Other pathogens that can be spread through working with amphibians include *Campylobacter spp.;* Zygomycosis, Phycomycosis, and Mucormycosis spores from saprophytic fungi that are common isolates from amphibian gastrointestinal tracts. Amphibians may be transport hosts for Gnathostomiasis. For information about signs and symptoms of illness or disease in amphibians and humans, see <u>Zoonoses of Fish, Amphibians and Reptiles</u>.

In the laboratory setting, human sensitivity to amphibian allergens (proteins which cause an allergic reaction in people) is rare. However, some people do become sensitized to amphibian proteins through inhalation or skin contact.

The single most effective preventative measure that you can take is thorough, regular hand washing. You must wash your hands and arms after handling amphibians or contaminated water or tanks. Proper technique involves the following steps:

Wet your hands with clean running water (warm or cold) and apply soap.

Rub your hands together to make a lather and scrub them well; be sure to scrub the backs of your hands, between your fingers, under your nails, and up your forearms.

Continue rubbing your hands and arms for at least twenty seconds (the time it takes to sing the "Happy Birthday" song from beginning to end twice).

Rinse your hands and arms well under running water.

Dry your hands and arms using a dean towel or air dry.

Washing hands with soap and water is the best way to reduce the number of germs on them. If soap and water are not available, use an alcohol-based hand sanitizer that contains at least 60% alcohol. Alcohol-based hand sanitizers can quickly reduce the number of germs on hands in some situations, but sanitizers do eliminate all types of germs. To use hand sanitizer effectively:

Apply the product to the palm of one hand (read the label to learn the correct amount). Rub your hands together.

Rub the product over all surfaces of your hands and fingers and up your forearms until they are dry.

Note that hand sanitizers may not be as effective when hands are visibly dirty.

Wear eye protection when appropriate. Wear gloves and/or protective sleeves when handling animals, animal tissues, body fluids, housing materials, and waste. eyes, nose, or mouth with unwashed hands or contaminated gloves. Never eat, drink, use tobacco products, or apply makeup in animal facilities or while handling animals.

Keep animal areas clean and disinfect equipment after using it on animals or in animal areas. Use cleaning techniques that do not aerosolize dirty water or other materials.

If you are injured on the job while handling amphibians or contaminated water, materials, or tanks/ equipment, promptly report the accident to your supervisor, even if it seems relatively minor. Gean any minor cut or abrasion immediately with antibacterial soap, and protect it from dirt and animal secretions until it has healed. Seek medical assessment and referral for treatment for more serious injuries or if you have an infected wound indicated by swelling, redness, pain, and draining fluids with or without a fever.

Familiarize yourself about the animals that you will be working with and the potential zoonotic diseases associated with each species. If you are ill, even if you are not certain that the illness is work related, always mention to your health care provider that that you work with amphibians. Many zoonotic diseases have flu-like symptoms and would not normally be suspected. Your health care provider needs this information to make an accurate diagnosis. Questions about personal human health should be answered by your health care provider.