

Information Handout for Individuals with Direct Animal Contact (Risk Group A)

Many research and teaching protocols at USM use animals for a variety of reasons. Among these are to investigate the origin and treatment of disease as well as to study basic life processes. The University does on occasion house or conduct field studies with mice, rats, fish, reptiles, amphibians, and other mammals as research and teaching species. All animal use is under the control of the Institutional Animal Care and Use Committee (IACUC). The IACUC exists to assure that all animals receive humane care and are used only for valid teaching and research studies.

If you have any concerns regarding the care and use of animals at USM, you should contact one of the following: the Office of Research Integrity and Outreach at (207) 780-4340; or the Consulting Veterinarian at (617) 432-1289. All calls will remain confidential and any reported concern will be investigated.

There are 2 risk categories assigned to animal related risk and appropriate training materials have been developed to assure workplace safety. This handout covers animal-related risk for those individuals in Risk Group A. Those in Risk Group A directly handle animals and may have exposure to animal waste and body fluids, along with reagents that may be used in research.

This handout reviews the major risk categories associated with animal use and list resources for further instruction. In addition to this handout, you may require additional training and specific authorization in order to gain access to an animal facility. An animal facility is a mostly virus-free environment to protect the animals from accidental infection with pathogens that could affect the research being conducted. This facility has strict dress and entry requirements.

General Precautions: Use common sense to reduce potential exposure to unidentified pathogens that the animals may carry. Protect your street clothes with a laboratory coat, precaution gown, or Tyvek at all times within the animal facility and wear appropriate personal protective equipment when out in the field. Make sure to wear gloves when handling animals, tissues, or equipment. Do not eat, drink, or smoke in the animal facility. Use extra care when handling sharps such as needles, scalpels or other similar objects. Discard these directly into a ‘sharps’ container without recapping. Be sure to wash your hands between animal rooms and upon exiting the facility or after handling animals in the field.

Allergies: Many people are allergic to animals, particularly to their fur and dander. Clipping animals for surgery and routine animal handling and cage change procedures can release large amounts of animal allergens into the air. Most allergies develop in people after prolonged exposure, so steps should be taken to protect yourself and reduce your exposure to allergens even if you have no symptoms at present. To reduce allergen exposure to coworkers and the public, you should minimize the use of animals in laboratories and other areas outside of the animal facility. If you bring animals to the laboratory, you must keep the container closed or cover the cage with a micro-isolator filter top as much as possible. All cages/transport containers must be securely closed to prevent escape or environmental contamination if the cage is dropped. The use of micro-isolator caging and Class II Biosafety cabinets for cage changing and animal handling will reduce but not eliminate animal allergens from the environment.

You may already have animal allergies, and symptoms could develop quickly after initial exposure in your new workplace. Once you develop an animal allergy, you may require a respirator mask (n95 mask) to continue working safely with animals. n95s are true respirators under the Federal and Maine State Bureau of Labor Standards regulations. There are prerequisites to the use of n95s including: training, medical evaluation and more. Before requesting a fit-test, personnel must be trained, have equipment on-hand and be medically cleared to wear the respirator.

The respirator mask will be fit tested for the individual by a professional from the University of Maine System's Office of Safety Management (<https://www.maine.edu/general-services/safety-management/>). Surgical facemasks may not adequately filter animal fur and dander, and therefore may not be appropriate for respiratory allergy protection. You should inform your supervisor immediately of any known animal allergy so that you may receive proper protective equipment before you begin working with animals.

Symptoms of animal allergy include red or itchy skin, hives, conjunctivitis, sneezing, nasal drainage and congestion, asthma, cough, wheezing, shortness of breath, watery and red eyes, and anaphylaxis. If you experience any of these symptoms please contact the University of Maine System Office of Risk Management & Insurance for direction on where to obtain medical services for a work related injury (<https://www.maine.edu/general-services/risk-management-insurance/>).

