OCCUPATIONAL HEALTH AND SAFETY PROGRAM

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REFERENCES

GUIDE FOR THE CARE AND USE OF LABORATORY ANIMALS
Occupational Health and Safety in the Care and Use of Research Animals
Biosafety in Microbiological and Biomedical Laboratories
Each institution **MUST** establish and maintain OHSP as an essential part of the overall program of animal care and use (The *GUIDE* - Page 17)
CRITICAL ELEMENTS OF OHSP

• Hazard identification and risk assessment
• Control and prevention strategies
• Facility and equipment monitoring
• Animal experiments involving hazards
• Personal training
• Personal hygiene
• Personal protection
• Medical evaluation and preventive medicine

“for maintaining safe and healthy workplace”

WHAT SHOULD BE CONSIDERED...

• Overview and recommendations
• Program design and management
• Physical, chemical and protocol-related hazards
• Allergens
• Zoonoses
• Principle elements of OHSP
• Occupational health-care services
HOW TO BE SUCCESSFUL

• **Commitment and support** from the I/O and upper level management for a safe workplace

• Recognizing that an OHS program is an essential component of the infrastructure to support **high-quality research**

• Recognizing that **well-trained and certified** OHS personnel are necessary

• The OHS unit must have a clearly defined **responsibility and authority**
I/O commitment and the delegation of authority

OHS personnel (internal and/or outsourcing)

Offer program participation to…

All personnel at risk

“to prevent occupational injury and illness”

STRATEGIES

Identification of hazards

Assessment of risk associated with the hazards

Managing the risks
SURVEY ALL TYPES OF POTENTIAL RISKS

Worksite Hazard Survey Form = Risk Identification

Type of hazards

- Chemical hazard
- Electrical hazard
- Environmental hazard
- Zoonotic diseases
- Allergens
- Protocol-related hazards (biological, chemical, etc...)

ANNUAL RISK ASSESSMENT AND MEDICAL EVALUATION

Confidential Information for Occupational Health and Safety Officer Only (ปลอมและส่งเสริมอาจารย์ที่ปรึกษาเพื่อเตรียมการณ์ในการใช้สำเนาที่มีผลต่อสุขภาพได้)

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Occupational Risk Assessment and Medical Questionnaire

A) GENERAL INFORMATION (รายละเอียด)

Name (ชื่อ)

Gender (เพศ) □ Male (ผู้ชาย) □ Female (ผู้หญิง) Date of birth (วันเกิด)

Choose and fill one of the followings based on the purpose of your entry (เลือกและจัดเต็มข้อมูลตามที่มีผลต่อสุขภาพได้)

1) Employees and AUCG members (ผู้สังกัดและผู้ประกอบการ)

Position (ตำแหน่ง)

2) Animal users and regular contractors (ผู้ใช้สัตว์และผู้มีส่วนๆ)

Position (ตำแหน่ง) □ Undergraduate student (นักศึกษาปริญญาตรี) □ Graduate student (นักศึกษาปริญญาโท) □ Research scientist (ผู้วิจัย)

□ Principal investigator (ผู้วิจัยที่มีส่วนเกี่ยวข้อง) □ Other (อย่างอื่น)

Affiliation (สถานที่ที่สัมพันธ์กับการใช้สัตว์) □ MUSC (มหาวิทยาลัยศิริราช) □ Department (ภาควิชา)

□ Other, specify (อย่างอื่น)

Phone number (เบอร์โทรศัพท์) E-mail (อีเมล)
RISK MANAGEMENT

Awareness
- Training program
- Warning Sign

Prevention & Protection
- Containment Facility
- Limitation of access
- Safety Equipment
- Safety Work Practices
- Personal Protective Equipment (PPE)

Accident Management

HIERARCHY OF CONTROLS

https://www.cdc.gov/niosh/topics/hierarchy
WORK PRACTICES TO REDUCE HAZARD EXPOSURES

- Use less-hazardous materials
- Decontaminate work surfaces before and after work with appropriate decontamination methods
- Keep hands away from mouth, nose, eyes and skin and wear PPE
- Wash hands

RISK ASSESSMENT & SAFETY TRAINING
INSTRUCTIONAL SIGNAGE FOR CAGE/RACK WASHERS AND BULK AUTOCLAVES

- Emergency safety cable
- Push here to open door
- Emergency stop

SAFETY WARNING SIGNS

- CAUTION
- DANGER
- Lab Safety
- Safety Signs
LABORATORY ANIMAL ALLERGY

Involve anyone having contact with animals, their bedding, or their body fluid or feces

