Animal Contact Program Handbook

Florida Institute of Technology

Office of Environmental & Regulatory Compliance

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1. OVERVIEW OF ANIMAL CONTACT PROGRAM

The Florida Institute of Technology’s Animal Contact Program for individuals who have animal contact includes a medical monitoring and an educational component. Medical monitoring is based on the type and frequency of exposure to animals and consists of a risk assessment, follow-up assessments and, tests/immunizations as needed. It is part of the University's Environmental & Regulatory Compliance (ERC) Office. The educational section provides individuals with health information specific to animal contact and promotes safe working practices.

The ERC and the Institutional Animal Use and Care Committee (IACUC) jointly oversee the Animal Contact Program. The Holzer Health Center (HHC) is the medical provider for the program, the ERC maintains the medical records.

This Animal Contact Program Handbook is intended to provide information for individuals working with or in proximity to animals.

Short term visitors from other institutions should provide to the ERC evidence of current participation in a medical surveillance program at their home institution. Without such documentation, visitors will be required to participate in the FIT Animal Contact Program. Individuals involved in isolated one-time, non-recurrent exposures shall be informed of potential dangers and medical precautions, but are not required to participate in the program. The primary responsible party (principal investigator, research director, student research coordinator, etc.) shall be responsible for assuring compliance with the notification requirements for these individuals. No work with animals or their tissues is permitted prior to enrollment in the Animal Contact Program.

2. MEDICAL MONITORING PROGRAM FOR ANIMAL CONTACT

The Florida Institute of Technology’s medical monitoring program is a comprehensive program for individuals having animal contact in association with University-sponsored activities. Individuals covered by the program include faculty, staff, students, and volunteers or visitors who work with vertebrate animals or in proximity to them, or who handle certain animal tissues, body fluids or wastes. The program is intended to comply with the recommendations made by the Committee on Occupational Safety and Health in Research Animal Facilities and the Institute for Laboratory Animal Resources. These recommendations have been published in the Guide for the Care and Use of Laboratory Animals, (National Research Council; National Academy Press;
The program requirements are based on the type of exposure to animals. Employee identification and tracking will be managed jointly by IACUC and the office of Environmental & Regulatory Compliance.

Individuals with animal contact shall be provided the animal contact program handbook. They shall be included in a risk assessment program that covers contact information, immunization history and a health questionnaire. The risk assessment will be updated on a periodic basis. An exit evaluation upon termination of an employee’s animal work will be offered by the Holzer Health Center.

3. SUMMARY OF IMMUNIZATION/TEST REQUIREMENTS

<table>
<thead>
<tr>
<th>Immunization/Tests</th>
<th>Exposure Condition</th>
<th>Frequency</th>
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<tbody>
<tr>
<td>Tetanus Immunization</td>
<td>All individuals with animal contact</td>
<td>Current within 10 years*</td>
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<tr>
<td>Rabies Immunization</td>
<td>All employees handling unvaccinated carnivores or their tissue</td>
<td>Immunization, booster, or positive rabies titer current within 2 years</td>
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<tr>
<td>Serum Banking</td>
<td>If directed by physician, depending on exposures and/or concerns</td>
<td>As directed by physician</td>
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<tr>
<td>Respirator Clearance</td>
<td>When medically necessary to combat animal allergies</td>
<td>Clearance - before assignment Fit-test –annually – ERC may perform.</td>
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<td>And Fit Test</td>
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<tr>
<td>Medical Consultation</td>
<td>When deemed necessary by Occupational Medicine personnel</td>
<td>Before assignment and as determined by the HHC medical personnel.</td>
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* The Public Health Service Advisory Committee on Immunization Practices recommends immunization against tetanus every 10 years. An immunization is also recommended if a particularly tetanus-prone injury occurs in an employee where more than five years has elapsed since the last immunization.

