



## Standard Operating Procedure (SOP)



### HUMAN GROSS ANATOMY

Effective Date: 8/23/2013

Revised Date: 8/23/2022

#### Introduction

- This SOP applies to HUMAN GROSS ANATOMY laboratory. This lab is operated through the Department of Health and Exercise Science.

#### General Lab Rules

1. No eating, drinking, smoking, handling contact lenses, or applying cosmetics in the laboratory.
2. Persons shall wear buttoned lab coats, long pants, safety glasses or goggles and appropriate gloves when working with hazardous chemicals.
3. All procedures are performed carefully to minimize the creation of splashes or aerosols.
4. Wash hands:
  - after handling chemicals materials,
  - after removing gloves, and
  - before leaving the laboratory.

#### 1. Human Gross Anatomy Lab Specific Rules.

- **Access to the lab is restricted to faculty, HES 352 students and Anatomy TAs only. You must receive permission** from the Lab Director before **ANY** guest may be brought into the lab to see your dissection.
- **All lab materials must remain in the lab at all times.** At no time may any lab materials leave the lab for any reason without permission of the Lab Director (including any cadaveric parts, osteology samples, lab models, and desk copies of textbooks).
- **Photography is strictly prohibited in the lab.**
- **All eating and drinking (including water, coffee and soft drinks) are prohibited in the lab at all times (24 hours a day, 7 days a week).**
- **Smoking and the use of smokeless tobacco products are prohibited throughout the building.**

#### 2. Rules for Anatomy Teaching Assistants (TAs).

- Dissection lab will be held every Tuesday from 4:30-7:00 PM. Lab Directors will supervise the dissection. All TAs are expected to attend these sessions.
- In addition to the Tuesday evening dissection, TAs are expected to complete any unfinished dissection on their own or with your dissection group before the next week's dissection lab.
- Lab TAs will also be responsible for supervising 1-3hr open lab period per week.
- For Open Labs, TAs are to arrive 5 minutes early to set up.



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- TAs are to make specimens available to the students. ONLY the TAs are to remove the specimens from their containers and place them in the dissecting trays. ONLY TAs are to return the specimens to the containers, making sure to use protective glasses incase of a splash or spill.
- TAs are to be available to answer student questions. This means that you must be prepared and not doing your own work as long as at least one student in the lab.
- Clean up the lab at the end of the period, including tables, counters, etc. The lab should be spotless when you leave.
- Always abide by the rules contained in this document.

#### Proper Use of Dissection Tables

**Do NOT push or move the dissection tables** or unlock the table wheels for any reason at any time. Downdraft tables are attached to wall duct work to remove volatile embalming vapors and should not be moved for any reason.

**Dissection tables can be opened by one person but are best locked in place under the table with two people.** First open and remove the books, instruments and gloves that your group will need from their underlying storage compartment. Then grab the central handle of the table cover and pull back to open the table. If possible, get a nearby student to help you latch the table cover on one side. Working together with a neighbor, swing the cover under the table and latch the covers in place (the proper technique will be demonstrated during lab orientation). Repeat the process when you open the cover on the opposite side.

**Do NOT place tissue removed from the body on the table surface.** The table surface contains many perforated holes elevated above a collecting trough. These holes are used to remove potentially harmful vapors and fluids. When you remove tissue from the body (i.e. skin, fat, fascia etc.) do not simply lay it on the surface where it can clog these holes and interfere with downdraft. Each dissection table has a 5 gallon white round plastic container for human waste disposal. This container is for ALL human tissues removed from the body (skin, fascia, fat etc.) and is sealed when full.

**Desiccation prevention.** To prevent a skilled dissection from being ruined by unwanted drying, follow these required steps. First use the spray bottle to wet dissected surfaces of the body (it is not necessary to wet or wrap areas that have not yet been skinned or dissected). Where possible close the dissected area with skin. Then before you close the tables, cover these surfaces with a blue wrapper saturated with spray bottle Carosafe to prevent desiccation. Apply the wrap to the dissected surfaces of the body. Only the necessary quantity of wrapping material is required to prevent direct exposure to air. When viewing the bodies dissected by other groups in the afternoon, at night or on weekends; REMEMBER to always wrap the cadaver **IMMEDIATELY** after viewing to prevent desiccation.



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**Do NOT leave any instruments or books inside the closed table.** Do not leave any books (i.e. - dissector or atlas), paper towels, instruments or gloves on your cadaver, bookstand or table surface when you finish and close the covers. All of these items must be placed neatly in the appropriate storage containers at the end of the lab session or when you finish dissecting at other times. Your group will be held responsible to keep the surface of your table and your assigned work area as clean as possible at all times. When you close the table, only the cadaver, the bookstand, the spray bottle and the 5 gallon white plastic disposal container (for human waste) should remain inside. Everything else should be stored neatly beneath the table.

#### Health Hazards

See FORMALDEHYDE SOP for information on health hazards of this chemical.

See SODIUM HYPOCHLORITE for information on bleach.

Be careful to avoid self-inflicted wounds at all times! Scalpels are sharp! Use the hemostat in your dissection kits to add or remove a scalpel blade – do not use your fingers.

