This information sheet is for the care and use of Reptiles

Potential Injury & Zoonotic Diseases

Reptiles should always be considered wild animals and handled with a great deal of respect. No one should be handling a reptile unless they have had training on safe handling procedures. Reptiles can use their claws to dig into flesh or clothing, or they can scramble in an attempt to be freed or they will thrash around in an attempt to escape. Moving or handling venomous snakes requires special skills and experience. Reaching or attempting to grab a freed reptile can cause injury to neck, back, and shoulder muscles.

The overall incidence of transmission of disease-producing agents from reptiles to humans is relatively low. In general, humans acquire these diseases through poor personal hygiene. The following are some of the zoonotic diseases that can be acquired by handling reptiles.

Salmonella: This bacterium inhabits the intestinal tract of many animals and humans. Salmonella occurs worldwide and is easily transmitted through ingestion of contaminated material, either directly or indirectly. Common symptoms of the illness are acute gastroenteritis with sudden onset of abdominal pain, diarrhea, nausea, and fever. The use of antibiotic treatment is standard treatment for this illness.

Aeromonas Hydrophila: This is a species of bacterium that is present in all freshwater environments and in brackish water. Infection is acquired through open wounds or by ingestion of contaminated food or water. Common symptoms are those associated with gastroenteritis (nausea, vomiting, and diarrhea) and wound infections.

Edwardsiella tarda: This is a gram-negative rod bacteria usually found in the intestines of cold-blooded animals and in fresh water. It is an opportunistic pathogen occasionally causing acute gastroenteritis (nausea, vomiting, and diarrhea) and can be associated with meningitis, septicemia, and wound infections. Mode of transmission is via the fecal/oral route or ingestion of contaminated food. Antibiotics are used for treatment.

Melioidosis: Also called Whitmore's disease is an infectious disease caused by the bacterium *Burkholderia pseudomallei.* Melioidosis is clinically and pathologically similar to glanders disease, but the ecology and epidemiology of melioidosis are different from glanders. Melioidosis is predominately a disease of tropical climates, especially in Southeast Asia where it is endemic. The bacteria causing melioidosis are found in contaminated water and soil and are spread to humans and animals through direct contact with the contaminated source. Illness from melioidosis can be categorized as acute or localized infection, acute pulmonary infection, acute bloodstream infection, and chronic suppurative infection. Inapparent infections are also possible. The incubation period (time between exposure and appearance of clinical symptoms) is not clearly defined, but may range from 2 days to many years.

Allergic Reactions to Reptiles:

Human sensitivity to reptile proteins in the laboratory setting is rare. It remains possible however, to become sensitized to reptile proteins through inhalation or direct skin contact.

If you have symptoms you are strongly advised to contact the Occupational Health Coordinator at 949-824-3757 to discuss this issue and arrange for follow-up with an occupational health physician.

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 reptiles. 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.

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 animals and their housing materials. For more serious injuries seek medical services through Workers Compensation by calling (949) 824-9152 or visiting their website at http://www.hr.uci.edu/

For treatment locations http://www.ehs.uci.edu/MedEmergPoster.pdf

SPECIES	BIOLOGICAL HAZARD/PATHOGEN	ROUTE OF TRANSMISSION	CLINICAL SYMPTOMS	PREVENTION/ PROPHYLAXIS	MEDICAL SURVEILLANCE REQUIRED	RISKS FOR EXPOSURE AT UCI
Reptiles	Aeromonas hydrophila	Contamination through wounds or various traumas	Diarrhea, slight fever, abdominal pains, blood and mucus in feces, weight loss, dehydration, cellulitis	Clean and disinfect wounds, personal hygiene, PPE	No	No
Reptiles	Campylobacteriosis	Fecal, contaminated food and water	Diarrhea, vomiting, fever, abdominal pain, visible or occult blood, headache, muscle and joint pain	Personal hygiene and PPE	No	Yes
Reptiles	Escherichia coli	Fecal/Oral, contaminated food and water	Diarrhea, abdominal pains, fever, vomiting, hemolytic anemia, thrombocytopenia, azotemia, thrombosis in terminal arterioles and capillaries	Personal hygiene and PPE	No	Yes
Reptiles	Mycobacterium ulcerans	Handling infected animals.	Infections start as erythematous nodules on the extremities and gradually become large, indolent ulcers with necrotic base	Personal Hygiene and PPE	No	No
Reptiles	Pentastosomiasis	Fecal/oral, contaminated food and water	Prostatitis, ocular infection, acute abdomen, lacrimation, nasal discharge, dyspnea, dysphagia, vomiting, headaches, photophobia, exophthalmia	Personal hygiene and PPE	No	Yes
Reptiles	Salmonellosis	Fecal/Oral, contaminated food and water	Diarrhea, vomiting, low grade fever	Personal hygiene and PPE	No	Yes
Reptiles	Sparganosis	Contaminated food and water	Pruritus, urticaria. Ocular sparganosis consist of painful edema of eyelids with lacrimation and pruritus	Personal hygiene and PPE	No	No
Reptiles	Burkholderia pseudomallei	Contaimenated soil and surface water and contact with contaminated wounds	Localized skin infection, pulmonary infections and acute blood stream infections	Wearing boots in agricultural situations, Universal precautions in hospitals/care facilities and PPE personal hygiene	No	Yes

References:

Johnson-Delany, CA. 1996. Reptile Zoonoses and Threats to Public Health. In: Reptile Medicine and Surgery. DR Mader, ed. W.B. Saunders Company, Philadelphia. pp. 20-33.

Acha, PN and B Szyfres. 1989. Zoonoses and Communicable Diseases Common to Man and Animals. 2nd Ed. Pan American Health Organization, Washington, D.C.

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