

## **Podcast Transcript: “Secrets of the Campus Cadavers”**

**Narrator:** From the University of Utah, “Secrets of the Campus Cadavers.” I’m Paul Gabrielsen.

### **Episode 4 – Cadavers Today**

**Narrator:** Fair warning: This episode discusses human cadavers, including dissection. Nothing graphic, but if that kind of thing isn’t for you, you might want to skip this episode.

This is the cadaver lab. Students from medical, dental, nursing and physical therapy programs at the University of Utah eventually spend some time here. In 2016, construction crews found cadaver remains from the early 20th century under a historic university building. Now, a hundred years later, we are here to learn more about how cadavers are used today.

This is a class of physical therapy students, all in scrubs. And they’re here in gross anatomy today to learn about the femoral triangle. It’s a muscle structure in the upper thigh. The lead teaching assistant is giving instructions as they prepare to enter the labs.

**TA:** As you’re looking through the dissection guide, one of the things it tells you to cut the psoas major and then just like kind of peel it up to see the lumbar plexus – don’t do that! If you do that it’s not going to really show you what you’re hoping to see.

**Narrator:** The students file into two lab spaces, each with rows of tables. Groups of four huddle around each table and begin working on the cadavers.

Before we go on, I have to say something about the smell. It’s formalin, or formaldehyde, used to preserve the bodies. It’s a chemical smell – but not acrid like alcohol. It’s soft, musty, more organic. But it’s thick in the air, like the humidity of a summer day. You feel it stinging in your eyes.

**Student:** Found it! Found it!

**Narrator:** The bodies are all people. Someone’s spouse. Someone’s parent. Someone’s sibling. The bodies at first glance look like wax or plastic models. But their humanity is not lost on the students.

**Student:** . . .until you see something that’s very not normal, like seeing cancerous tissue is really emotionally affecting, as an example. Seeing faces is challenging.

**Narrator:** For that reason, perhaps, some of the faces remain covered. Here’s second-year medical student Dani Golomb. She’s pursuing a medical degree on her way to a career in psychiatry.

**Golomb:** So, I was horrified by anatomy lab. I was full of dread. I had never been around a dead body for an extended period of time. I’d been to a wake once.

**Narrator:** She describes her first day in the lab.

**Golomb:** I was woozy, I was lightheaded, I was on the verge of tears.

**Narrator:** She ended up outside in the hallway. David Morton, the instructor, came out to sit with her.

**Golomb:** He said, 'you know, I've never worked with anyone who couldn't get through this,' and I was like, 'Well here's your first person!'

**Narrator:** With time, she became more comfortable with the lab. She learned, as all students do, the few details about the person who donated the body she worked on. Age, occupation, and cause of death. And their first name. Her donor's name was Dallas.

**Golomb:** You open up a body and it's filled with mystery. And we discovered he had very extensive lung cancer that was not reported. It was such a strange thing to have this secret that maybe he didn't know, that his family didn't know, but we found out going inside of him.

**Narrator:** She started to greet Dallas in the morning and say goodbye to him when she left the for the day.

**Golomb:** I started to talk to Dallas occasionally. I would say hi to him, I would place my hand on him if we were about to do something big. I felt like I was his friend or, maybe let's say I was his primary care doctor and my peers were his surgeons, per se.

**Narrator:** Still,

**Golomb:** I don't think surgery is for me.

**Narrator:** Almost unanimously, medical students and their instructors talk about the unique learning experience of dissecting a real human body. Much better than a textbook, they say. Some medical schools around the country don't dissect cadavers anymore. Some use pre-dissected bodies. Others use digital models. Some are using virtual reality. But there are things that digital cadavers can't teach.

Here again is Kerry Peterson, director of the body donor program at the university.

**Peterson:** There are a number of structures, dozens of structures in the body that are given the term, or the name, fascia. And some of those fascias are among the most tenacious materials you'll ever find. It takes a sharp scalpel to go through them. And other fascias in the body are so friable that you can blow on them and they practically tear.