4. OCCUPATIONAL INJURY REPORTING PROCEDURE

When an injury or illness occurs and medical treatment is necessary, the individual and/or the supervisor must phone the FIT Insurance Office (FITIO) at (321) 674-7297 to complete a First Report of Injury or Illness form. FITIO then will assist in selecting an authorized medical provider and will fax a copy of your First Report form to the authorized medical provider.
selected for treatment. FIT’s Insurance/risk Management web site has more information: http://www.fit.edu/safety/liab_ins_management.php

Within 7 days of the injury, the Injury and Incident Investigation Report should be filled out and sent to the ERC. The Injury and Incident Investigation Report must be submitted whether the injured person receives medical treatment or not.

In addition, any injury must immediately be reported to the FIT security department at 321-674-8111. FIT security will come on scene and create an injury incident report and assist if any emergency is present. If the injury will result in loss of work time or require medical treatment additional reports will need to be completed with FITIO as needed for the filing of a Workers Compensation Claim. The report should be completed within 7 calendar days of the occurrence/filing of the injury with FITIO. The form, when completed, helps the University understand and analyze the causes of accidents and enhance the ability to take action to prevent recurrence.

NOTE: Venomous snake bites should follow the instructions contained in Section 7k (also posted at facility).

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5. FORMS ASSOCIATED WITH THIS PROGRAM

Risk Assessment for Animal Contact

Renewal - Risk Assessment for Animal Contact

These forms & their instructions may be obtained from the Office of Environmental & Regulatory Compliance and must be completed as applicable.

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6. PROGRAM CONTACTS

Additional information may be obtained from the sources listed below.

Questions regarding risks, precautions to be followed or the medical monitoring program should be directed to Environmental & Regulatory Compliance Office at 321-674-7715 or 321-674-8283 or 321-674-8493.

Questions regarding a specific situation should be directed to the principal investigator or employee supervisor.

Medical advice is available from the Holzer Student Health Center at 321-674-8078.
7. HEALTH INFORMATION

The Public Health Service of the U.S. Department of Health and Human Services directs research/teaching institutions to develop programs that promote the health and safety of employees who have animal contact. This document contains informational material about several specific conditions or practices with which animal workers should be familiar.

Any occupational injury, illness, or hazardous exposure must be reported at once to the immediate supervisor for instructions on procedures for obtaining medical treatment. Reporting all accidents and illness to the supervisor is necessary and must be prompt and accurate in order to assure proper handling of all claims. In the event of serious injury, medical assistance should be sought immediately.

Every person working with animals should be aware of the potential danger from animal bites. Although an animal scratch or bite might not seem serious, its occurrence should be reported to one's supervisor so that proper measures may be taken.

a. Personal Hygiene

There are a number of personal hygiene issues which apply to all workers with animal contact. Attention to personal hygiene protects not only the worker, but also prevents zoonotic diseases or allergens from being carried home whereby family members may be exposed.

1. There should be no eating, drinking, smoking, gum chewing, contact lens handling or applying of cosmetics in areas where animals are housed or used.

2. Laboratory coats or other protective clothing should be worn over street clothes when working with animals. This will minimize the contamination of street clothing. Protective clothing should be left in the lab or animal facility and should not be worn in common areas, lavatories, when eating, or in public eating areas.

3. Careful hand washing is required after handling of animals and prior to leaving the laboratory or animal facility.

4. All work surfaces should be decontaminated daily and after any spill of animal related material.

b. Tetanus

The Public Health Service Advisory Committee on Immunization Practices recommends immunization against tetanus every 10 years. An immunization is also recommended if a particularly tetanus-prone injury occurs in an employee where more than five years has elapsed since the last immunization. Every employee should have up-to-date tetanus immunizations. The current tetanus immunization given by the Student Health Care Center, Tdap, protects against tetanus, diphtheria and pertussis.
c. Leptospirosis

