FOCUS ON SAFETY

Beyond animal welfare, the IACUC is tasked with oversight of the safety of personnel working with animals.

The NIH notes that the activities involved with animal research and animal care, including the animals themselves add new elements of risk to the laboratory environment.

Up until very recently AAALAC cited issues with personnel safety as the number one finding on site visits. It still remains the second most commonly discussed issue.

In this update we offer some visual reminders regarding the use of safety equipment, remind you of the PPE needed to work with various species via the PPE Matrix, and advise you of the types of risks that can be involved in working in animal research.

ASK Jamie??
(About Safety)

Dr. Helen Tripps-Lott Asks: Jamie, What are the kind of accidents that can happen in an animal laboratory?

Jamie: Well NIH, AAALAC, and other sources list these common injuries associated with animal laboratory space:
• Burns from autoclaves etc.
• Chemical and substance exposure
• Muscular injuries, bruises, contusions from moving equipment
• Injuries due to falling on wet floors and slippery surfaces
• Puncture wounds from needles and sharps
• And of course Bites and scratches

Rex Easley Asks: Jamie what can I do to improve safety in my laboratory?

Jamie: That’s a good question Rex
• Make sure you label those secondary containers, people need to know what’s in them
• Don’t overfill those sharps containers they have a fill line
• Remove chemicals and sharps from your workspace when you’re done with them, a crowded area leads to accidents
• Don’t skip items on your PPE, they are required for a reason
• Check your eye wash stations and safety showers regularly, trust me you won’t have time when they are needed.
Guidelines for the Use of Appropriate Personal Protective Equipment in Animal Research
The University of Texas at Austin
Institutional Animal Care and Use Committee

This document provides information regarding use of appropriate personal protective equipment that should be used by individuals working with and around research animals.

Section A - Background

In addition to the oversight of animal welfare, institutional animal care and use committees are tasked with ensuring users of animals in research are able to work safely.

According to the Guide for Care and Use of Laboratory Animals (National Research Council, 2011):

An animal care and use program comprises all activities conducted by and at an institution that have a direct impact on the well-being of animals, including animal and veterinary care, policies and procedures, personnel and program management and oversight, occupational health and safety, institutional animal care and use committee (IACUC) functions, and animal facility design and management. A comprehensive Occupational and Health Safety Program (OHSP) should include a hierarchy of control and prevention strategies that begins with the identification of hazards and the assessment of risk associated with those hazards.

Managing risk involves the following steps: first, the appropriate design and operation of facilities and use of appropriate safety equipment (engineering controls); second, the development of processes and standard operating procedures (SOPs; administrative controls); and finally, the provision of appropriate personal protective equipment (PPE) for employees.

Special safety equipment should be used in combination with appropriate management and safety practices (NIH 2002; OSHA 1998a,b). Managing risk using these strategies requires that personnel be trained, maintain good personal hygiene, be knowledgeable about the hazards in their work environment, understand the proper selection and use of equipment, follow established procedures, and use the PPE provided.

Section B - Implementation: General Objectives

The Institutional Animal Care and Use Committee has established the minimum required personal protective equipment (PPE) to be used by personnel while working with various species. University of Texas oversight committees (e.g. IBC), specific departments (e.g. EHS), specific animal housing facilities (e.g. ARC) and the type of work being done in specific projects (e.g. the use of biological materials) may require the use of more PPE. Researchers must not use less than these standards without explicit approved from the IACUC. You should contact the Occupational Health Office or EHS if you have questions regarding PPE.

The PPE guidelines for work with non-human primates can be found separate from this document. Refer to:

Personal protective equipment (PPE) requirements for personnel working with non-human primates at UT-Austin.
## Section C - Implementation: Species Specific

Minimum PPE Policy Requirements for UT Vertebrate Animal Research Housing and Use Locations (Version 3 July 2018)