**Narrator:** Students who work with real bodies get to learn the difference between these tissues by holding them in their hands.

**Peterson:** Each and every one of us is as different on the inside as we are on the outside. And so, our arteries branch different, some are thicker, some are thinner. In an anatomy lab here at the School of Medicine we have 32 bodies that medical students have access to. There's four assigned per body. But they tour and look at other people's bodies. Having a number of human bodies not only teaches anatomy, but with 31, 32 bodies in the lab, two or three of those have had heart bypass surgery. We can look at the effects of that. Two or three at least have artificial knees, a number have had surgeries. If you get a textbook or atlas it shows you one way.

**Narrator:** Peterson says the U received 250 bodies in 2016 from all over the Intermountain West.

**Peterson:** The state of Idaho, Wyoming, Montana, Nevada, Arizona, if I miss some I'm sorry.

**Narrator:** He works with donors and their families while they are still alive. He also takes care of all of the arrangements at their death. As a licensed mortician, he performs many of the functions of a funeral home,

**Peterson:** . . .we just don't sell anything.

**Narrator:** Every piece of flesh removed from a body is collected and kept together, anticipating the final cremation of the body after anatomy lab is complete. The ashes are then returned to the donor's families.

**Peterson:** Every family reacts differently. We've had those that are 'hey, learn everything you can, keep her for years!'

**Narrator:** It's not just students who work with the bodies. First responders come to the anatomy lab to learn. So do bioengineers.

**Peterson:** The people that develop our artificial knees, our pacemakers. . .

**Narrator:** One invention in particular stands out to Peterson. Something that would not have been possible without the help of cadavers. Think Luke Skywalker's mechanical hand. A prosthetic hand that can feel and can be controlled with the same nerve impulses that muscles use. An invention developed at the U is making that possible. It's called the Utah Slanted Electrode Array and it's an electrode that can be implanted to record nerve signals. Like the signals that tell an arm to move. Those signals can be translated into impulses and sent to a prosthetic arm.

**Peterson:** Yeah, anatomy's been studied for thousands of years, but it's never been studied in how do you hook up this array to a nerve?

**Narrator:** In developing the array, researchers learned the right way to splice human nerves so they don't fray. They couldn't do that without a cadaver.

Respect for the dead, Peterson says, is something inherent in working with cadavers.

**Peterson:** When you walk into a room that has 30 dead human bodies in it for the first time, for some of these students, there is a sense of awe. And the first thing that comes to anybody's head is: this is not a place to disrespect folks.

**Narrator:** Peterson does provide an orientation to anatomy students. He outlines what is appropriate and what's not.

**Peterson:** Frankly, I don't think we need to do it.

**Narrator:** The students just know. Maybe it's the way that seeing a cadaver puts a person in touch with their own mortality.

**Peterson:** I am not well-adjusted when it comes to death. I don't like the notion. I abhor the fact that someday my bell will toll.

**Narrator:** Peterson has seen the remains found under the George Thomas Building. Derinna Kopp, the state forensic anthropologist, asked him to evaluate them. She wanted to confirm that the cuts she saw were from anatomical dissection. Peterson felt a strong connection to the medical educators of the past – those who taught the human body by opening it up to see what’s inside.

**Peterson:** I have never felt it so much as when I was down in the lab, the anthropology lab and looking at those bones. Seeing that the cuts are made the same way. It was amazing thinking that the people that taught are dead and the doctors that learned, the future doctors that learned are also dead, but those bones could still be used for teaching.

**Narrator:** Those cuts, though, are one of the few things that are the same about dissection today and dissection in the early 20<sup>th</sup> century. As we’ll learn in the next episode, back then the sources of the bodies were different. The attitudes about those bodies were different. So what was it like? And how does that help us understand how our remains came to rest where they did?

We’ll explore those questions next time on Secrets of the Campus Cadavers.

This podcast is a production of University of Utah Marketing and Communications, produced, written and edited by Paul Gabrielsen and Brooke Adams.

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