

## Purpose

Eastern Washington University (EWU) is committed to providing a safe learning and work environment. The Health and Safety for Individuals Working with Animals (HSIWA) program is part of this commitment. The HSIWA program is designed to address the specific hazards that come with animal contact; it is designed to comply with the Animal Welfare Act (AWA) and the Public Health Services Policy on Humane Care and Use of Laboratory Animals (PHS Policy).

This document will review the HSIWA program components including, Animal Exposure Occupational Medicine (AEOM), the hazards associated with animal work, and the work practices used to minimize these hazards.

The term “workers” will be used to refer to students and employees.

## Responsibilities

The responsibilities addressed in this section are with regard to the HSIWA only. Each of the entities listed here have additional responsibilities outside the scope of this program.

## Environmental Health & Safety

The HSIWA program is run by EWU Environmental Health & Safety (EH&S) in consultation with members of the Institutional Animal Care and Use Committee (IACUC).

EH&S is responsible for:

- Identifying employees who need to participate in the AEOM using the Essential Function Analyses provided for new positions and obtaining additional information from supervisors as needed
- Coordinating AEOM procedures with EWU’s licensed health care provider (LHCP)
- Working with the IACUC, as needed, for hazard analysis
- Working with animal research groups who fall outside the scope of the IACUC to ensure appropriate health and safety procedures are in place and hazard analyses have been performed

## Institutional Animal Care and Use Committee

The IACUC ensures animal research is conducted in accordance with the AWA, the PHS Policy, and other federal regulations.

The IACUC is responsible for:

- Reviewing animal research activities to ensure animal and worker safety has been appropriately addressed and hazards have been reduced as much as possible, this includes
  - Ensuring the appropriate training is being provided for workers
  - Ensuring research activities have appropriate engineering controls, safety practices, and personal protective equipment (PPE)
- Working with EH&S to address safety concerns for workers with animal contact
- Suspending animal activities if safety concerns are raised and not corrected
- Ensuring that access to animal research facilities is granted only after hazard training has been completed.

## Principle Investigators/Project Directors

Principle Investigators (PIs) and Project Directors (PDs) are responsible for assessing potential risk to workers and reducing that risk to the lowest possible level that allows their research to continue.

PIs/PDs are responsible for:

- Determining potential risk during research activities and informing workers, the IACUC, and EH&S of those risks
- Providing appropriate training to workers
- Assessing the need for, and supplying appropriate PPE for each task
- Abiding by IACUC and EH&S requirements for safe research practices
- Alerting the IACUC and EH&S to any safety problems or concerns that arise and reporting all incidents promptly<sup>1</sup>
- Participating in the AEOM program and ensuring participation of any workers.

## Individuals Working with Animals

All workers are expected to make sure they understand and follow all safety protocols.

Workers are responsible for:

- Attending required trainings and asking questions until they understand the training material
- Understanding the hazards associated with animal work and the work practices used to minimize their exposure
- Reporting any safety problems or concerns to their PI or supervisor
- Reporting any incidents (accidents, illnesses, near-misses...) to EH&S as soon as possible<sup>1</sup>
- Following safe work procedures and wearing provided personal protective gear
- Participating in the AEOM program.

## Animal Exposure Occupational Medicine

The Animal Exposure Occupational Medicine program is a portion of the EWU Occupational Medical Monitoring Program (OMM). Program participation is required for anyone:

- Involved in rodent cage changes or cage washing
- Who handles rodents in ongoing research projects, lasting at least two months or more than one academic quarter
- Involved in research that involves Risk Group 2<sup>2</sup> pathogens
- Involved in field research that requires physical contact with animals that are known reservoirs of zoonotic disease<sup>3</sup>

In addition to those who are required to participate in this program, anyone who works with animals may elect to participate. Program participation is strongly encouraged for anyone who:

- Has a history of allergies, especially severe allergic reactions
- Has a chronic medical condition
- Has a medical condition or takes medication that reduces immune function
- Is pregnant

The program involves an initial medical evaluation by EWU's LHCP and vaccinations, when necessary, followed by review of the worker's health for any developing health concerns.

- Employees are strongly encouraged to report any occupational health concerns to the LHCP.
- Students are strongly encouraged to report any health concerns to a provider at the Rockwood Clinic.

Workers may need to participate in other aspects of the OMM, depending on hazards exposures for their position. Examples of these programs include the Respiratory Protection Program, for employees who need to use a respirator, and the Bloodborne Pathogen Program, for workers who work with human samples or cell lines.

All medical evaluations and vaccinations are offered to individuals with animal contact free-of-charge. Time necessary for these medical procedures are part of the employee's work time.

