Mycobacterium other than Tuberculosis (MOTT) also known as Nontuberculosis Mycobacteria (NTB)

Disease in Animals

There are several species of mycobacterium bacilli that cause disease in animals and humans. The agents listed below cause atypical mycobacteriosis. Immunocompromised animals are more susceptible. The Ohio Department of Agriculture (ODA), Division of Animal Industry has Johne's disease control plans. Contact (614) 728-6220 or (800) 300-9755 for more information.

Reporting: This is not a reportable animal disease in Ohio, but cases in animals can be voluntarily reported to ODA and/or the local health department (LHD). Reporting may identify outbreaks and areas of high environmental risk.

Transmission and Clinical Signs: Routes of exposure include inhalation, ingestion, and breaks in the skin. The agents are relatively resistant to many disinfectants and can survive for a long period of time in the environment.

Agent	Primary Host	Transmission	Clinical Signs
M. avium *M. intracellulare*	Swine & poultry	Air, water, soil, food	Granulomatous lesions and nonspecific signs
M. marinum *M. fortuitum*	Fish	Contaminated water sources, aquariums, soil	Lesions on gut, skin, and gills
M. paratuberculosis (Johne's Disease)	Cattle, sheep, wild ruminants	Milk, soil, fecal contaminated fomites	Wasting, diarrhea, death

Case classification:

- Suspected: a clinical case with signs consistent with MOTTS or NTB.
- Probable: a suspect case with laboratory evidence from a screening or unvalidated test.
- Confirmed: a case that meets confirmatory testing criteria determined by a state or federal diagnostic laboratory.

Disease in Humans

Reporting: Report by the end of the business week any suspected human illness or positive laboratory result to the LHD where the patient resides. If unknown report to the LHD of the health provider or laboratory. Although *M. tuberculosis* is the cause of most human tuberculosis cases, differentiation based on clinical picture alone is not possible.

Human illness: Human cases of MOTT are acquired from environmental sources. Animals can play a role in transmission by contaminating the environment. About 90 percent of human infections involve the pulmonary system. Symptoms include a cough lasting three weeks or longer, pain in the chest, coughing, bloody sputum, fatigue, weight loss, fever and/or night sweats. The other 10 percent of infections involve the lymph nodes, skin, soft tissues and bones. *M. marinum* may present as a non-healing granulomatous skin lesion. Immunocompromised persons are at higher risk, especially for *M avium*.

Personal protection: Use respiratory protection when working in contaminated environments or handling infected animals. Wear gloves and cover exposed skin when cleaning fish tanks. Samples taken for testing should be considered infectious. Immunocompromised individuals, in particular, should avoid potentially contaminated environments.

For More Information

Disease in Animals

Ohio Animal Disease Diagnostic Laboratory
Iowa State University Center for Food Security and Public Health Animal Disease Factsheets (Mycobacteriosis)

Disease in Humans

ODH Infectious Disease Control Manual
Extrapulmonary Infections Associated with NTB, EID Journal 2009