

EAST CAROLINA UNIVERSITY
INFECTION CONTROL POLICY

Human Performance Laboratory, Department of Exercise and Sport Science

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Approved by:

Human Performance Laboratory

Human Performance Laboratory

Chairman, Infection Control Committee

Infection Control Nurse

I. Purpose:

The Infection Control policy is established to help safeguard research subjects and personnel from the transmission of infection between subject and personnel during research projects. All ECU personnel, students and other healthcare workers are to comply with all infection control policies.

II. Personnel:

ECU employees and paid graduate students that utilize the lab space at the Brody Building will comply with employment screening as outlined in the Prospective Health policy. Prospective Health will maintain all these employees' records.

Graduate and undergraduate students will have their health records maintained at ECU Student Health Center.

Graduate students that work with biological samples must attend Bloodborne Pathogen training annually. At the training risks associated with accidental exposure are thoroughly explained. Students are encouraged, at their expense, to get the hepatitis B vaccine. The vaccine is not required, but strongly encouraged.

Undergraduates that work on research projects where the potential for a biological exposure exists are required to attend a Bloodborne Pathogen workshop and obtain, or provide documentation of hepatitis B vaccination. The student is responsible for all costs associated with hepatitis B vaccination.

Both graduate and undergraduate students will be required to show proof of health insurance coverage when they begin their tenure in the HPL. For those students that do not document health insurance coverage, they will not be allowed to participate in research and studies that involve the collection of blood and tissue samples.

Exposure for graduate and undergraduate students:

In the event of an exposure, the student will immediately notify either Dr. Joseph Houmard (Director of the Human Performance Laboratory) or Mr. Michael R McCammon (Associate Director of the Human Performance Laboratory). At that time the lab director or associate will request to obtain a blood sample from the source. The director or associate will explain to the source that their blood will be analyzed for hepatitis B and C, HIV antibodies, and STS. The blood sample, with a code, will be sent to ECU Student Health Services (ECU SHS) for analysis. In the event that an exposure occurs after hours, on weekends or holidays, student will immediately notify the HPL director or the associate. The director or associate will contact the source and make arrangements for obtaining a blood sample to be analyzed. The student will go to ECU SHS during regular hours of operation for counseling and analysis of blood sample. Refer to **Appendix B** for procedures following an exposure.

The student receiving the exposure will go to the ECU SHS for counseling and to have their blood analyzed for hepatitis B and C, HIV antibodies, and STS. Their blood will be tested

following a proscribed format. See **Appendix B**.

Given the type of research performed in the HPL, the risk of working with known HIV research subjects, or at risk individuals is small. However, all blood samples are considered to be contaminated, thus requiring the students to follow guidelines provided in the Bloodborne Pathogen workshop given by personnel from the Department of Prospective Health.

In the event of an exposure occurring outside of Greenville, the student will follow the format described. The HPL director and the associate will attempt to obtain the necessary blood sample for the source. See **Appendix B**.

The HPL will be responsible for payment for testing antibodies in the blood from the source and student. The HPL will be responsible for costs incurred by the student. The pay out by the HPL will consist of paying for all medication and tests not covered by the student's health insurance policy. The aggregate paid by the HPL will not exceed \$1,000.00.

All incidents will be reported on **Appendix C** to the HPL director and/or the associate, and the action taken by the director and/or associate and the student.

Faculty and staff that have an exposure will be referred to the Department of Prospective Health. All evaluations and medications, if necessary, will be taken care of through the Department of Prospective Health.

The ECU contract physician or co-investigator physician from the Brody School of Medicine is the HPL's consulting physician and will write the necessary orders for testing the source.

Questions regarding exposure, risk etc. will be directed to designated persons in the ECU SHS and/or in Prospective Health.

Students, graduate and undergraduate, that are exposed to chemical or radiation contamination will notify the director or associate and complete all the necessary paperwork. If appropriate, the students will be referred to the ECU SHS for medical management for the exposure.

Faculty and staff that are exposed to chemical or radiation will notify the director and/or associate and complete all the necessary paperwork, **Appendix C**. If appropriate, they will be referred to Prospective Health for medical management for the exposure.

