

**OCCUPATIONAL HEALTH AND SAFETY PROGRAM
FOR PERSONNEL WITH ANIMAL CONTACT
WASHINGTON UNIVERSITY**

I. Introduction

A. This program is intended for all Washington University faculty, residents, postdoctoral fellows, research technicians and students, who have direct contact with animals (living or dead), harvested animal tissues and body fluids, cages, bedding or waste products. Personnel dealing with animal tissue/body fluids obtained from commercial resources are exempt. Employee health screens for individuals on both the Medical and Danforth campuses will be provided by the Medical Center Employee Health Service (EHS) at 4525 Scott Avenue, East Building Box 8030, telephone 362-3528. Employee Health Services will provide required immunizations on both campuses. Services provided to the Danforth campus employees will be charged to their respective departments. Animal-related injuries will be handled by EHS for Medical Center staff and students. For Danforth staff, injuries will be handled by the Student Health Service (SHS), located in Umrath Hall, Box 1201, telephone 935-6666. For Hilltop staff, injuries will be handled by BarnesCare Corporation, 5000 Manchester.

B. Six categories of involvement with animals have been established:

1. Category 1, personnel working exclusively with non-feral rodents and rabbits from approved sources and cold blooded vertebrates (a list of approved vendors is available from the Division of Comparative Medicine, Box 8061).
2. Category 2, personnel working with or exposed to non-feral animals and purpose-bred laboratory animals (non-feral dogs and cats) (farm animals-pigs)
3. Category 3, personnel working with or exposed to feral animals from populations known to be potential carriers of rabies.
4. Category 4, personnel working with or exposed to nonhuman primates.
5. Category 5, personnel involved in animal care.
6. Category 6, personnel working with animals experimentally exposed to nuclear, chemical or biological hazards.

II. Health History and Preventive Medicine Programs The following categories and require immunizations are summarized on a table (*Categories of Animal Involvement and Health Requirements*).

A. Category 1, personnel working exclusively with non-feral rodents and rabbits from approved sources, and cold blooded vertebrates, shall receive the following:

1. A health history screen at the time of employment or enrollment, or when duties change

to include working with animals. New employees who will be working with laboratory animals will receive health screen forms in the new employee packet from Human Resources. This form is to be filled out and sent to Employee Health, Box 8030. The screen shall include a past medical history noting allergies to animal dander or dust, and cardiac and/or respiratory problems.

2. All employees are required to participate in “two step” TB testing within two weeks of hire. If the employee has had a positive TB test in past, they must provide proof of their positive TB test and a normal chest x-ray report. If the employee cannot provide proof they must be tested. BCG is not a contraindication for TB testing. All employees who have a newly positive TB test are required to have a chest x-ray and are required to see the Employee Health physician for medical screening and if indicated, to be offered treatment of Latent Tuberculosis Infection. For employees with a documented previous positive TB test, they must review the symptoms of Tuberculosis and declare if they are having any symptoms annually. Tuberculosis testing is required annually for DCM employees.

3. Tetanus prophylaxis as indicated, for Department of Comparative Medicine (DCM) employees.

4. DCM employees need a 6 ml serum sample taken at the time of the initial physical examination, to be stored at the Barnes-Jewish Laboratory and used as a baseline sample. Additional samples may be taken after a bite or scratch injury or at the discretion of a physician when an illness that may be animal-related is suspected. A new serum sample shall be taken every year.

5. Information on the occupational health and safety program and on safety and health hazards for personnel with animal contact, which is contained in the *Occupational Health and Safety Manual*. Manuals have been distributed to departments involved in animal research, and it is also available through the office of the Associate Vice-Chancellor of Animal Affairs, Box 8025.

6. Training in the proper handling of the species with which they will be working and the procedures they will be using. This will be scheduled through the DCM Training office.

