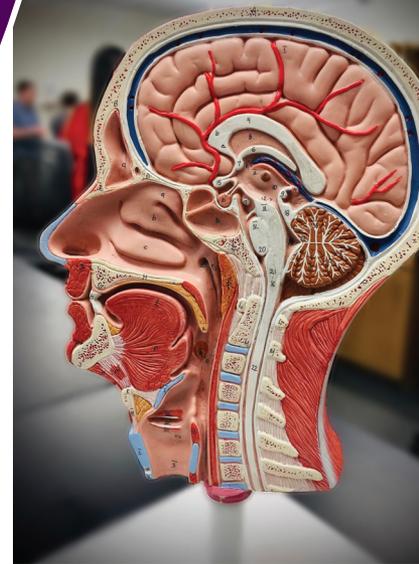


# Tips to Minimize the Likelihood of Fainting in a Cadaveric Dissection Lab

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## ABSTRACT

Many biology courses include a dissection lab. Whether students are dissecting a frog or a cadaver, it is important for them to be comfortable with their surroundings and the dissections. However, many students are uneasy around dissections, which could lead to several issues within a lab. To combat this, we feel it is important that faculty are aware of the various ways of preparing themselves and students to prevent fainting and other dangerous issues in lab. How one prepares for lab can have a huge impact on the students' lab experience. This article presents 10 tips and tricks we have employed to aid students in having a positive cadaver dissection experience, including informing students of the dissection and what will be covered in lab, requiring proper attire, recommending that students eat before lab to prevent nausea, and several other ideas.

**Key Words:** anatomy; cadaver practicum; cadaver dissection laboratory; fainting.

## Introduction

Throughout one's biology education, it is not uncommon to encounter labs involving dissections of anything from a frog to a cadaver. No matter the specimen, dissection is an important part of the learning experience in science classrooms.

When entering a dissection lab for the first time, most students do not know what to expect or what preparations they should make. Teachers often relay various lab safety rules to students, but few prepare students to see an animal or a human on the dissection table. Just being in the room with a specimen or being around the smell of preservatives may cause unprepared students to faint. Fainting is dangerous and can lead to other injuries, yet if students and faculty know what signs to look for, fainting can easily be prevented. Informing students on how to identify the signs in themselves and peers will provide another layer of safety and success for students in the dissection lab.

In addition to preventing fainting, we must also focus on ways to help students be more comfortable in lab, thus maximizing their success within the course. A study in anatomy labs surveyed students

three times over a semester and found that repeated exposure to cadavers reduced the fear and possible nausea students felt toward cadaver dissection from 64.6% to 12% to 4.7% across their three samples (Mulu & Tegabu, 2012). Thus, by reducing the fear students feel toward dissection, we are lowering the risk of fainting in lab. With this in mind, we have gathered the following tips and tricks that faculty and students can use to prevent fainting in dissection labs.

## Ten Ways to Prevent Fainting

### 1. Inform Students

By providing students, beforehand, as much information as possible on what the dissection will be like, you give them time to process what is to come in the dissection. This preparation could include suggesting related online videos or readings about the process that will take place in lab.

### 2. Require Proper Attire

Instruct students to wear closed-toe shoes, long pants, lab coats/aprons, and gloves and to tie long hair back. For labs using bone saws, students should use protective eyewear, and optional face masks should be available. Proper attire helps prevent skin contact with preservatives used in the dissection. In addition, wearing the proper attire can help students feel more secure in the lab, helping prevent any unnecessary stress that could contribute to an uneasy feeling during lab.

### 3. Recommend Eating before Lab

Some students think that eating prior to a lab that will include such stomach-churning activities will result in nausea and possibly vomiting in class, so they may be tempted to go to lab with an empty stomach. However, an empty stomach can cause more nausea than eating beforehand. Recommend that students maintain a regular eating routine to prevent nausea, and suggest carrying snacks like

crackers, granola bars, or even plain bread, as these can help settle an uneasy stomach.

#### 4. Help Set Goals

Having something to accomplish will help distract students from panicking. Start with small goals throughout the dissection to build student confidence. For example, use a scalpel to remove fascia, preparing muscles for isolation; or remove small portions of the outer layer of skin, allowing the fascia to be revealed. Allow students to take short breaks during which they can evaluate if they have accomplished their goal, set a new one if appropriate, or even decide on a new approach. Encourage students to write notes or ask questions throughout to break up the dissection, which will make it less overwhelming.

#### 5. Ease Students In

Allow students to become familiar with the lab room and the smell of formalin or other preservatives by opening the cadaver table(s) during the introduction/safety day. If the smell of the room is too strong for students, provide mentholated jelly they can apply under their nose to mask the scent. If this is not enough, suggest that students wear the optional surgical face mask for extra coverage.

#### 6. Practice Breathing

In high-stress situations, we tend to hold our breath without realizing it. Teaching breathing techniques may not be typical lab safety protocol, but it can be very useful to students. As a class, practice regulating breathing by taking in a few slow deep breaths, holding each three seconds before slowly exhaling. Doing this as a class will help students feel more comfortable applying techniques in stressful situations later in lab.

#### 7. Be Mindful of Body Language

Inform students to be aware of how they are standing and to be sure they are not locking their knees, which can lead to fainting. Instructors and students should be aware of fainting signs: dizziness, lightheadedness, paleness, perspiration, anxiety, restlessness, nausea, tightness in the chest, and sweaty skin (Department of Health & Human Services, 2014). When experiencing these symptoms, students are tempted to run out of the room. That would be dangerous and put students at risk of greater injuries. Instruct students that the safest thing to do is take a step back and sit down right where they're standing. If symptoms begin to worsen, assist students out of the room and have them lie down and elevate their feet.

#### 8. Use the Buddy System

Have students pair up with another peer to go through the lab. When students walk around lab, locking arms with their partner can provide safety for both students. The buddy system can also help ensure that students have a designated partner watching for signs of fainting throughout lab, and if fainting does occur there is someone to catch them.

#### 9. Encourage Informing Peers & Instructor

Advise students to inform you and their dissection team if they are feeling ill, so that everyone is more aware and watching for signs of fainting. While students may feel embarrassed expressing this, it is not something that is uncommon. Being open about discomfort toward dissection, and talking through it with peers, may help students relieve some of their apprehension.

#### 10. Help Students Know When to Leave the Room

Being in the dissection room for long periods of time, while students are still getting used to it, could be a challenge. If the dissection is becoming too overwhelming for students, allow them to take a quick break from lab. By going on a short walk in the hall or taking a quick break outside to get fresh air, students can recharge their energy toward the dissection. This will allow students to reenter and remain in the lab for the remainder of the lab period, rather than leaving class early.

### ○ Conclusion

Whether it is being able to identify signs in themselves or in those around them, it is important that faculty are aware of what the signs of fainting are and how to prevent it from occurring. With these tips, our hope is that students will be able to safely participate in dissection labs without the risk of fainting, allowing students to stay in lab longer. Students attending lab for the full duration gain more hands-on learning experiences, through the exposure to dissection, than those students who do not stay for all of lab. With more exposure to dissection, students also become more comfortable, eventually eliminating their fear toward dissection labs that may contain anything from frogs to human cadavers. With the elimination of these obstacles to success in lab, students also eliminate the risk of fainting, allowing them to achieve the goal of practicing dissection safely.

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