Zoonoses: The microbiological quality of research animals has been greatly improved by modern breeding and production. However, some animals are naturally infected with viruses or bacteria that can cause severe disease in people. These diseases are called zoonoses. Protection of research and animal care staff and students requires strict adherence to standard work practices and protective clothing requirements. Prompt reporting of all animal related injuries and compliance with all animal facility procedures are also required.

Protocol Related Risk: If your research involves the use of toxic, radioactive or infectious materials, you will be required to have specific training before you will be allowed to begin work with these agents. Depending on the substance involved, an experienced staff member will provide the training. Most hazards associated with toxic materials in animals occur during preparation and administration of the substance. Special attention is required to avoid accidental injection or ingestion of the materials or contamination of the surrounding workspace. You must also plan for contamination of cages, bedding and carcasses. You must assure that safe handling practices for these items are developed before any work begins. The IACUC, and the University Environmental Health and Safety Office will work with you to develop these procedures.

Occupational Health Services: Contact the University of Maine System's Office of Risk Management & Insurance to determine who provides occupational health services for University of Southern Maine employees (<https://www.maine.edu/general-services/risk-management-insurance/>). The USM Health Services (<https://usm.maine.edu/uhrs>) provides these services for students. If an injury has occurred while you are working at the USM Animal Facility, please fill out the appropriate forms and contact the Office of Research Integrity and Outreach (ORIO) as well as the University of Maine System Office of Risk Management & Insurance if you

are an employee or the University Health Services if you are a student. However, if there is an emergency situation, do not hesitate to call 911 for emergency services.

USM's University Environmental Health and Safety Office is also available as an information source on personal protective equipment and other required safety devices.

Special Considerations for Field/Wildlife Studies:

The most important aspect of occupational health and safety while working with wildlife is to be aware of your situation. This includes knowledge of environment, terrain and their special concerns, anticipation of changing conditions, the rapid collection and processing of new information in order to make informed decisions, training in how to respond appropriately, and always staying alert and engaged. A lack of this "situational awareness" is one of the primary factors in accidents attributable to human error. Safety training is the single most important component of being prepared and staying safe. The Principal Investigator (PI) is responsible for ensuring all research personnel are trained. Such training may include survival, injury prevention, first aid, and team communication. Some common field injuries include (but are not limited to) knee and ankle injuries from slips and falls, stings and bites (if you have a known allergy, you are required to carry the appropriate medications at all times, such as an epinephrine pen), and muscle strain from lifting or falling. All personnel must use appropriate Personal Protective Equipment (PPE) as necessary, which may include gloves, sturdy boots, eye protection, coveralls, and mask or respirator.

In case of an injury from wildlife, such as a bite or scratch, clean and disinfect as soon as possible. Also consider aspirin, acetaminophen, or ibuprofen for pain/inflammation, and antibiotics from a physician. In case of kicks/blunt trauma, be aware that blows to the head, chest or abdomen can cause internal injuries. There may also be environmental dangers, such as heat or cold related injuries. Heat can cause overheating or dehydration, so trap/capture during cool times of day and provide shade. Always bring plenty of water and consider cool packs. Cold weather can cause hypothermia and frost-bite, so dress warmly and bring hot packs. If the terrain is rugged, be sure to move slowly and wear appropriate footwear.

If any injury occurs, follow the appropriate first aid procedures and seek medical attention. The early reporting of an injury is absolutely imperative. Inform your direct Supervisor, principal investigator, or co-workers when working in remote field areas.

Information Handout for Individuals With Indirect Animal Contact (Risk Group B)

Many research and teaching protocols at USM use animals for a variety of reasons. Among these are to investigate the origin and treatment of disease as well as to study basic life processes. USM does on occasion house or conduct field studies with mice, rats, fish, reptiles, amphibians, and other mammals as research and teaching species. All animals are under the control of the Institutional Animal Care and Use Committee (IACUC). The IACUC exists to assure that all animals receive humane care and are used only for valid teaching and research studies.