7. Instructions for reporting any injuries or illnesses that may be related to animal contact. Refer to Part III of this document

B. Category 2, personnel working with or exposed to purpose-bred laboratory animals from approved sources, and farm animals, in addition to that listed for Category 1, shall have the following:

1. Women of childbearing age who will be working with cats or exposed to their feces shall have a serum sample screened for antibodies to toxoplasmosis. A titer of less than 1:16 suggests specific immunity is absent, and the woman should be informed that she is susceptible to toxoplasmosis. Women who become pregnant, and are susceptible to toxoplasmosis should avoid contact with cats if at all possible.

C. Category 3, personnel working with feral animals from populations known to be potential carriers of rabies (including non human primates that have not been released from quarantine) in addition to that listed for categories 1 and 2, shall receive the following:

1. Prophylactic rabies immunization series with human diploid cell vaccine (HDCV). Employees who choose not to receive prophylactic rabies immunization will be asked to sign a waiver annually and may not be permitted to work with animals in this category. Pre-exposure vaccination does not eliminate the need for additional medical evaluation after a rabies exposure; it simplifies management by eliminating the need for Rabies Immunoglobulin and decreasing the number of doses of vaccine needed. Pre-exposure prophylaxis might offer partial immunity to persons whose post exposure prophylaxis is delayed or pre-exposure prophylaxis might provide some protection to persons at risk for unrecognized exposures to rabies. Please refer to Table 6 (CDC Human Rabies Prevention---2008, United States) listed below for pre-exposure recommendations

TABLE 6. Rabies pre-exposure prophylaxis guide — United States, 2008

Risk category	Nature of risk	Typical populations	Pre-exposure recommendations
Continuous	Virus present continuously, often in high concentrations. Specific exposures likely to go unrecognized. Bite, nonbite, or aerosol exposure.	Rabies research laboratory workers; rabies biologics production workers.	Primary course. Serologic testing every 6 months; booster vaccination if antibody titer is below acceptable level.*
Frequent	Exposure usually episodic, with source recognized, but exposure also might be unrecognized. Bite, nonbite, or aerosol exposure.	Rabies diagnostic laboratory workers, cavers, veterinarians and staff, and animal-control and wildlife workers in areas where rabies is enzootic. All persons who frequently handle bats.	Primary course. Serologic testing every 2 years; booster vaccination if antibody titer is below acceptable level.*
Infrequent (greater than population at large)	Exposure nearly always episodic with source recognized. Bite or nonbite exposure.	Veterinarians and animal-control staff working with terrestrial animals in areas where rabies is uncommon to rare. Veterinary students. Travelers visiting areas where rabies is enzootic and immediate access to appropriate medical care including biologics is limited.	Primary course. No serologic testing or booster vaccination.
Rare (population at large)	Exposure always episodic with source recognized. Bite or nonbite exposure.	U.S. population at large, including persons in areas where rabies is epizootic.	No vaccination necessary.

* Minimum acceptable antibody level is complete virus neutralization at a 1:5 serum dilution by the rapid fluorescent focus inhibition test. A booster dose should be administered if the titer falls below this level.

D. Category 4, personnel working with nonhuman primates, in addition to that listed for categories 1 and 2, shall receive the following:

1. Annual PPD testing for tuberculosis for anyone without a prior history of a reactive test. Those who test positive for TB will be evaluated annually to determine if they may work with nonhuman primates.

2. Employees must provide written official documentation of two doses of the Measles, Mumps, Rubella vaccine or documentation of immunity. Employees who are non immune will be offered the vaccine; those who choose not to receive the vaccine may not be allowed to work with nonhuman primate species known to be susceptible to the human rubeola virus.

3. Animal care personnel working with primates shall have a 6 ml serum sample taken on a yearly basis and stored at a maximum temperature of -20 degrees C as a baseline sample.

4. All employees working with macaques should schedule an appointment with Employee Health Services to discuss the exposure protocol.