#### Exposure Monitoring



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- WFU EHS will periodically monitor faculty to determine their exposure to formaldehyde.
- WFUHS EHS will periodically measure and accurately determine exposure to formaldehyde for faculty, staff, and students shown by the initial monitoring to be exposed at or above the action level, or at or above the Short Term Exposure Limit.
- If the last monitoring results reveal employee exposure at or above the action level, WFU EHS will repeat monitoring of the faculty, staff, and/or students.
- Regulated areas where the concentration of airborne formaldehyde exceeds either the Time Weighted Average (TWA) or the Short Term Exposure Limit (STEL) will be posted at all entrances and access ways with signs bearing the following information:

<p><b>DANGER</b>  <b>FORMALDEHYDE</b>  <b>IRRITANT AND POTENTIAL CANCER HAZARD</b>  <b>AUTHORIZED PERSONNEL ONLY</b></p>
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#### Personal Protective Equipment

##### Gloves

Disposable, single use gloves must be worn when it can be anticipated hand contact with blood or other potentially infectious materials may occur and when handling or touching contaminated items or surfaces.

##### Lab Coats

Appropriate protective clothing such as, but not limited to, splash protective gowns, coveralls, aprons, lab coats, clinic jackets, or similar outer garments shall be worn during occupational exposure situations. The type and characteristics will depend upon the task and degree of exposure anticipated. Surgical caps, hoods, and shoe covers shall be worn in instances when gross contamination can be reasonably anticipated.

##### Mask/Shields

Face masks, in combination with eye protection devices, such as goggles or full face shields must be worn whenever splashes, spray, spatter, or droplets of blood or other potentially infectious materials may be generated where eyes, nose, or mouth contamination can be anticipated.



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**What to wear and what NOT to wear.** Clothing and shoes in the lab should be comfortable but also protective. You may not wear open toe shoes at any time. Shoes that have good cushioning and arch support are recommended for extended periods of standing. If shoes have black rubber soles be sure they do not mark the floor. Do not wear contact lenses in the lab. **Students will not dissect the cadavers; hence, they are not required to wear lab coats or protective glasses.** They are required to wear gloves when handling specimens from the containers and while at the dissecting tables examining the cadavers.

**What to wear:** comfortable clothing and closed toe shoes that do not mark the floor

**What NOT to wear:** Shorts. Open toe shoes.

#### Work Practices

##### Proper use of non-dissecting area :

The area separate from the dissecting tables is designed for students to work on specimens, models, and skeletons. While in this area, wearing gloves on both hands is required if a specimen is being studied.

##### Proper use of specimens:

Specimens of segments have been harvested to facilitate learning and are often used in practical examinations. These sections are stored in containers on shelves in a wall cabinet. You will need gloves to handle the specimens. Be sure you handle the specimens with care. When you have finished using a specimen – return it to the counter. **ONLY TAs OR CLASS INSTRUCTORS ARE PERMITTED TO RETURN THE SPECIMENS TO THE CONTAINERS.**

##### Proper Use of Osteology Specimens:

Osteology specimens should never be removed from the lab and always stored in the group container. These specimens are often fragile (especially skulls) so be sure they do not drop and hit the floor.

#### Waste Disposal

- All dissection debris must be disposed of in the Biohazard Waste container as you dissect (and not just when you finish).
- None of the dissected tissues removed from the cadaver may be placed on the table top (these tissues and any other objects including paper towels can obstruct table downdraft vents).
- Place all of the removed tissue in the white bucket on the table top.
- Do **NOT** place human tissues in the floor trash can – this trash can is for the disposal of only the protective plastic gowns, gloves and paper waste only.



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- Place all used blades in the specific sharps disposal container provided for your group. Each sharps disposal container has a window, if you cannot see inside this window then have a taller classmate dispose of your blade. When a sharps container is  $\frac{3}{4}$  full, seal the container and place it in the Biohazard Waste box.

#### Emergency Numbers

Fire and Medical Emergencies	x5911 (911 on cell phone)
Environmental Health and Safety	x3427
FastMed Urgent Care (employees)	(336) 714-4616
Student Health (students only)	x5218
Poison Control	800-222-1222

#### First Aid

##### CHEMICAL EXPOSURE

- In case of skin contact: Take off contaminated clothing and shoes immediately. Wash off in safety shower for at least 15 minutes. Call x5911 for medical assistance.
- In case of eye contact: Rinse thoroughly with plenty of water at eyewash for at least 15 minutes and call x5911 for medical assistance.
- If swallowed: Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Call x5911 for medical assistance.
- Call x5911 and describe the extent of injuries.
- Report all accidental exposures to EHS and Human Resources (employees) or Student Health (students).
- Complete an incident report if there is an over-exposure to the chemical or if there is an accident involving the chemical.

##### CUTS OR PUNCTURES



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1. If you cut yourself then use direct pressure immediately applied with a clean paper towel directly on the laceration. Go to a nearby sink and flush the open wound with copious amounts of water. Apply additional direct pressure until all of the bleeding has stopped. Then, apply antiseptic and a sterile pressure dressing when bleeding to the washed wound has subsided.
2. A puncture wound should instead be made to bleed immediately to better wash out the wound. If you have punctured (not cut) your hand then rapidly spin your arm in windmill fashion to encourage bleeding by centripetal force. Go to a nearby sink, wash the puncture and repeat the process to encourage more bleeding. After again washing with copious amounts of water, apply antiseptic to the surface of the puncture and a sterile pressure dressing.
3. Report ALL injuries to an instructor immediately. Present to the Student Health Center or Emergency Room if the injury is serious or progressing badly. In addition to the instructor all injuries or potential bio-hazard exposure (cuts, puncture, etc) should be reported to the professor, facilities coordinator, and the EHS Office. All information is kept strictly confidential.

#### Spill and Accident Procedures

If you should accidentally spill human tissue (removed fat or fascia) or accidentally spill fluid (embalming fluid) on the floor around your table it should be reported to the Lab Director/technician immediately. Isolate the area to prevent others from tracking contaminated fluids on their shoes around the room. The lab technician/director should report the spill immediately to EHS.