Faculty, staff and students will attend a Bloodborne Pathogen workshop annually, or upon entering the program. Documentation of attendance is required to participate in the research projects supported by the HPL. Faculty, students and staff that work with radioactive materials will attend a radiation safety workshop.

Working with staff from Prospective Health and the student health center, the director and associate will evaluate their infection control policy every three years or as needed

III Physical Layout

The Human Performance Laboratory (HPL) is located within the Ward Sport Medicine Building. The HPL occupies 5000 square feet of the sports medicine building. Within the lab there are eight faculty offices, a reception area, body composition room, a room for graduate students, a biochemistry laboratory, and two research laboratories.

The HPL also has laboratory space in the Brody Building. Rooms in use by the HPL are: 3S08, 3W52, 3W40-A, and 6N-90. In all of these lab spaces, tissue and blood are analyzed.

IV. Procedures:

Hand washing should be done with an antimicrobial soap and water immediately before and after each patient and/or specimen contact. Handwashing facilities in the HPL are located in the biochemistry lab, the testing lab, examination room, and the research lab. At all stations antimicrobial soap and disposable paper towels are available. Additionally, hand-washing facilities are available in all lab space utilized by the HPL at the Brody School of Medicine.

For all of the procedures performed in the HPL, aseptic techniques are adhered to. Procedures routinely performed are venous blood draws, micro dialysis, punch needle biopsies, spirometry. All supplies are disposed of in clearly marked biohazard bags and sharps containers.

Standard precautions will be observed on all research subjects. Gloves are worn if hands may be exposed to blood and other potentially infectious materials. Protective mask and eyewear or face shield are worn if facial splashing is likely. Lab coats are worn if more extensive splashing of uniform is likely.

When obtaining blood samples, gloves are worn by the technician. For multiple blood draws in a session, all supplies are disposed of (gloves, gauze, needle, etc.) and new supplies are used. Between draws, hands are washed with antimicrobial soap. When working with samples in the biochemistry lab, all personnel wear lab coats. No open toe shoes, shorts, or food are allowed in the biochemistry labs.

Needles should be handled with extreme caution. Needles should not be bent or broken. Needles should not be resheathed unless absolutely necessary. If needles must be resheathed, it must be done with a mechanical device or with a one-handed technique.

Health care workers who have exudative lesions or weeping dermatitis shall refrain from handling patient care equipment and devices used performing invasive procedures and from all direct patient contact until the condition resolves. Open wounds or sores should be covered with a protective dressing.

This policy will be adhered to when obtaining blood and tissue samples and when performing microdialysis procedures.

Procedures performed in the department include:

- Obtaining venous blood samples
- Punch needle biopsies
- Micro-dialysis
- Finger sticks for glucose and blood lactate
- Heat studies that include obtaining rectal temperatures
- Various analyses of blood and tissue samples

All areas that subjects use are cleaned with a 10% chlorine solution. These areas include vinyl topped examination tables, treadmills and counter tops. Reusable equipment used for assessment of aerobic capacity is cleaned and soaked in an antimicrobial solution as per manufacturer's recommendations. They are then left to air dry.

Reusable medical instruments (ie rubber tubing, mouth pieces, valves) are cleaned and disinfected and/or sterilized per manufacturer's recommendations. Reusable equipment is wiped down with an EPA approved disinfecting solution after use.

All specimens will be placed in leak-proof plastic bags marked with a biohazard label.

After use, all specimens are placed in marked biohazard bags. Those bags are picked up weekly for incineration.

All supplies for personal protective equipment are in labeled areas within the labs in the HPL and in the Brody building.

Refer to **Appendix A** for a list of common procedures that require minimum personal protective equipment.

V. Equipment and Supplies

Clean equipment is stored in cabinets that are clearly marked

Dirty disposable supplies are discarded in appropriate containers and kept in the biochemistry laboratories.

Reusable dirty equipment is cleaned in a designated sink area. Areas are designated by signage and the appropriate function to take place at each individual cleaning area. Reusable equipment will be sterilized in an autoclave that is in the biochemical lab in the HPL.