This is a contagious disease of animals and humans due to infection with Leptospira spp. The usual mode of transmission is contact with infected urine or the ingestion of urine-contaminated food or water or through a skin break. Clinical symptoms may be severe, mild or absent and may cause a wide variety of symptoms including fever, jaundice and general discomfort. The disease can usually be treated successfully with antibiotics. Dogs, domestic livestock and wild rats are commonly infected.

d. Human Allergies to Animals

Allergy to animal hair and dander is common and therefore one of the most important occupational problems occurring in workers exposed to animals. Allergic reactions are expressed in a number of ways including allergic rhinitis (a condition characterized by runny nose and sneezing similar to hay fever); by allergic conjunctivitis (irritation and tearing of the eyes); by asthma, or by atopic dermatitis (a skin condition which is caused by contact with a substance to which an individual is allergic). Allergy to animals is particularly common in workers exposed to animals such as cats, rabbits, mice, rats, gerbils and guinea pigs. There is still some controversy regarding exactly what substance causes the allergy in a certain individual. Previously it had been thought that most allergies were caused by dander and debris from the skin and fur of an animal. More recent studies seem to suggest that exposure to animal urine, saliva and fecal matter may be equally or more important. Exposure to animal urine may occur either through direct urine contact with skin or more commonly by inhaling dust from the bottom of a cage which has been contaminated with urine or fecal material.

Various studies show that 15 to 20% of workers exposed to animals will develop symptoms of allergy. This percentage may be even higher since some people are forced to leave their jobs because of the severity of the allergies that develop. Most of these reactions are of the allergic rhinitis and allergic conjunctivitis type. Less than half of these will actually be asthma. People who have a prior personal history or family history of asthma, hay fever, or eczema will be more likely to develop asthma after contact with animals, but these people do not seem any more likely to develop rhinitis and conjunctivitis than do people without such personal or family history. Everyone should exercise certain precautions to attempt to prevent animal allergy. These attempts should not be focused only on people with atopic history. Symptoms can develop anywhere from months to years after a person begins working with animals. A majority of the individuals who are going to develop symptoms will do so within the first year. It is extremely unusual to develop symptoms after more than two years of animal contact. Certain procedures should be routinely followed in order to prevent the development of animal allergy. Animals should be handled in extremely well ventilated areas to prevent build up of various particles in the air. Workers may want to wear gloves to prevent direct exposure to the animals. This applies to animal urine as well as to animal dander. In order to prevent inhaling contaminated material, cages should be changed frequently and masks should be worn during the changing of cages.

Despite the best preventive techniques, some individuals will develop allergies after contact with laboratory animals. Rarely, this will be so severe that a person is forced to change his line of work. More commonly, this can be controlled with the increased use of masks or respirators.
while working with animals and the possible use of medications. Desensitization therapy has been done for some individuals but this is not as effective for animal allergies as it is for some other types of allergies. Anyone with significant symptoms related to animal exposure should obtain medical advice.

**e. Ringworm (Dermatomycoses)**

Many species of animals are susceptible to fungi that cause the condition known as ringworm. The skin lesion usually spreads in a circular manner from the original point of infection, giving rise to the term "ringworm." The complicating factor is that cats and rabbits may be asymptomatic carriers of the pathogens which can cause the condition in humans.

In humans, the disease usually consists of small, scaly, semi-bald, grayish patches with broken, lusterless hairs, with itching. Transmission of the disease is by direct contact with an infected animal. Personal hygiene is the best method of prevention and one should obtain medical assistance if the lesions are noted.

**f. Psittacosis**

Psittacosis infection is common (1-20% of birds affected) in wild bird populations, but particularly so in pigeons and birds of the parrot family. Most infections in birds are unapparent. The infection is spread from bird to bird and from bird to humans via direct contact with infectious material or via aerosols, so direct contact with an affected bird is not necessary. One or two weeks after exposure, an infected human may develop a respiratory illness of varying severity. A mild case will appear to be the flu, while more severe cases can result in chills, fever, sweating, headaches and even pneumonia. The disease is readily treated with tetracycline-type antibiotics. Working in a dusty environment with high densities of birds is a much greater risk than working with birds outdoors or in clean, well-ventilated areas.

