

Zoonotic Disease Risk Handout

This information sheet is being supplied to you to help assist you in understanding risks faced in the conduct of your job at The University of Toledo (UT). It is supplied to personnel identified as having a reasonable occupational exposure risk to the agent described. This information has been developed with the assistance of the UT Division of Laboratory Animal Medicine, Office of Health and Safety and the Office of Occupational Medicine. Questions and concerns should be directed to any of the units.

Fish

Mycobacteriosis: For those personnel working with fish, development of infection by mycobacterium (*M. marinum* or *M. fortuitum* usually) must be considered. These are bacterial agents that cause sores or hard lumps, generally on the hands, of aquarium workers. The fish often also have similar lesions. The mode of transmission is by direct invasion from contaminated water and by fish contact. The usual site of infection is at minor hand wounds. The infection can become generalized and life threatening in immunocompromised individuals.

Other infections: *Erysipelothrix insidiosa* is another bacterial organism causing skin infections in humans that work with fish. *Aeromonas hydrophilia* may cause skin infections but may also cause nausea, vomiting and diarrhea when transmitted from fish to people. There are a variety of other less common bacterial zoonoses of fish, including salmonellosis.

Other hazards: While allergies to fish are unusual, they can occur through inhalation of fish proteins in the air and by direct skin contact. Physical injuries caused by water-laden tanks (lift injuries), wet floors (slip and fall injuries), electrical faults, lacerations (broken glass, fish fins, etc.) must be guarded against.

Amphibians

The occupation hazards of amphibian exposure are much the same as with fish (above).

Reptiles

Salmonellosis: Salmonellosis is a common zoonotic infection subsequent to reptile exposure. A variety of *Salmonella* species have been the cause of infections. The bacteria do not usually cause clinical illness in the reptiles. Disease in humans usually manifests as nausea, vomiting and diarrhea. The infection can be severe and life threatening, especially in children and persons that are immunocompromised.

Other infections: *Edwardsiella tarda* and *Plesiomonas shigelloides* are bacterial organisms of reptiles that may cause gastroenteritis in humans.

Other hazards: All reptiles, regardless of their personal history, are undomesticated and must be treated as wild animals. Severe scratches can be inflicted through efforts to escape. Bite wounds and scratches are particularly prone to infection when caused by reptile injury.

How to protect yourself

Wash your hands. The single most effective preventative measure from animal-related hazards is frequent hand washing.

Wear gloves. Gloves can be particularly effective in reducing infection when cuts and abrasions are present.

When ill, it is important to discuss your possible occupational exposures with your attending physician as this information can be instrumental in timely diagnosis and treatment.