Animal-Human Rabies Exposure Policy

This policy applies to all mammals, including the Orders Carnivora and Chiroptera (bats), used or encountered by Purdue University in research, testing, or teaching in Indiana. This policy also includes any animals not owned by the University but present on University property.

Investigators conducting research outside of Indiana are generally subject to this policy, but may also be subject to other local regulations which might take precedence over this policy (notably Animal Disposition Procedures).

Animal researchers and handlers must be aware of the potential risks involved with the specific type of research that is being conducted. Potential exposure to serious zoonotic diseases, such as rabies, is monitored by the Indiana State Department of Health, by the Purdue Laboratory Animal Program (LAP), and by the Purdue Radiological & Environmental Management Department (REM). The LAP is available to assist in obtaining information about zoonotic diseases and local regulations pertaining to disease control and reporting.

Staff and students who might potentially be exposed to rabies must sign a letter of acknowledgment verifying that they have read and understand this policy.

The following is a brief description of this disease; and is followed by University Policy on immunization and animal exposure procedures.

Rabies Virus
Rabies is a viral infection that is transmitted when saliva, tissue, or nasal discharges from a rabid animal is introduced into the human body by a bite, scratch, or through exposure to the mucous membranes. The rabies infection is a fatal acute viral encephalomyelitis that is characterized by headache, fever, and sensory changes that progress into paralysis, delirium, convulsions, and death. There is no known effective treatment. The fatality rate of infected individuals is 100%.

Disease Exposure
Most exposures are an “animal bite exposure”. An animal bite exposure is defined as having one’s skin pierced or abraded by animal teeth or claws. Other exposures may occur through “non-bite” mechanisms. A non-bite exposure is defined as having abraded skin, open wounds, eyes, and mucous membranes contaminated with animal saliva or other potentially infectious materials, i.e., neural tissue. This could result from direct contact with the material or from accidents involving sharps (needles, broken glass). In addition, aerosol exposures in laboratories and in caves with high numbers of bats are included in the non-bite exposure potential.

Rabies pre-exposure series immunizations
Rabies pre-series immunizations are routinely offered to all Veterinary staff and students by Purdue University Student Health (PUSH). Other staff and students that will have or are likely to have contact with wild carnivora/chiroptera for research purposes should also have the rabies pre-exposure immunizations. This immunization consists of three injections spanning 21-28 days and is given intradermally or intramuscularly. A titer is drawn every two years on research personnel whose risk is rated frequent or continuous. Side effects include injection site irritation, itching, or flu-like symptoms. If an animal bite or non-bite exposure occurs after the
pre-series immunizations are administered. If a bite exposure or non-bite exposure occurs without the pre-series one rabies immune globulin and five intramuscular immunizations are necessary. Actions following a non-bite exposure will be determined by the victim’s physician in conjunction with LAP and REM. Contact PUSH Allergy and Immunization Clinic at 41818 for further information on immunizations.

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<th>Immunization Funding:</th>
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<td>Non-employees – the department, grant, or individual.</td>
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Non-Immunized Individuals
Although the University cannot require any person to submit to the pre-exposure series immunizations, the University strongly recommends the immunization series for staff and students who may be at risk of exposure to rabies virus. LAP and REM are available for consultation and to assist in risk assessment.

Individuals voluntarily rejecting the immunizations must sign a waiver in which they agree to hold the University harmless from any liability as a result of their injury or death from rabies. In risky situations, the instructor, investigator, clinician, or LAP all have the authority to deny access to the animal to any person who has not received the immunizations. Individuals are strongly encouraged to discuss the benefits of the pre-exposure series with a physician if they are considering not taking advantage of this immunization.

Bite Prevention
- Species specific animal handling techniques are taught by the LAP veterinary staff and the animal facility management staff.
- If possible, direct handling of wild animals or any animals suspected of being infected should be avoided by using tongs, bite gloves, squeeze cages, shields, or other protective equipment.
- Animals known to be aggressive should always be handled by a minimum of two people.