## Initial Medical Evaluation and Vaccinations

The medical evaluation process is different for students and employees. The process for each group is described below.

The medical forms for each group are available on the EH&S website<sup>4</sup> for those who elect to participate. Printed forms for those who elect to participate should be treated as specified below.

### Employees

Upon hire, or transfer to a position, that meets the requirements for program participation, employees will be enrolled in the program. Employees will be emailed the *Employee Initial Medical Questionnaire for Individuals with Animal Contact* to fill out. Employees must complete the form on their computer and print it out. Employees should seal the form inside a standard letter envelope (pre-addressed envelopes can be requested from EH&S).

Sealed forms should be sent to EH&S at MAR 002. Forms will not be opened; medical information is confidential between the employee and the medical provider. The forms will be recorded as received and then forwarded to the LHCP.

If the LHCP requests, the employee will have an in-person medical consultation.

### Students

Students who will participate in research projects that meet the requirements for program participation will be emailed the *Student Initial Medical Questionnaire for Individuals with Animal Contact*. Students must complete the form on a computer and print out the completed form.

**Students should schedule an appointment on a Tuesday with Carol Gahl at the Cheney Rockwood Clinic to have the form reviewed; call 509-235-6151 to make the appointment.** This appointment is covered by the Health and Wellness Fee. The student will be provided with a signed statement, page 2 of their form, which they need to return to their instructor or supervisor before they can start working on the project.

### Vaccinations

Vaccinations will be provided to students and employees who need them.

- The CDC recommends that all adults should receive one dose of tetanus vaccine every 10 years. Workers with animal contact will be offered this vaccination as part of the AEOM.
- Individuals working with wild mammals may be offered a rabies vaccination if needed.
- Other vaccinations may be offered depending on the research hazard assessment.

### Periodic Medical Review

Follow-up medical questionnaires are available on the EH&S website<sup>5</sup>. The questionnaires should be used to report medical changes or alert the health care provider to developing allergy symptoms. These follow-up questionnaires can be filled out at any time and should be treated like the initial questionnaires for each group.

- Employees should send sealed forms to EH&S
- Students should take completed forms to Rockwood for review

## Emergency Medicine

Employees are covered by the Washington State Department of Labor and Industries (L&I) Industrial Insurance (workers' comp). If an employee is injured while working (on campus or in the field), they can receive medical treatment. Workers' comp will pay for approved medical, hospital, and related services due to workplace injuries.

Students are responsible for obtaining and paying for any necessary medical treatment. Minor injuries may be treated at Rockwood Clinic and would be covered by the Health and Wellness Fee.

Any injury sustained while working with animals must be reported to EH&S.<sup>1</sup>

## Animal Exposure Hazards

Allergies, zoonotic and animal transmitted diseases, and bites/scratches are the three main physical hazards associated with animal contact. These hazards will be reviewed in this section along with compassion fatigue.

Other hazards may be present, depending on the project, location of work, or facility. These hazards may include:

- Bloodborne pathogen exposure – from materials derived from humans or non-human primates
- Physical injury – from contact with sharps, liquid nitrogen, UV or laser energy
- Radiation exposure
- Microbial infections – from research materials, or present in an environment for field workers

Project specific hazards must be explained by the PI or supervisor at the beginning of the project or when new workers start.

Chemical exposure is a hazard present for most workers in laboratories and animal facilities. Anyone working with or around potentially hazardous chemicals must have Chemical Hazard Communication (HazCom) training. Training is provided to employees by EH&S and to students by PIs or supervisors. Individuals should not work with new chemicals before they receive training and fully understand the hazards.

## Allergies

Allergic reactions are very common among animal workers. Between 11% and 44% of people working with laboratory animals report work-related allergic symptoms. Of the individuals who experience symptoms, 4-22% may develop asthma that persists after work exposure ceases.<sup>6</sup> Identifying allergy symptoms early allows for a change of work environment and practices that can minimize an individual's exposure, avoiding chronic symptoms.

It is important for animal workers to recognize allergic symptoms and record when and where these symptoms occur. Animal workers are encouraged to report any allergic symptoms they experience while working with or around animals.

The most common allergy symptoms are:

- Nasal issues – congestion, runny nose, sneezing, and itching
- Eye problems – redness, itchy and/or watery eyes
- Skin reactions – hives (swollen, pale red bumps that may itch, burn, or sting) or other red, itchy patches on the skin

Asthma involving coughing, wheezing, and shortness of breath, may occur. In rare cases, anaphylaxis (generalized itching, swelling of lips eyes and/or extremities, respiratory distress, shock) can occur. Anaphylaxis can be the result of an animal bite or a puncture wound contaminated with animal proteins; it can be fatal.