If you have any concerns regarding the care and use of animals at USM, you should contact one of the following: the Office of Research Integrity and Outreach at (207) 780-4340; or the Consulting Veterinarian at (617) 432-1289. All calls will remain confidential and any reported concern will be investigated.

There are 2 risk categories assigned to animal related risk and appropriate training materials have been developed to assure workplace safety. This information handout covers animal-related risk for those in Risk Group B. Individuals in Risk Group B do not directly handle animals or animal tissue, but they work in an area where animals or animal tissues are commonly used.

If you are working in an animal facility, the main risk you encounter is animal fur or dander in your work area because research animals pass by your work area on the way to another laboratory. Research staff must transport animals only in closed and covered containers to minimize unintentional exposure of others to animal dander. If you see animals being transported in open containers or cages, please contact the University of Maine System's Office of Safety Management (<https://www.maine.edu/general-services/safety-management/>).

You may be exposed to animals or animal tissues and waste when cages are opened or animals are handled in the laboratory or the area in which you work. Many animals have the potential to induce allergies in susceptible individuals. You should inform your supervisor immediately of any known laboratory animal allergy so that you may receive proper protective equipment before you are exposed to animal allergens.

You may already have animal allergies and symptoms could develop quickly after your initial exposure in your new workplace. Animal allergies may also develop after a variable exposure period. Symptoms of animal allergy include red or itchy skin, hives, conjunctivitis, sneezing, nasal drainage and congestion, asthma, cough, wheezing, shortness of breath, watery and red eyes, and anaphylaxis. If you experience any of these symptoms, or have other concerns related to animal exposure in the workplace, please contact the University of Maine System Office of Risk Management & Insurance for direction on where to obtain medical services for a work related injury (<https://www.maine.edu/general-services/risk-management-insurance/>).

Once you develop an animal allergy, you may require a respirator mask to continue working safely with animals. The respirator mask will be fit tested for the individual by a professional from the University of Maine System's Office of Safety Management (<https://www.maine.edu/general-services/safety-management/>). Surgical facemasks may not adequately filter animal fur and dander, and therefore they may not be appropriate for respiratory allergy protection.

If you are working in the field, the most important aspect of occupational health and safety while working with wildlife is to be aware of your situation. This includes knowledge of environment, terrain and their special concerns, anticipation of changing conditions, the rapid collection and processing of new information in order to make informed decisions, training in how to respond appropriately, and always staying alert and engaged. A lack of this “situational awareness” is one of the primary factors in accidents attributable to human error. Safety training is the single most important component of being prepared and staying safe. The Principal Investigator (PI) is responsible for ensuring all research personnel are trained. Such training may include survival, injury prevention, first aid, and team communication. Some common field injuries include (but are not limited to) knee and ankle injuries from slips and falls, stings and bites (if you have a known allergy, you are required to carry the appropriate medications at all times, such as an epinephrine pen), and muscle strain from lifting or falling. All personnel must use appropriate Personal Protective Equipment (PPE) as necessary, which may include gloves, sturdy boots, eye protection, coveralls, and mask or respirator.

In case of an injury from wildlife, such as a bite or scratch, clean and disinfect as soon as possible. Also consider aspirin, acetaminophen, or ibuprofen for pain/inflammation, and antibiotics from a physician. In case of kicks/blunt trauma, be aware that blows to the head, chest or abdomen can cause internal injuries. There may also be environmental dangers, such as heat or cold related injuries. Heat can cause overheating or dehydration, so trap/capture during cool times of day and provide shade. Always bring plenty of water and consider cool packs. Cold weather can cause hypothermia and frost-bite, so dress warmly and bring hot packs. If the terrain is rugged, be sure to move slowly and wear appropriate footwear.

If your responsibilities change so that you work directly with the animals or animal tissues, you will then be placed into Risk Group A. You should receive a new handout and receive specific training in proper techniques of animal care and use prior to beginning your new assignment.

The Principal Investigator will ensure that you are provided any additional training. If the work involves toxic or infectious materials, you will also receive training from an appropriate staff member.