**g. Toxoplasmosis**

Toxoplasmosis is a disease which is caused by an organism called Toxoplasma gondii. Approximately 1/3 of the United States population has had this disease at some time. Usually this disease is quite mild and may be mistaken for a simple cold or viral infection. Swollen lymph nodes are common. In addition, it is common to have a mild fever, general tired feelings and mild headaches. Rarely, more serious illness can occur such that there can be an involvement of the tissues of the lungs, heart, brain or liver.

People acquire this disease by eating meat which is raw or has not been cooked properly or by contact with feces of an infected cat. At any one time, about 1% of all cats will be shedding the toxoplasma oocyst in their feces. In addition, this organism can be passed on to the fetus of a pregnant woman if she becomes infected during her pregnancy. **There are two situations in which toxoplasmosis can be extremely serious.** A person whose immune system is not working properly can contract a very severe form of the disease. This would include people with AIDS or a positive blood test for the AIDS virus, people on medications which suppress their immune systems, and people who have some other serious illness which affects their immune...
system in the same way. In addition, an infection with toxoplasma can severely damage an unborn child. This can only occur if the mother gets an acute infection during the time she is carrying this child. This can result in miscarriages, still births, or various congenital defects. The disease is more serious if passed on to the fetus early in pregnancy but it is more common for the illness to be passed on later in pregnancy.

Certain simple precautions will prevent a person from acquiring toxoplasmosis. Obviously, meat should be thoroughly cooked before it is eaten, therefore preventing this form of transmission. Cats acquire the toxoplasma organism by eating raw meat or wild animals that have been infected with the organism. The cat then excretes an egg form in its feces. These do not become infective for approximately two days but after this they can persist for quite some time in the soil. Because of this, it is important that cats be fed only commercial cat food or well cooked meat. In addition, the litter box of a cat that goes outside should be changed daily. When a woman is pregnant, she should avoid any contact with cat litter and should avoid any close contact with any cats who have been allowed to roam outdoors.

Pregnant women should be cautioned about working with cats in the laboratory setting. Pregnant animal technicians who have been assigned to cat husbandry duties should be reassigned to other jobs during pregnancy. Pregnant research technicians who are exposed to cats in other ways would be best to avoid this exposure. There is no vaccine to protect humans from this parasite.

h. Rabies

Rabies is a relatively rare and devastating viral disease which results in severe neurological problems and death. Most cases of rabies occur in wild carnivores although any mammal can contract the disease. The disease is virtually unheard of in common laboratory animals. The exception to this is with dogs and cats. All bites of any type should be reported immediately to one's supervisor.

Rabies is an endemic disease in Florida, especially in skunks, foxes and bats. Note that up to 30% of the bats found on the ground are positive for rabies. Sporadic cases have been well-documented in other species of wildlife, as well as domestic animals. Animals and animal tissues field-collected in Florida should be handled with care. Precautions should take into account the fact that infected animals may shed the virus in the saliva before visible signs of illness appear and that rabies virus can remain viable in frozen tissues for an extended period. Persons handling neurologic tissues from unvaccinated carnivores or wild animals are at greatest risk. There is a human vaccine that offers protection for those persons working with this material or with unvaccinated animals. Vaccine titers are checked periodically to ensure adequate vaccine protection.

i. Bites & Scratches

Most animals are capable of inflicting bites or scratches. The bacteriology of bite wounds reflects the animals’ oral flora. Learning/applying the proper methods of handling the species with which you work may serve to prevent bites and scratches. Protective garments such as gloves and long-sleeved laboratory coats limit injury to the hands and arms.
Bites or scratches should be immediately washed with soap (preferably an antiseptic soap, such as chlorhexidine-Nolvasan® or Betadine®-povidone iodine) and running water. Bites or scratches that result in bleeding should be thoroughly scrubbed as above for at least 15 minutes. After cleansing, a topical disinfectant and bandage should be used on the wound to protect it. Individuals should notify their supervisor. Depending on the severity of the wound, individuals should seek medical treatment by reporting to the Holzer Health Center.

