

C2L7 - Ashley Hay

(0:05 - 1:40)

Hello, welcome back. So here we are, Course 2, Lesson 7. We're going to talk about environmental hazards now. So some of the things that I want you to think about as you've now completed the lesson, are you able to identify risks that might be present in the operating room? What would happen if there was a fire? Would you know how to appropriately respond? Are there certain methods and prevention that you can take to avoid chemical injury, both for yourself, other providers and patients? Do you know what kind of toxic substances can develop in smoke plumes? You want to be able to describe standard precautions and techniques to prevent sharp injuries? That's very important.

Sharps injuries occur quite frequently, less so with some preventative measures that we've hopefully all put into place. And there's a lot of protection now built into a lot of different kinds of sharps, but not all of them. So just knowing how to use them and dispose of them.

And then also throughout this lesson, we talked about things like disposing hazardous waste and how to properly handle that. Latex reactions in allergic patients and then body mechanics and preventing transmission-based infections. So I think one, just kind of knowing different kinds of risk that exist.

(1:40 - 4:08)

So biological versus chemical versus physical, what do those kind of look like and how can they differ? Being aware of just safety standards and recommendations. You don't have to go through each one, but knowing that recommendations do exist by all different kinds of organisations and having those links available to you, things like the CDC or the EPA, Environmental Protection Agency, knowing how to access those standards and recommendations are really important. So moving on to technical risks, some things like fire.

So how does that occur in a hospital setting? It sounds really unusual and wild, but it does happen. And there is definitely a certain risk to that, especially in the OR because the OR has a lot of different kinds of items that can traditionally create a fire. So things like oxygen that's being delivered to a patient, different kinds of fuel, if you will, like things that can ignite are just the furniture and the structures within the room, different kinds of electrical appliances, clothing, bedding, insulation, even like surgical prep and drapes, and then sources of ignition.

So when we're using things like different kinds of power tools or instruments in certain operations, things like light sources or lasers or cautery. So that's when we kind of burn certain areas to stop bleeding. So just knowing that all of these things can kind of align, unfortunately, sometimes to create fires.

You should know the different classes of fires. So there's A, B, C, D, and K. So make sure that

you look through and know those differences. And then you also definitely need to be familiar professionally and also for your exam of what RACE means.

R-A-C-E. It's a fire plan that stands for Rescue, Alarm, Contain, and Evacuate. So make sure that you definitely are making some sort of index card or note for yourself and you're able to recall that information.

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Also, another acronym that you're going to need to be aware of is how to use a fire extinguisher. This will come up all the time in your training and certain different exams and certifications. So what we talk about is for using a fire extinguisher, we use the word PASS.

P-A-S-S. And that stands for Pull. Pull the pin out of the fire extinguisher.

Aim. You want to use the hose to aim it at the base of the fire. Squeeze is squeezing the handle to let whatever is inside your extinguisher.

They can vary depending on what type of fire it is. Squeeze is squeezing the handle. And then Sweep.

So Pull, Aim, Squeeze, and Sweep. And then there's, of course, a bunch of different types of fire prevention. So you will definitely be asked to participate in things like fire drills, knowing the use of the term code red, which is typically a fire alert, and just being aware of how to contact the fire department and knowing where your fire alarms are.

The lesson also very briefly covered some risks with radiation. So there are some types of patients and also some types of procedures or operations where the patient is radioactive. I myself have cared for a number of radioactive patients.

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And the three things that you always want to remember whenever there is radiation being used is the principle of time, distance, and shielding. So time is the amount of time that you spend near a radiation source. That includes the patient if they're radioactive.

So trying to minimise your time near that source. Distance is maximising your distance whenever possible. And then shielding.

(6:15 - 8:13)

So there are a number of different kinds of shields that we can use to be able to interact with the patient if needed or shield yourself from whatever the radiation source is. So I myself have used things like certain kinds of drapes that you may use. Be aware they're definitely heavy.

So using that time principle, reducing your time whenever possible, will be helpful to you

because if you are caring for these patients over a course of a 12-hour shift, wearing that additional weight is another kind of stressor and fatigue on your body. There are also different kinds of walls that some of them are movable for example or standing behind a wall if there's maybe a radioactive source of radiation that's being used. So just make sure that you're thinking about your risk in general and then always considering what safety precautions you can use and then how you can prevent any sort of injury.

We also talked about surgical smoke plumes. So smoke carries toxic chemicals and likely carcinogens, so things that can create cancer. So you always want to make sure if there is any sort of cauterisation being used in the OR that you have a way to evacuate the smoke and setting that up appropriately prior to any sort of procedure that might include that.

Also definitely make sure that you are aware of standard precautions and what that means, including isolation. So for example, if a patient is on isolation precautions, they may be on something like contact precautions if they have something that can be transmissible through touch. So that might be something like C. diff.

(8:15 - 9:19)

That's an issue kind of with diarrhoea that can be very easily transmitted. So we then take extra isolation precautions to make sure that we don't transmit that to other patients and then also to ourselves, which I have seen happen to a number of providers, especially when they don't follow the proper precautions. So make sure every time that you give yourself proper time to utilise whatever precautions you have.

Droplet precautions, things like if they have flu, airborne precautions, things like tuberculosis or even COVID because they're aerosolising, and just knowing that airborne is different than droplet. And then just general standard precautions. Going back to that, we talk about things like hand hygiene, protective barriers, things like gowns or gloves or shields, and then just taking precautions with obviously anything that comes in contact with the patient.

(9:21 - 11:37)

Latex allergies, very important to be aware of, especially when planning surgical cases, and very important to know if any of the providers that are involved in the surgery or the patient are allergic to latex. So prevention is really key there. But then, being aware of what that might look like if a patient happens to develop the allergy while you're in the OR.

So that might be things like swelling or redness at any kind of different site of the body. And it could be a local reaction, like a little rash or a systemic reaction, like the patient's having difficulty breathing. So, of course, if you see any of those things happening during the case, before, during, or after, you want to make sure to alert someone right away.

And then we also talked about just proper posture and body mechanics. So it's important that you're aware of always lifting, never bending at the waist and picking up items, but rather

always bending your knees. So you really want to increase your core strength whenever is possible.

But there is certain risks that exist, especially in the low back, wrist, shoulder, and neck that are very common among healthcare providers. It's really because of repetition of certain movements all the time. So you want to make sure that you're preventing that risk whenever possible.

And just knowing that lifting with your back is always the wrong answer on the exam. It's always bending with your knees and picking anything up with a proper lifting technique. And yeah, just a quick little reminder too, if you haven't already, we are in lesson, course two rather.

So if you haven't already, definitely book some sessions with your coach, so that way you can kind of get your questions answered as you go and start getting some study techniques and preparation for your upcoming exam. All right, till next time.