5. Hepatitis B vaccine will be made available to all personnel working with chimpanzees.

E. Category 5, personnel (Veterinarians and Vet techs) involved in the care of laboratory animals shall have the tests and immunizations as described in categories 1, 2, 3 and 4 depending on the species of animal.

F. Category 6, personnel working with animals that are exposed to nuclear, chemical and/or biological hazards.

1. The Environmental Safety Office, Box 8229, has an Environmental Safety Handbook, Hazard Containment and Chemical Hygiene Plans and a Biosafety Manual. A Radiation Safety Manual is available from the Mallinckrodt Institute of Radiology, Box 8131.

2. Additional health monitoring may be required. Employees are referred to their supervisor or laboratory director for further information.

3. The handling of laboratory animals may pose special risks for individuals who are immunosuppressed for any reason, including long term administration of oral corticosteroids, chemotherapy, or HIV/Acquired Immunodeficiency Syndrome. Employees that are immunosuppressed or pregnant should discuss this risk with the Employee Health Service at the time of enrollment in the program, and with their personal physician. This fact should also be stated on the health history screen.

III. Washington University Policies and Procedures on Reporting and Responding to Animal-Related Illness or Injury

A. Reporting and Medical Records

1. Personnel shall immediately report any animal-related injury or illness to their supervisor or laboratory director.
2. The Washington University *Animal Exposure Report* shall be completed. This form is available in all department offices, Employee Health Services and the WUSM intranet. This form may be filled out after the fact in the case of an emergency situation.
3. A copy shall be filed with the department and the original shall be sent with the employee to the Employee Health Service, or the Student Health Service.
4. The Employee Health Service will keep on file all health history screens and records of tests and prophylactic immunizations that need to be repeated or rescheduled.

B. Animal-related injuries involving all animal species:

All Washington University *employees and Medical Center students*:

1. For non-emergent, routine treatment on regular workdays, Monday - Friday, between 8:00 a.m. and 4:00 p.m. call the Employee Health Service to report the incident and set up an appointment to be seen.
2. After hours or on weekends call the Employee Health Service (#871-2966 and listen to the directions) to report the incident. EHS will determine whether they will treat the injury or illness or refer the employee to the Barnes-Jewish Emergency Room.
3. For life-threatening emergencies, go directly to Barnes-Jewish Hospital Emergency Room. Protective Services may be called to provide assistance (#362-HELP.) The Employee Health Service must be notified as soon as possible.

Washington University *Hilltop Students*:

1. Contact the Student Health Service (935-6666) for medical attention.

C. Additional medical attention required for injuries involving animals in categories 3 and 4

1. Category 3, concerning possible rabies exposure: Bites or scratches from category 3 animals should always be reported to a Division of Comparative Medicine veterinarian so that a decision can be made whether to sacrifice the animal or quarantine the animal for observation.

2. Category 4, concerning possible *Herpes simiae* (B virus) infection: Bites or scratches from category 4 nonhuman primates of the genus Macaca (examples: Rhesus, Pigtail, Cynomolgus) or anything that may have been exposed to their secretions or blood, such as a needle stick or scratch from a cage, require special attention and adherence to a strict protocol because of the risk of B virus infection. For specific instructions, refer to the Standard Operating Procedures for Case Management of Employees Potentially Exposed to *HERPES VIRUS SIMIAE (B VIRUS)*.

D. For all other injuries (not related to animals):

Washington University employees:

1. For acute or traumatic injuries requiring immediate emergency medical treatment, notify Protective Services (#362-HELP). Employees should go to the Barnes-Jewish Hospital South Emergency Room.

2. For all other injuries, employees notify Protective Services (#362-HELP.)

3. The Washington University *Report of Injury or Illness* shall be filled out. A copy shall be filed with the department. The original shall be sent to Worker's Compensation Office, Box 1069

Washington University students:

1. For routine or urgent care, *Hilltop* students should contact Student Health Service (935-6666).

2. For routine or urgent care, *Medical Center* students should contact Student Health Service (362-3523).