Laboratory rodents are purchased from laboratories which exclude zoonotic agents. For this reason, there is usually limited concern for disease from research rodents. Exceptions would include animals which have been inoculated with biohazardous material (e.g., LCMV) during the course of the research being performed with the animal. There is always concern about a secondary bacterial infection that may occur. Common skin and intestinal bacteria present on the individual or the animal can infect the bite or scratch wound and cause these secondary infections. The wound should have the above first aid procedures performed and medical treatment should be sought for severe or infected wounds and wounds from animals that have been exposed to a biohazardous material.

**j. Venomous spine injuries (Lionfish sting)**

1. Remove any obvious foreign material such as spines.

2. Rinse wound with clean water.

3. Lionfish venom is partly broken down by heat. Rapid application of hot water should therefore bring some pain relief and cannot be sufficiently stressed. The wound and surrounding area should be immersed in water as hot as the victim can stand (but NOT boiling water, and tested on non-injured body area) for about 30 to 90 minutes. Water should be no hotter than 45 degrees Celsius (114 degrees Fahrenheit) in order to prevent scalding and other heat related injuries.

4. Monitor circulation, airway and breathing.

5. Go to the nearest healthcare facility. A responsible person should accompany the victim to a healthcare facility and report: the approximate amount of time that has transpired from since the victim was envenomated; the exact nature of the first aid that was administered (including type and dosages of over-the-counter painkillers, if taken); and, whether or not the victim slowly ascended from depth underwater and adhered to the rules pertaining to planned safety/decompression stops. All of this information may be important in treating the victim.

**k. Venomous snake bites**

1. Call 911 and campus security (x8111).
2. Obtain cage card of animal that produced bite (emergency responders must know species).
3. Ensure that the snake(s) is safely contained so that there is no danger of additional bites.
4. Exit snake room, secure door.
5. Immobilize the bitten area.
6. Maintain the bitten area at a level below the heart.
7. Limit victim’s movement.
8. Remove all jewelry (rings, bracelets, watch, etc.), restrictive clothing and any constricting item before swelling occurs.

For bites from Bitis (gaboon and rhinoceros vipers), if bitten on a limb, wrap the limb tightly with an ACE bandage.

The preferred antivenin for Crotalus and Agkistrodon is CroFab (Crotalidae Polyvalent Immune Fab). Many people may be severely responsive (anaphylaxis) to USA Polyvalent. Local hospitals are unlikely to have antiserum to Bitis species. This can be obtained readily through the Miami-Dade Fire Rescue Venom Response Unit (786-331-4443).

**What NOT to do:**
DO NOT use a tourniquet (except for application of a bandage for Bitis bites; see above).
DO NOT drink or apply alcohol.
DO NOT cut or suck the wound
DO NOT apply ice
DO NOT wait for symptoms before calling 911

1. Safe practices in field/wildlife studies

Field work presents potential occupational health and safety hazards such as disease transmission and trauma related to conflict with wildlife. General field safety procedures include:

- Understand the hazards and follow safety precautions described to you by your course instructors, academic advisors, etc.
- Notify course instructors, academic advisors, etc. of any disability or medical condition that may impact your safety
- Carry first aid and antiseptic kits, allergy medication
- Use field PPE such as long pants and sleeves, close-toed shoes, sturdy gloves
- Make sure immunizations are current
- Carry identification with allergy information
- Immediately report any accident, injury, or illness

For additional information, see the following manual designed by the National Park Service as a guide for field staff to help prevent zoonotic disease exposure.