Common sources
- Rat/mice: urine and saliva
- Rabbit: fur, saliva, urine
- Bedding materials (new and used)
- Sanitation/laundry supplies

See Allergy prevention FAQ
http://www.aaalac.org/accreditation/faq_landing.cfm

CONSEQUENCES

Allergic rhinitis – symptoms and co-morbidities
HAND HYGIENE

**How To Wash Your Hands**

1. Wet hands with water and apply soap or handwash.
2. Rub hands palm to palm.
3. Rub palm over the back of the other hand, with interlaced fingers and rotate the palm.
4. Palm to palm with fingers interlaced.
5. Rub of fingers scrubbing palm with fingers interlaced.
6. Rotate and rubbing of all hands clasped in right palm and left versus.
7. Rotational rubbing, backward and forward with closed fingers of right hand in all palms.
8. Rinse hands under running water.
9. Dry hands thoroughly with a paper towel or air drier.
10. Use napkin or paper towel to shut off the tap.

RESPIRATOR USE AND FIT TEST

Harmful dusts, fogs, fumes, mists, gases, smokes, sprays, or vapors, and animal allergens

- **Engineering control measures and/or administrative controls**
- After re-evaluation and risk assessment, respirator is needed
  - Dust, smoke, and aqueous fog (aerosols)
  - Pathogen, chemical or gas exposures
    - N95 or FFP1-3 filtering face piece respirator
    - Chemical Cartridge/Gas Mask, Powered Air-Purifying Respirator (PAPR), or Self-Contained Breathing Apparatus (SCBA)
PPE SELECTION

The selection of PPE is made in consultation with a safety specialist and workers to maximize protection without compromising comfort, maneuverability, or compliance.

PROPER USE OF SAFETY EQUIPMENT

- Fume hood
- Biological safety cabinet
- Cage change station
Zoonoses

- Viral diseases
- Bacterial diseases
- Rickettsial diseases
- Protozoal diseases
- Fungal diseases
- Helminth Infections
- Arthropod Infestations

Required Risk Assessment

“Zoonosis surveillance should be a part of OHSP”

ABSL-2 Facility

Practices and procedures required to conduct research with animals infected with agents that can cause disease in humans

Restriction for access

Proper training with SOPs

Engineering control and PPE requirement to prevent exposure
COMPRESSED GAS AND ANESTHETIC GAS

ERGONOMICS

1. Maintain neutral posture
2. Work in power zone

3. Adequate lighting
4. Reduce excessive force and motion
5. Allow for movement and stretching
6. Seek help if needed
WORK PRACTICES TO REDUCE PERCUTANEOUS HAZARD EXPOSURES

• Eliminate the use of sharps
• Use needles with self-storing sheath
• Keep sharps objects in view
• Limit to use one open needle at a time
• Use puncture resistant gloves
• Use proper sharps containers
• Proper animal handle techniques

Do not recap!

COMMON INJURIES AND INCIDENT REPORT

Bites and Scratches
• Employees and researchers should be properly trained in...
  • Animal handling
  • General restraint techniques
  • Environmental factors for the species you will work with
• All staff should be familiar with first aid procedures specific to each species and the incident reporting process

First Aid Kit

Central Animal Facility, Faculty of Science, Western University (M151500)
Incident Report and Monitoring Form for Work-related Injuries

[Image of First Aid Kit and Incident Report Form]
PROCEDURES FOR ACCIDENTS

All accident, bites, injuries, illnesses and allergic reactions


INCIDENT REPORT FLOW CHART
**EMERGENCY RESPONSE**

On hearing the fire alarm sounds...
- Remain calm
- Stop working
- Recall the exits and leave the building
- Do not take risks
- Do not use the elevators

MUSC annual training is provided.

Pay attention to the location of these signs once inside the facility.
ALWAYS, log in and out

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**MEDICAL EVALUATION AND PREVENTIVE MEDICINE FOR PERSONNEL (THE GUIDE, PAGE 22)**

- Pre-employment or pre-exposure serum collection (only in specific circumstances)

- **Periodic medical evaluations**

- Pre-employment or pre-exposure serum collection if determined by OHS professionals

- An appropriate immunization schedule
  - It is important to immunize animal care personnel against **tetanus**.
  - Pre-exposure immunization should be offered to people at risk of infection.
EFFECTIVENESS OF THE OHS PROGRAM

- Commitment and coordination
- Rules and guidelines
- Knowing the hazards
- Avoiding and controlling exposures
- Training and education
- Consistency
- Recording and monitoring