Autoclaves:

- All instruments or trays used for sterile procedures will be cleaned prior to sterilization.

- After cleaning, these instruments are wrapped prior to sterilization.
- Each individual wrapped package will have chemical indicator in place.
- Each package is labeled, dated and initialed.
- Biological Spore testing is done at least weekly and documented.
- The biological spore tests are incubated according to manufacturer's recommendations and documented in a log.
- The incubator and log are maintained by the designated staff for date and condition.

Sterile supplies are checked monthly by designated staff for condition.

All reusable materials are inspected on a regular basis; damaged materials are discarded in appropriate containers.

In areas where blood is obtained, all contaminated non-sharp material is placed in appropriately labeled red bags. Sharp trash is placed into sharps containers.

Sharp containers are located in all areas where blood and tissue samples are obtained. They are sealed and when $\frac{3}{4}$ full removed to an appropriate area for pickup by biohazard waste technicians. Personnel come weekly to collect containers in the Ward Sports Medicine Building. Containers are removed by students and staff to appropriate disposal areas when necessary in the Brody Building.

Clean linen is stored in closed cabinets

Soiled linen should be placed in covered dirty linen hampers. This linen is picked up each week by the contract linen service. Gloves will be worn when handling soiled linen.

APPENDIX A

Common Procedures	Minimum Equipment Needed
Punch needle biopsies	Biopsy needles, sterile field dressing, sterile gloves, autoclave, disposable syringes, and sharps containers, biohazard bags.
Veni-punctures	Gloves, alcohol pads, gauze, bandages, test tubes, Vacutainer needles, sharps containers, biohazard bags.
Micro-dialysis	Sterile field dressing, sterile gloves, disposable syringes, sharps containers, biohazard bags.

APPENDIX B

- I. When an exposure occurs:
 - First aid measures done immediately.
 - The student should immediately notify the supervisor or preceptor and complete appropriate paper work. (**Appendix C**)
 - The facility policy for counseling and screening the source patient should be instituted immediately.
 - The results of source patient testing should be forwarded to ECU SHS as soon as possible.

- II. Student with low risk exposure should:
 - Report to ECU SHS as soon as possible.
 - Have the following initial screening:
 - a. HIV antibody
 - b. Hepatitis B titer (surface antigen & antibody)
 - c. Hepatitis C antibody
 - d. STS
 - Source patient lab reports to will be forwarded by facility representative to ECU SHS Urgent Care at 328.6841 as soon as possible.
 - a. HIV antibody
 - b. Hepatitis B surface antigen, hepatitis B surface antibody, hepatitis B core antibody
 - c. Hepatitis C antibody
 - d. STS
 - Receive counseling by ECU SHS which may include.
 - a. What constitutes exposure, protocol for determining risk
 - b. Responsibilities of ECU SHS and student
 - c. HIV counseling protocols
 - d. Implications of positive and negative results
 - e. Reporting symptoms of febrile illness
 - f. Refraining from blood donation
 - g. Avoiding pregnancy
 - i. Using condoms
 - Have follow-up screening by ECU SHS which may include:
 - a. 6 weeks – HIV
 - b. 3 months – HIV, STS
 - c. 6 months – HIV, hepatitis C (if source patient positive)
 - Be treated for any positive tests per protocol

- III. Students with known HIV exposure or high-risk exposure should:
 - Report to ECU SHS within the first 24-48 hours post-exposure. (In high risk, Post Exposure Prophylaxis (PEP) may be considered up to two weeks after exposure.

After hours exposure should be handled through the ED per facility policy and report to ECU SHS the next day).

- Send any available information on the source patient to the treating facility, this may include:
 - a. HIV antibody results
 - b. Most recent CD4 count, current antiviral medications, other relevant information obtained with consent of source.