<table>
<thead>
<tr>
<th>Species/type</th>
<th>Full coverage closed-toed shoes, long pants/dresses when in housing or lab use areas</th>
<th>Gloves worn</th>
<th>Scrubs, lab coat or isolation gown worn while inside housing rooms or actively handling animals in use areas</th>
<th>Mask worn when in housing rooms or actively handling animals in use areas (allergen or pathogen risks)</th>
<th>Additional foot protection</th>
<th>Hair bonnet worn when in housing rooms or actively handling animals in use areas</th>
<th>Eye/face protection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rodents - conventional</td>
<td>Yes</td>
<td>Yes, when handling animals or entering housing rooms</td>
<td>Yes</td>
<td>Dust/surgical mask</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Rodents – SPF &amp; barrier (PPE is used for both containment and exclusion)</td>
<td>Yes</td>
<td>Yes, when handling animals or entering housing rooms</td>
<td>Yes</td>
<td>Dust/surgical mask</td>
<td>Shoe covers</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Rodents – pathogens, toxins or chemicals</td>
<td>Yes</td>
<td>Yes, when handling animals or entering housing rooms; nitrile recommended (double or heavy duty are options)</td>
<td>Fluid resistant (elastic cuff recommended)</td>
<td>N95* likely (Consult with EHS)</td>
<td>Consult with EHS</td>
<td>Consult with EHS</td>
<td>Consult with EHS</td>
</tr>
<tr>
<td>Rabbits - standard</td>
<td>Yes</td>
<td>Yes, when handling animals or entering housing rooms</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Fish - standard</td>
<td>Yes</td>
<td>Yes, when handling fish</td>
<td>Lab coats recommended but not required unless chemical hazards</td>
<td>No</td>
<td>Non-slip shoes or rubber boots (for wet</td>
<td>No</td>
<td>Yes (when splashes are likely)</td>
</tr>
<tr>
<td>Reptiles and Amphibians - standard</td>
<td>Yes</td>
<td>Yes, when handling animals</td>
<td>Yes</td>
<td>No</td>
<td>Non-slip shoes or rubber boots (for wet locations)</td>
<td>No</td>
<td>Yes (when splashes are likely)</td>
</tr>
<tr>
<td>Wild Rodents</td>
<td>Yes</td>
<td>Yes, when handling animals or entering housing rooms; nitrile recommended (+/- protective bite/scratch gloves)</td>
<td>Yes</td>
<td>N95*</td>
<td>Shoe covers</td>
<td>Yes</td>
<td>Safety glasses at a minimum</td>
</tr>
<tr>
<td>Rodents – field work (See also the Safety Guidelines for Field Researchers)</td>
<td>Yes</td>
<td>Yes, when handling animals, cages, traps and contaminated equipment; nitrile recommended (+/- protective bite/scratch gloves)</td>
<td>Yes, when actively handling rodents or contaminated traps</td>
<td>N95*, when actively handling rodents or contaminated traps</td>
<td>Protective footwear based on location (wet, rocky, ticks, snakes, etc.)</td>
<td>Protective headgear based on location (wet, sun exposure, mosquitoes, etc.)</td>
<td>Consult with EHS</td>
</tr>
</tbody>
</table>

*N95 Respirators require a Respirator Fit Test, Please contact the Occupational Health Program for more information.
For non-human primate precautions, please see the separate Personal protective equipment (PPE) requirements for personnel working with non-human primates at UT-Austin guidelines.
Section D - References

The AIR We Breathe

Three Key Factors Required for a Respirator to be Effective

1. The respirator must be put on correctly and worn during the exposure.
2. The respirator must fit snugly against the user’s face to ensure that there are no gaps between the user’s skin and respirator seal.
3. The respirator filter must capture more than 95% of the particles from the air that passes through it.

*If your respirator has a metal bar or a molded nose cushion, it should rest over the nose and not the skin area.

<table>
<thead>
<tr>
<th>Canister Brand</th>
<th>Maximum Hours of Use</th>
<th>Maximum Weight Gain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breath Fresh</td>
<td>12-15 hours</td>
<td>50 gm</td>
</tr>
<tr>
<td>f/air</td>
<td>12-15 hours</td>
<td>50 gm</td>
</tr>
<tr>
<td>Enviro-Pure</td>
<td>N/A</td>
<td>100-120 gm</td>
</tr>
<tr>
<td>VaporGuard</td>
<td>N/A</td>
<td>50 gm</td>
</tr>
<tr>
<td>VetOne Clean Aire Filter</td>
<td>12-15 hours</td>
<td>50 gm</td>
</tr>
</tbody>
</table>

SPOT THE DIFFERENCE

Laminar Flow
- Yes: Sample Protection
- No: Operator Protection

Fume Hood
- No: Sample Protection
- Yes: Operator Protection

Biosafety cabinet
- Yes: Sample Protection
- Yes: Operator Protection

Please contact the Office of Research Support and Compliance with any questions, comments, or concerns.
voice: (512) 471-8871 | web: http://www.utexas.edu/IACUC | email: IACUC@austin.utexas.edu
Recently the Occupational Health Program reported that they had treated individuals for bites from squirrels on campus.

The IACUC would like you to know that they do not condone of this behavior, and on a more serious note that you should have animal bites attended to. Besides immediate injury, bites can lead to transfer of many diseases including tetanus.

BUT according to the CDC small mammals such as squirrels, rats, mice, hamsters, guinea pigs, gerbils, chipmunks, rabbits, and hares are almost never found to be infected with rabies and have not been known to cause rabies among humans in the United States.

Unlike dogs, when a squirrel wags it tail it is communication distrust and danger. Squirrels are very territorial and show a great deal of aggression towards other squirrels. A simple web search for aggressive squirrels will show plenty of news stories about aggressive squirrels and their human victims.

The best way to prevent squirrel aggression is to not let them get too comfortable in your territory including not feeding them. As with most wild animals easy access to food brings expectations and behavior.