

Zoonotic Diseases of Companion Animals

Routes of Transmission

This handout lists potential routes of transmission of select zoonotic diseases between animals and humans.

Additional routes may occur between animals.

Direct Contact and Fomite

These diseases may be spread by bites, scratches, or direct contact with animal tissues or fluids (e.g., urine, feces, saliva). Disease transmission may also occur indirectly through contact with contaminated objects or surfaces (fomites), such as cages, aquaria, bowls, or bedding.

- Acariasis (mange)
- Brucellosis
- Cat Scratch Disease
- Dermatophytosis
- Glanders
- Influenza
- Leptospirosis
- Lymphocytic Choriomeningitis
- Melioidosis
- Monkeypox
- Mycobacteriosis
- Methicillin-Resistant *Staphylococcus aureus* (MRSA)
- Pasteurellosis
- Plague
- Q Fever
- Rabies
- Rat Bite Fever
- Salmonellosis
- Sporotrichosis
- Tularemia

Oral

These diseases can be transmitted by ingestion of food or water contaminated with a pathogen. This typically occurs from fecal contamination from unwashed hands or soil contact.

- Baylisascariasis
- Campylobacteriosis
- Cryptosporidiosis
- *Escherichia coli* O157:H7
- Echinococcosis
- Giardiasis
- Hookworm Infection
- Leptospirosis
- Salmonellosis
- Toxocariasis
- Toxoplasmosis
- Trichuriasis
- Tularemia
- Yersiniosis

Aerosol

These diseases can be transmitted through the air by droplet transfer, fluids aerosolized from an animal to a person (e.g., sneezing or cough) or by aerosolized materials which are inhaled.

- *Bordetella* Infection
- Cryptococcosis
- Hantavirus
- Influenza
- Leptospirosis
- Melioidosis
- Plague
- Psittacosis
- Q Fever
- Tularemia

Vector-borne

These diseases are transmitted by an arthropod vector.

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|--------------------------|--------------------------------|-------------------|
| FLEAS | TICKS | TRIATOMINE |
| • Plague | • Ehrlichiosis | ("kissing bugs") |
| MOSQUITOES | • Lyme Disease | • Trypanosomiasis |
| • West Nile Encephalitis | • Rocky Mountain Spotted Fever | (Chagas disease) |
| SAND FLIES | • Tularemia | |
| • Leishmaniasis | | |



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By Animal Species

This handout lists select zoonotic diseases that may be carried by companion animals and potentially transmitted to humans.

Most zoonoses can be prevented when proper precautions are taken.



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Dogs

Brucellosis	Leptospirosis	Mange (acariasis)
Campylobacteriosis	Larva Migrans:	Rabies
Dermatophytosis (ringworm)	Hookworms	Salmonellosis
Ectoparasites: fleas, ticks	Roundworms	
	Whipworms	

Cats

Campylobacteriosis	Ectoparasites: fleas, ticks	Rabies
Cat Scratch Disease	Larva Migrans	Salmonellosis
Cryptococcosis	Mange (acariasis)	Sporotrichosis
Dermatophytosis (ringworm)	Plague	Toxoplasmosis
	Q Fever	

Ferrets and Rabbits

Ferrets	Roundworms	Pasteurellosis
Campylobacteriosis	Salmonellosis	Salmonellosis
Dermatophytosis (ringworm)	Tuberculosis	Tularemia
Ectoparasites: fleas	Rabbits	Yersiniosis
Influenza	Cheyletiellosis	
Rabies	Dermatophytosis	
	Ectoparasites	

Rodents

Gerbils	Hamsters	Hedgehogs	Mice and Rats
Ectoparasites	Campylobacteriosis	Dermatophytosis (ringworm)	Ectoparasites
Leptospirosis	Dermatophytosis (ringworm)	Lymphocytic choriomeningitis	Dermatophytosis (ringworm)
Salmonellosis	Ectoparasites	Salmonellosis	Leptospirosis
Tularemia	Leptospirosis	Yersiniosis	Lymphocytic choriomeningitis
Guinea Pigs	Lymphocytic choriomeningitis		Pasteurellosis
Campylobacteriosis	Mange (acariasis)		Rat bite fever
Chlamydiosis	Pasteurellosis		Ringworm
Dermatophytosis (ringworm)	Salmonellosis		Salmonellosis
Ectoparasites	Tularemia		Yersiniosis
Lymphocytic choriomeningitis			Prairie Dogs
Pasteurellosis			Ectoparasites
Salmonellosis			Monkeypox
Sarcoptic mange			Plague
Tularemia			

Pet Birds

Campylobacteriosis	Newcastle disease	Salmonellosis
Cryptococcosis	Pasteurellosis	Tuberculosis
Ectoparasites	Psittacosis	

Reptiles and Amphibians

Campylobacteriosis	Mycobacteriosis	Salmonellosis
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Aquarium Fish

Chlamydiosis	Erysipeloid	Melioidosis
Cryptosporidiosis	Mycobacteriosis	Salmonellosis