooming equipment, which are contaminated with the pathogen
- **Transmammary (lactogenic)**– Transmission of a pathogen to kittens via the mother's breast milk
- **lactrogenic** – Medically induced, such as via blood transfusion, organ transplant etc.
- **Transport and intermediate hosts** – Animals and insects who has acquired a parasite, which is then passed onto the cat either during feeding (such as vector-borne parasites), or as prey (rodents for example, who are eaten)
- **Carrier** – An animal who is infected with a pathogen and is capable of infecting others, but has no obvious signs
- **Airborne** – This differs from aerosol or inhalation as infection is acquired through contamination in the air, but not necessarily directly inhaled (ringworm for example, in which spores in the air can come into contact with the fur and skin and cause infection)

Disease	Zoonotic	Route(s) of transmission
<u>Anaplasmosis</u>	No	Vector-borne, blood transfusion
Anthrax	Yes	Aerosol, fomites, direct contact, blood transfusion (possible)

<u>Aspergillosis</u> (<i>Aspergillus spp.</i>)	No	Inhalation
Babesiosis (<i>Babesia spp.</i>)	No	Vector-borne, blood transfusion, vertical
Blastomycosis (<i>Blastomyces dermatitidis</i>)	No	Inhalation, cutaneous (rare)
<u>Bordetella</u> (<i>Bordetella bronchiseptica</i>)	No	Aerosol, direct contact
<u>Calicivirus</u>	No	Aerosol, direct contact, fomites, caregivers
<u>Campylobacteriosis</u> (<i>Campylobacter jejuni</i>)	Yes	Fecal-oral
Cat flea typhus (<i>Rickettsia</i>)	No	Vector-borne, blood transfusion
<u>Cat scratch disease</u> (<i>Bartonella henselae</i>)	Yes	Vector-borne, blood transfusion (possible)
Cheyletiellosis (<i>Cheyletiella blakei</i>)	Yes	Direct and indirect contact (environment)
<u>Chlamydiosis</u> (<i>Chlamydomphila felis</i>)	No	Direct contact, fomites (possible, but rare)
Clostridium (<i>Clostridium difficile</i>)	Possible	Fecal-oral
<u>Coccidiosis</u> (<i>I. rivolta</i> , <i>I. felis</i>)	No	Fecal-oral, direct contact (hunting) and indirect contact (environment)
Coronavirus	No	Fecal-oral, direct contact, fomites
Cowpox	Yes	Direct contact
<u>Cryptococcosis</u> (<i>Cryptococcus neoformans</i>)	No	Inhalation.
<u>Cryptosporidiosis</u> (<i>Cryptosporidium spp.</i>)	Possible	Fecal-oral
<u>Cytauxzoonosis</u> (<i>Cytauxzoon felis</i>)	No	Vector-borne, blood transfusion (possible)
<u>Ear mites</u>	No	Direct contact, fomites
<u>Feline herpes</u> (<i>feline herpesvirus type 1</i>)	No	Vertical, aerosol, direct contact, caregivers, fomites
<u>Feline immunodeficiency virus</u>	No	Direct contact, vertical, blood transfusion
<u>Feline infectious anemia</u> (<i>M. haemofelis</i> , <i>M. haemominutum</i>)	No	Vector-borne, vertical, transmammary, blood transfusion
<u>Feline leukemia virus</u>	No	Direct contact, vertical, transmammary, blood transfusion
<u>Giardia</u>	Possible	Fecal-oral
<u>Heartworm</u>	No	Vector-borne, blood transfusion
<u>Histoplasmosis</u> (<i>Histoplasma capsulatum</i>)	No	Inhalation

<u>Hookworm</u>	Yes	Indirect exposure (penetration of larvae in contaminated environment through skin), ingestion, inhalation (via contaminated environment), vertical, transmammary (possible)
<u>Leishmaniasis</u> (<i>Leishmania spp.</i>)	Yes	Vector-borne, blood transfusion (possible)
Leptospirosis (<i>Leptospira spp.</i>)	Yes	Urine-oral exposure, vertical, cutaneous transmission via cuts and abrasions from contaminated sources (puddles, soil etc), possible direct contact (during intercourse)
<u>Lungworm</u> (<i>Aelurostrongylus abstrusus</i> , <i>Capillaria aerophila</i>)	No	Transport hosts, indirect contact (infected water)
<u>Lyme disease</u> (<i>Borrelia burgdorferi</i>)	No	Vector-borne, blood transfusion (possible, but unlikely)
<u>Notoedric mange</u> (<i>Notoedres cati</i>)	Yes	Direct contact, fomites
<u>Panleukopenia</u> (<i>feline parvovirus</i>)	No	Fecal-oral, direct contact, fomites, vertical
<u>Plague</u> (<i>Yersinia pestis</i>)	Yes	Vector-borne (fleas), aerosol, direct contact, indirect contact
<u>Pseudorabies alphaherpesvirus</u> <i>suid herpesvirus-1</i> or <i>SuHV-1</i>	Yes	Direct contact with infected swine, indirect contact (ingestion of contaminated pork or infected prey), fomites, possible aerosol
<u>Rabies</u> (<i>Rhabdoviridae</i>)	Yes	Direct contact (biting)
<u>Ringworm</u> (<i>Microsporum canis</i> , <i>Microsporum gypseum</i> , <i>Trichophyton mentagrophytes</i>)	Yes	Direct contact, fomites, caregiver, airborne spores
<u>Roundworm</u> (<i>Toxocara cati</i> and <i>Toxascaris leonina</i>)	Yes	Transmammary, indirect contact (food, feces, water, soil infected with worm eggs), transport hosts such as rodents (who carry the encysted form)
<u>Salmonellosis</u> (<i>Salmonella spp.</i>)	Possible	Fecal-oral
Tapeworm (<i>Dipylidium caninum</i> , <i>Taenia taeniaeformis</i>)	No	Vector-borne
<u>Tetanus</u> (<i>Clostridium tetani</i>)	Yes	Fomites (such as nails from puncture wounds)
<u>Toxoplasmosis</u> (<i>Toxoplasma gondii</i>)	Yes	Fecal-oral
Tuberculosis (<i>Mycobacterium tuberculosis</i>)	Yes	Direct transmission (bites), indirect transmission (infected cows milk or meat)
<u>Tularemia</u> (<i>Francisella tularensis</i>)	Yes	Oral, aerosol, vector borne, blood transfusion