



State of Louisiana
Louisiana Department of Health
Office of Public Health

Veterinarians Exposed to Mycobacteria in Dogs and Cats

Transmission of mycobacteria from dogs and cats to people is extremely rare; however, risk can be increased in veterinary personnel that are exposed directly to infectious tissues. Dogs are most often only transiently colonized with *Mycobacterium tuberculosis* (M.tb); transmission to a human from a dog is extremely rare (only one documented case). The one documented case occurred in a veterinarian that necropsied an infected dog, so although rare, exposure is possible. There are no documented cases of transmission of M.tb originating from cats, although this type of transmission may be plausible. There is also a very small chance of transmission of *Mycobacterium bovis* (M.bovis) from a cat or dog to human. Standard veterinary precautions should be utilized when performing necropsies on any animal. (*See excerpt below!)

Rapidly growing mycobacteria (e.g. *Mycobacterium avium*, *Mycobacterium intracellulare*) are saprophytes that are ubiquitous in the environment. These bacteria are also rarely transmitted to people. There may be more of a risk of transmission of these type organism, but this type of transmission seems to be primarily a problem in the immunosuppressed.

The leprosy form of mycobacteria that occurs in dogs (canine leproid granuloma [CLG] organism) and cats (*Mycobacterium lepraemurium*) is not considered zoonotic; it is characterized by cutaneous and subcutaneous nodular lesions. Nevertheless, zoonotic forms may produce similar lesions, so determining an accurate etiology is essential.

It is recommend to have suspect tissues examined by a board-certified veterinary pathologist at a capable private laboratory, a state veterinary diagnostic laboratory, or a veterinary school laboratory. This process usually involves cytology, observing for non-staining, Gram-positive bacteria with acid-fast staining to confirm diagnosis. Culturing and/or PCR is often needed to confirm species. One is advised to check with the laboratory prior to shipment of tissues, to confirm the capability of performing these suggested assays.

Again, the chances of transmission of these organisms from cats and dogs is minimal, except in the immuno-suppressed. If anyone exposed to suspect animals or animal tissues is immunocompromised, chances of transmission increase significantly. All immunosuppressed exposed persons should consult their healthcare provider and explain the circumstances of a potential exposure. Usually testing of immunocompetent humans is not recommended. If the animal is positive for mycobacteria, testing of exposed immunocompromised patients may be indicated.

* Excerpt from the Compendium of Veterinary Standard Precautions for Zoonotic Disease Prevention in Veterinary Personnel: "Necropsy is a high-risk procedure because of the possibility of injury and potential contact with infectious agents in body tissues, body fluids, and aerosols. Nonessential persons should not be present during necropsy procedures. Veterinary personnel should routinely wear gloves, facial protection, and impermeable protective outerwear. In addition, eye protection and respiratory tract protection used in the context of a respiratory tract protection program should be employed when band saws or other power equipment is used or there is a high probability of exposure to a zoonotic pathogen. Cut-proof gloves should be used to prevent sharps-associated injuries." For details refer to the Compendium of Veterinary Standard Precautions for Zoonotic Disease Prevention in Veterinary Personnel, National Association of State Public Health Veterinarians, Veterinary Infection Control Committee, 2015 (<http://nasphv.org>)