

Zoonoses - Animals Can Make You Sick¹

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While animals around the farm may appear healthy, they may be carrying a disease that can infect you and family members. These diseases can be transmitted through everyday contact with the animal, or through contact with their carcasses or other by-products. A person can also be infected by just entering a contaminated animal housing facility. Diseases that can be transmitted from animals to humans are referred to as zoonotic diseases or zoonoses.

It is important for farmers to know about zoonotic diseases because the symptoms are frequently similar to other types of illnesses. Symptoms of psittacosis (ornithosis) for example, range from a flu-like illness to acute pneumonia. For proper diagnosis and treatment, your healthcare professional must be also aware of any potential sources of the infection. While there are many zoonotic diseases, this factsheet will address those where there is some potential for infection in Michigan. This is only a partial list of zoonotic diseases in the state.

Some of the more obvious zoonotic diseases can be the result of being scratched or bitten by an animal or from milking. Symptoms of one of the most common zoonotic diseases, Cat-Scratch Fever, can include localized pain, swelling, redness and fever. Another common zoonotic disease is Milkers' Nodules, which frequently results in pustules on the hands and fingers after being infected. Ringworm is a common zoonotic disease that causes pustular nodules with hair loss in exposed areas of the body head or arms.

Zoonotic diseases are caused by bacteria, viruses, chlamydia, fungi and parasites. Animal sources for zoonosis include cattle, sheep, horses, pigs, chickens, turkeys, dogs, cats, rodents and some wild animals. Depending on the disease, all of these animals can be a source of infection (See Table 1).

Steps to minimize the risk of contacting a zoonotic disease include wearing gloves for certain activities, a well-managed vaccination program, and good sanitation and personal hygiene.

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1. Michigan State University.
 2. Kenneth D. Rosenman, M.D., Occupational Medicine, Michigan State University, 5/92. Funded by the National Institute of Occupational Safety and Health - #UO5/CC-4506052-01.

Table 1. Animal Diseases that can infect humans

Disease	Common Source	Clinical Effects	Mode of Acquisition	Prevention
Bacterial Diseases				
Campylobacter	Cattle, Sheep Pigs, Dogs Rodents Poultry	Acute gastroenteritis nausea headache, diarrhea	Direct contact food contaminated with animal feces	Avoid contact with infected animals and feces contaminated food
Cat-scratch diseases	Cats, Dogs Fomites	Fever, primary skin papule, regional lymphadenopathy	Direct contact with infected animals	Avoidance of animal scratches and puncture wounds
Salmonellosis	Cattle, Cats Dogs, Horses Poultry, Turtles	Chills, fever, headache, diarrhea, vomiting	Direct contact with animal or its feces, food contamination from infected animals	Improved food processing and preparation
Viral Diseases				
Encephalitis	Horses Rodents	Lethargy, fever headache, disorientation	Mosquito or tick bite	Protective clothing, insect repellents
Rabies	Cats, Dogs Raccoons Skunks, Bats Foxes	Fever, headache, agitation, confusion, seizures, excessive salivation, death	Animal bite, contact with infected tissue, body fluids or feces	Avoid contact with suspected animals, local wound care, pre- and post- exposure immunization/ vaccination
Chlamydial Diseases				
Psittacosis (Ornithosis)	Pigeons Turkeys Parakeets Parrots	Fever, headache, pneumonia	Inhaled from infected birds, carcasses, secretions and contaminated facilities	Avoid contact with infected birds, control of disease with antibiotics
Fungal Diseases				
Ringworm	Cats, Cattle	Skin lesions	Direct contact	Avoid close contact with infected animals, Children and individuals with immune suppressed system are more susceptible
Parasitic Diseases				
Tosocariasis (Visceral larval migrans)	Dogs Raccoons Cats	Eye disease, brain disease	Ingestion and contact with infected ovum of parasites	Treat pets, avoid fecal contaminated soil and sandboxes
Toxoplasmosis	Cats, Sheep Undercooked meat	Fever, lymph- adenopathy, abortion, still- birth, mental retardation	Ingestion of infected meats, oocysts in fecal contaminated soil	Proper disposal of cat feces, cook meat well, avoid contaminated soil (especially preg- nant women and immune compromised individuals)
Scabies	Dogs Raccoons	Itching skin Lesions	Direct contact with infected animals	Treat pets, avoid contact with infected animals