Allergy symptoms usually manifest in the first three years of employment, but individuals may develop allergies after longer exposure also.

Individuals with preexisting allergies and smokers may be more likely to develop work-related allergies. Individuals who cannot eat fish because of allergies may be more susceptible to an allergic reaction after touching fish, though it is uncommon.

## Zoonotic and Animal Transmitted Diseases

Animals can carry a number of diseases and contact with infected animals can cause disease in humans. Zoonotic diseases are ones that normally infect animals but can infect humans as well.<sup>3</sup> There are a number of zoonotic and animal transmitted diseases; Lyme disease (ticks) and Hantavirus (rodents) are two examples.

Most laboratory-bred animals are free from diseases; wild animals (including rodents) and animals from pet stores can carry diseases. All projects involving wild animals will need to involve determination of potential disease exposure.

Immunocompromised individuals are at a greater risk for developing any illness, including those from animals. Pregnant workers should be extra careful as diseases and some treatments can be more dangerous for pregnant women and/or developing fetuses.

## Arthropod Diseases

There are a few diseases spread by arthropods (mainly mosquitoes and ticks) in Washington State (WA). These diseases include West Nile virus, Tick-borne Relapsing Fever, and Lyme disease. Individuals who work outside should use precautions to avoid insect bites.

Ticks can be mailed to the Washington State Department of Health for species identification.<sup>7</sup>

## Rabies

Rabies is a viral disease spread through the saliva of infected animals; if untreated it is usually fatal. Rabies is rare in WA, it is most commonly found in bats. The Department of Health keeps records of where rabid bats have been found recently.<sup>8</sup>

Rabies is preventable through prompt, appropriate medical care. If the disease is untreated, symptoms normally appear 2-8 weeks after exposure; most patients die within a few weeks of symptom onset.

## Bites, Scratches, and Exposure

In addition to allergy exposure and possible disease transmission, animal bites and scratches can cause pain and anxiety and wounds can become infected.

Bites and scratches are defined as having skin pierced or abraded by animal teeth or claws. Exposure is defined as animal fluids or tissue contacting abraded skin or one of the mucous membranes (eyes, ears, nose, and mouth). Bite/scratch areas should be washed with soap and water as soon as possible. Exposed mucous membranes should be rinsed with water. All animal bites, scratches, and exposures must be reported to EH&S as soon as possible after the event.

Anyone bit by a wild animal should contact a health care provider and their local health department to determine if additional medical treatment is warranted.

## Compassion Fatigue

Some individuals experience emotional effects from working with animals in research, especially if the animals experience pain or if the individual is involved in animal euthanasia. Compassion fatigue is emotional, physical, and/or spiritual exhaustion associated with chronic exposure to stressful situations involving animals.

The symptoms of compassion fatigue can include depression, anxiety, cynicism, isolation, hopelessness, difficulty concentrating, pain, substance abuse, and suicide.

There is a high rate of compassion fatigue in individuals who work with animals. It is important for individuals who work with animals to recognize the symptoms of compassion fatigue and seek help quickly if symptoms occur.

## Hazard Reduction and Exposure Prevention

### Housekeeping and Personal Hygiene

Animal living and research spaces should be cleaned and disinfected frequently. Work surfaces should be disinfected before and after research activities; they should be disinfected after any spill. Be sure to follow the manufacturer's directions for disinfection. Dust suppression methods should be employed during housekeeping.

Individuals should wash their hands before and after handling animals and whenever gloves are removed. Individuals should avoid activities that expose mucous membranes to contamination or increase the risk of ingesting hazardous materials. No eating or drinking in research and animal housing areas; cosmetics should not be applied and contacts should not be handled in these areas.

### Respiratory Protection

Individuals are usually exposed to allergens by inhalation. Animal allergens are released into the air when cages are opened and when animals are handled. The allergens tend to be very small and can remain suspended in the air for a long time.

Reducing the amount of animal allergens released into the air greatly reduces an individual's exposure. Engineering controls, like filter-top cages, HEPA filtered room ventilation, and dust-free bedding all reduce the amount of allergens released into the air. Work practices, like opening cages and working with animals inside a biosafety hood, can also limit allergen exposure.

Personal protective equipment, especially gowns or dedicated animal work clothes and coverings for shoes and hair, can prevent workers from bringing animal allergens home with them. This helps to limit the amount of time a worker is exposed to the allergens.

