

**The University of Tennessee  
Institutional Animal Care and Use Committee  
Occupational Health Program**

**ATYPICAL MYCOBACTERIOSIS**

**People at Risk:** People caring for infective amphibians and fish as well as those performing necropsies on infected animals are at risk for contracting the disease. Immunocompromised people have a greater potential for serious disease symptoms. The disease is very rare in people with normal immune systems.

**Transmission:** Atypical *Mycobacteria* are gram positive, acid fast rods that are non-motile and found throughout the environment. People may be infected by inhaling or swallowing infective droplets, or by coming into contact with infective animals or their aquaria. *M. fortuitum*, *M. chelonae*, *M. marinum*, and *M. xenopi* are some of the species that affect fish and amphibians.

**Symptoms:** In fish and amphibians, the disease usually manifests as chronic wasting, edema, and nodules under the skin.

The signs of atypical mycobacteriosis in humans usually consist of a single lesion (nodule) on hands or fingers at the site of a cut or abrasion. This usually resolves over time without treatment. Occasionally the organism can spread to nearby lymph nodes, resulting in nodules in the lymph nodes as well as the site of the original infection. Rarely, infection can spread to joints, tendons, and bones.

Immunocompromised individuals are more prone to severe infection, and show symptoms of respiratory or generalized disease.

**Diagnosis and Prevention:**

Diagnosis is based on symptoms and detection of microorganisms microscopically, through histology, and/or culture. Treatment consists of antibiotics.

Use gloves when working with fish and amphibians and when cleaning their aquaria. **Always** wash hands thoroughly after handling animals and aquaria.