Post Bite Procedures
- Confine the animal to prevent any further injuries and to allow quarantine or immediate rabies testing. It is important to have the name and address of the owner of the animal so that REM can conduct follow-up procedures. If ownership is unknown, record the address where the bite occurred so that the local Animal Warden can begin a search.
- Wash the wound thoroughly with warm water and soap. Use a disinfectant if available.
- Label the enclosure “RABIES OBSERVATION” to warn others of the situation.
- Immediately report the incident to the facility animal care supervisor, LAP, PUSH and the PI.
- Immediately notify the PUSH physician or nurse that an animal bite has occurred. Determine and document the victim’s rabies pre-series immunization status.
- This is a state reportable health event. The Indiana State Department of Health “Animal Bite Report – Report of Rabies Prophylaxis” form must be completed by PUSH, in conjunction with LAP. In other U.S. States similar forms are required.
If the animal cannot be confined and escapes; or if the health status of the animal cannot be determined for any other reason, LAP and REM officials shall consult with public health officials on the risk of rabies, based on the animal’s species, the animal’s history, and the circumstances of the biting incident. Based on the information gathered, a post exposure prophylaxis recommendation will be developed.
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Animal Disposition Procedures:
Upon report of an animal-human bite incident, the LAP will determine the fate of the animal based on the following criteria. Animals may not be removed to another location without prior approval of the LAP.

1) Domestic dogs, cats, and ferrets will be labeled “Rabies Quarantine” and quarantined for 10 days if such quarantine facilities are available (See #6). Otherwise the animal will be submitted to the Indiana State Diagnostic Laboratory for rabies testing. The Indiana State Department of Health requiresiii domestic animals to be confined for 10 days.iv

2) A 45 day quarantinev may be used for other research species meeting all the following criteria:
   a) Acquired from USDA licensed Class A closed colony breeding facilities.vi
   b) The breeding colony meets USDA indoor housing requirementsvii, with no open wire exposure to bats or other wild susceptible species.
   c) The University research housing meets USDA indoor housing requirements, with no open wire exposure to bats or other wild susceptible species.
   d) The breeding colony has been closed to introduction of new animals for a minimum of three years and three generations.
   e) Annual rabies health monitoring data provided to LAP for a minimum of prior three years.
   f) Health certificate signed by a licensed, accredited veterinarian provided at acquisition prior to entering the University colony and prior to bite exposure.

3) If the biting animal is a particularly rare or valuable specimen and the risk of rabies is small, post exposure treatment may be administered to the bite victim in lieu of killing the animal for rabies testing.viii The biting animal will be quarantined for at least 45 days, determined by LAP based on risk analysis. Treatment will be determined by the bite victim’s physician in conjunction with LAP and REM.

4) All other animals, including animals used in field studies, are considered wild and will be submitted to the Indiana State Diagnostic Laboratory for rabies testing. The Indiana State Department of Health requiresix wild animals to be euthanized and then tested for rabies.

5) The brain of any animal in quarantine will be submitted to the Indiana State Diagnostic Laboratory at the discretion of the LAP veterinary staff or at any request of the exposed victim.

6) Quarantined animals will be kept in strict confinement and cared for by the professional husbandry staff only. These animals are exempt from the USDA exercise requirements and will not be removed from the primary enclosure during the quarantine period. Feed, water, and sanitation will be provided in such a manner as to minimize any potential contact. Petting will NOT be allowed. Animals may only be released from quarantine following examination by a LAP veterinarian.

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i Human Rabies Prevention – United States 1999, Recommendations of the Advisory Committee on Immunization Practices (ACIP) PHS

iii 345 IAC 1-5

iv Compendium of Animal Rabies Control, 2003, National Association of State Public Health Veterinarians

v Compendium of Animal Rabies Control, 2003, National Association of State Public Health Veterinarians

vi Animal Welfare Act, Animal and Plant Health Inspection Service, USDA, 9CFR Ch. 1, Part 2, SubPart A

vi Animal Welfare Act, Animal and Plant Health Inspection Service, USDA, 9CFR Ch. 1, Part 3


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