Respirators may be necessary for individuals who are especially sensitive to animal allergens. Respirators may also be necessary for individuals who work with or around wild rodents or other species who have airborne diseases.

- Employees who require respirators will need to be enrolled in the OMM Respiratory Protection Program.
- Students and employees who voluntarily use a respirator should check with their personal doctors to make sure they are healthy enough to use a respirator. They must contact EH&S annually to have the fit of their respirator checked.

### Physical Protection

Workers must wear all PPE provided for their job or project. They are responsible for inspecting their PPE before they put it on to ensure it is in good condition. Workers must alert their supervisor of any PPE defects or damage they identify and should not proceed with any projects until appropriate, functional PPE can be obtained.

Individuals should use appropriate precautions when handling animals. To protect from animal bites or scratches, workers should utilize sedation, anesthesia or a restraining device when possible.

Care should be taken when working outside. Sunscreen and bug repellents should be used when appropriate.

Anyone who works with or traps wild animals should familiarize themselves with diseases the animals can carry and any animal symptoms they can look for to recognize infected animals. They should also be familiar with the symptoms of those diseases in humans and be prepared with information they can take to a medical provider about the diseases should they begin experiencing any of the symptoms.

## Emotional Care

The emotional wellbeing of individuals who work with animals is important. Feelings about yourself, your skills, your employer and your job should not be ignored. Self-care may be enough to help for some individuals; others may need to seek out external help.

### Self-care

Below are some things that individuals can do to help reduce their stress and lower their likelihood of developing or sustaining compassion fatigue.

- Spend time with friends and/or family – people have a tendency to isolate themselves when they feel depressed and anxious, reach out and spend time with people who support and love you
- Get enough sleep – the CDC recommends adults get at least seven hours of good sleep every night<sup>9</sup>.
- Exercise – Try to get 10 to 30 minutes of exercise every day; it doesn't matter what you do as long as you are moving and getting your heart rate up
- Eat better – Eat a nutritious meal or snack every three to four hours; minimize sugar, alcohol and caffeine
- Get some sunlight – A little extra vitamin D can be good for your immune system and your mood
- Practice relaxation techniques – activities like massage, yoga, mindful breathing or a hot bath can all be beneficial to decrease tension in the body and help clear the mind

### Resources

Anyone who experiences any symptoms related to compassion fatigue is encouraged to reach out for help. Even if the symptoms are small and uncommon, seeking the help of a counselor can be extremely helpful.

### Emergency

Free, 24/7, anonymous help is available from the **National Suicide Prevention Lifeline**<sup>10</sup> at 1-800-273-8255. They also have resources for how to support and get help for other people you think may be in trouble.

### Students

EWU students who have paid their Health and Wellness Fee have free access to Counseling and Psychological Services (CAPS). Their main office is in 225 Martin Hall and their regular hours are M-F from 8am to 5pm. Appointments can be made by calling 509-359-2366.

CAPS is open for walk-in counseling services M-F from 1pm to 4pm.

### Staff

EWU employees have access to counseling through the Employee Assistance Program<sup>11</sup> (EAP). Staff should call the EAP at 1-877-313-4455.

## References

<sup>1</sup> Incident report form: <https://inside.ewu.edu/ehs/incident-reporting/>

<sup>2</sup> American Biological Safety Association Risk Group Database: <https://my.absa.org/Riskgroups>

<sup>3</sup> US Air Force page on zoonotic diseases: <http://www.phsource.us/PH/ZD/index.htm>

<sup>4</sup> Environmental Health & Safety website: <https://inside.ewu.edu/ehs/>

<sup>5</sup> Environmental Health & Safety website: [https://sites.ewu.edu/ehs/forms/#occ\\_med\\_forms-1](https://sites.ewu.edu/ehs/forms/#occ_med_forms-1)

<sup>6</sup> Bush RK, Stave GM. Laboratory animal allergy: an update. ILAR J (2003) 44(1):28–51

<sup>7</sup> Tick identification form: <https://www.doh.wa.gov/Portals/1/Documents/Pubs/333-179.pdf>

<sup>8</sup> Rabies activity in WA: <https://www.doh.wa.gov/YouandYourFamily/IllnessandDisease/Rabies/RabiesActivity>

<sup>9</sup> CDC How Much Sleep Do I Need? [https://www.cdc.gov/sleep/about\\_sleep/how\\_much\\_sleep.html](https://www.cdc.gov/sleep/about_sleep/how_much_sleep.html)

<sup>10</sup> National Suicide Prevention Lifeline: <https://suicidepreventionlifeline.org/>

<sup>11</sup> Employee Assistance Program: <https://des.wa.gov/services/employee-assistance-program>