

UCSC Biosafety - Information on Zoonotic Diseases

Species Specific Guide - Reptiles



This guide is designed to inform individuals who work with animals about potential zoonoses (diseases of animals transmissible to humans), personal hygiene, and other potential hazards associated with animal exposure. This information sheet is directed toward those involved in reptile research.

Potential Zoonotic Diseases

Reptiles require careful handling as they carry a range of germs that can lead to human illness (especially in small children, pregnant women, the elderly and people with serious disease such as cancer). All reptiles carry a range of germs including bacteria, viruses, parasites and worms. Many of these can be transmitted on to the researcher. The most significant of these include:

Salmonella: Salmonella are commonly found in all types of reptiles and can spread from reptiles to humans when handling contaminated reptile feces. Salmonella infection causes diarrhea, headache, fever and stomach cramps and can result in septicemia (blood poisoning). Dehydration can be severe.

Botulism: Botulism is a serious and life-threatening illness caused by a toxin released by the *Clostridium* bacterium that causes paralysis and death. *Clostridium* is found widely in the environment including soil and mud as spores and animals that live close to the ground are commonly contaminated with clostridium. *Clostridium* commonly contaminates reptiles, especially aquatic reptiles like turtles.

Other infections: Illness such as campylobacteriosis (a bowel infection), leptospirosis (a liver disease), trichinellosis (a disease of muscles, the nervous system and the heart and lungs) have been associated with reptiles and while most are treatable, some can be very serious. The risk for most people working with reptiles does not pose a significant health risk as long as proper hygiene is maintained.

How to Protect Yourself

- All reptiles should be considered to be contaminated with one (or many) of the above bacteria.
- **Wash your hands.** The single most effective preventative measure that can be taken is thorough, regular hand washing. Wash hands and arms after handling any animal. Never smoke, drink or eat before washing your hands.
- **Wash clothes.** Wash any clothes that have been in contact a reptile. Use a warm or hot wash.
- **Wear gloves.** When working with rodents wear appropriate gloves for the task and wash your hands after removing gloves.

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- **Wear respiratory protection.** Respiratory protection should be worn when there is a risk of aerosol transmission of a zoonotic agent or when there is a medical history of allergies. Information can be obtained by contacting EH&S (ehs@ucsc.edu) or visiting the Respiratory Protection Program website (<http://ehs.ucsc.edu/programs/safety-ih/respiratory-protection.html>).
- **Wear other protective clothing.** Lab coats should be available and worn when working with rodents. Avoid wearing street clothes while working with animals. Lab coats should be laundered at work.
- **Seek Medical Attention Promptly.** If you are injured on the job, promptly report the accident to your supervisor, even if it seems relatively minor. Minor cuts and abrasions should be immediately cleansed with antibacterial soap and then protected from exposure to rats and mice. For questions contact EH&S Biosafety (biosafety@ucsc.edu). For more serious injuries or emergencies, seek medical attention at Dominican Hospital.
- **Tell your physician you work with reptiles.** Whenever you are ill, even if you're not certain that the illness is work-related, always mention to your physician that you work with rodents. Many zoonotic diseases have flu-like symptoms and would not normally be suspected. Your physician needs this information to make an accurate diagnosis. Questions regarding personal human health should be answered by your physician.