- Receive evaluation by ECU SHS provider concerning:
 - a. Risks of developing communicable disease
 - b. Student's relevant history
 - c. Side effects of medications offered
- Receive general instructions
- Have signed consent form before receiving prescription
- Have the following labs drawn:
 - a. HIV antibody
 - b. Hepatitis B Titer (surface antigen and antibody)
 - c. Hepatitis C antibody
 - d. STS
 - e. Serum HCG (women only)
 - f. Executive I (cholesterol, HDL, triglycerides)
- Be scheduled by ECU SHS for follow-up appointment with Infectious Disease.
- Receive counseling including:
 - a. What constitutes exposure, protocol for determining risk?
 - b. Responsibilities of ECU SHS and student
 - c. HIV counseling protocols
 - d. Implications of positive and negative results
 - e. Reporting symptoms of febrile illness
 - f. Refraining from donating blood
 - g. Avoiding pregnancy, using condoms
- Have follow-up screening which may include:
 - a. 6 weeks – HIV, STS
 - b. 3 months - HIV, STS, Hep. B&C
 - c. 6 months – HIV, hepatitis C
- Be treated for any seroconversion
- * ECU SHS provider should follow Blood and OPIM Exposure protocol.

IV. Billing charges may be handled through interdepartmental transferred funds where a departmental fund exists. In incidences where no departmental policy or procedure exists, the student may be evaluated by ECU SHS following the above protocols at the student's expense.

V. Exposure of ECU Employees

- If faculty or ECU paid graduate student is exposed to human blood or body fluid, notify Prospective Health evaluation and followup.

- If source patient exposure at Brody, notify Prospective Health to evaluate source.
- If source outside SOM, Health Performance Lab will evaluate source.

APPENDIX C

Human Performance Laboratory Student Incident Report

Name _____ SS# _____

Local Address _____

Home Address _____

Local telephone _____ Permanent telephone _____

Date and time of incident _____

Nature of incident: Please check in appropriate box

Blood or body fluid	Infectious/Respiratory	Radiation Exposure
Stick	Inhalation	Internal
Splash	Splash	External
Cut		
Scratch		
Other (describe)	Other (describe)	Other (describe)
Source patient (have they been notified) Y N		

Brief description of the incident:

List protective equipment in use at time of incident _____

Where appropriate procedures followed? _____ if no, explain _____

Student signature _____ Date _____

Supervisor/instructor signature _____ Date _____

Seen by _____ Student Health nurse/physician

Medical evaluation:

Results:

Follow up recommended:

Appendix D

ECU: PROSPECTIVE HEALTH SERVICE

NON-PATIENT INCIDENT REPORT

NAME _____ SS# _____
HOME ADDRESS _____ HOME PHONE _____
DEPT/WK.STATION _____ WORK PHONE _____
JOB TITLE _____ SUPERVISOR=S NAME _____
DATE OF INCIDENT _____ TIME OF INCIDENT _____
LOCATION OF INCIDENT _____

NATURE OF INCIDENT

Blood or Body Fluid Exposure

stick
splash
spray
cut
bite
scratch
scrape/abrasion
other _____
Source pt. _____
MR# _____

Infectious Respiratory Exposure

inhalation sprain
other
Radiation Exposure
internal
external
Chemical Exposure
inhalation
skin absorption

Body Accident

sprain
strain
hit
struck
puncture
fall
other _____
Electrical Injury
other _____

BRIEF NARRATIVE OF INCIDENT _____

Was protective equipment used? yes ___ no ___ Were appropriate work practices followed? yes ___ no ___

Employee Signature _____ Title _____ Date _____

Supervisor Signature _____ Date _____

Seen By: _____ Employee Health Nurse _____ Physician _____ Physician Extender _____

Nature of Injury

____ laceration _____ abrasion
____ chemical burn _____ thermal burn
____ dermatitis _____ fracture
____ contusion _____ strain/sprain
____ puncture/needlestick _____ blood/body fluid exposure
____ other _____

Medical

Evaluation _____

RESULTS

____ first aid Hepatitis B vaccine _____ indicated _____ given _____
____ blood/body fluid exposure protocol
-----return to work _____ work restriction _____
____ follow up _____ no _____ yes 6 wk _____ 6 mo _____ other _____ 3 mo _____ 12 mo _____ other _____
Provider _____ Date _____

_____ The results of this evaluation have been discussed with the employee. The employee has been informed regarding medical conditions which may result from exposure to blood or other potentially infectious materials, educated regarding risk reduction practices and had the surveillance program explained in detail.