Pressure Ulcers eCourse

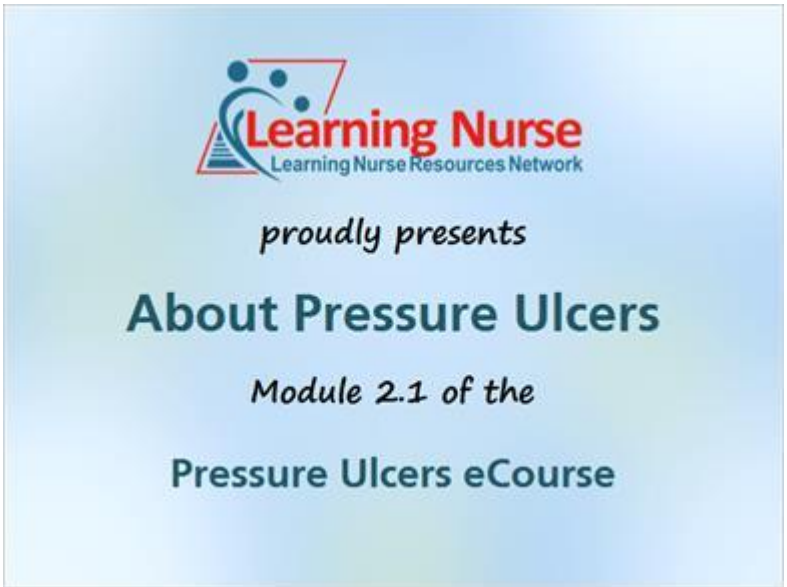
Module 2.1: Definition and Causes

Handout

2.1 Definition and Causes

1. About Pressure Ulcers

1.1 Welcome



Narration

Music only

1.2 Topics

Narration

JILL: Hi. I'm Jill along with Mark. Welcome to Module 2 of the Pressure Ulcers Course.

MARK: What are our topics for this Module?

JILL: This Module consists of 3 units or lessons. The first lesson is about the definition and the causes of pressure ulcers. In the second unit, we will talk about the classification systems used to define pressure ulcers and their various stages. And finally … in the last lesson, we will discuss the risk factors and the implications of pressure ulcers.

MARK: Sounds like we have a lot to cover. Let's get started!

1.3 Terms & Definition

Narration

JILL: We have already talked about the terms and definition in the Introduction. So let's do a quick review. Do you remember the common terms used to describe pressure ulcers, Mark?

MARK: Sure do … other names for pressure ulcers are … bedsores, pressure sores and decubitus ulcers.

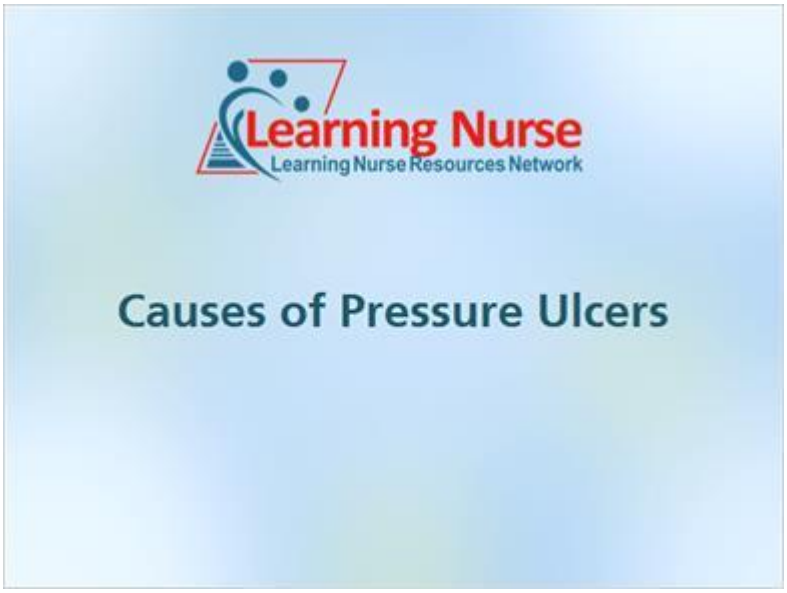
JILL: That's right. The National Pressure Ulcer Advisory Panel and the European Pressure Ulcer Advisory Panel define a pressure ulcer as … a localized injury to the skin and/or underlying tissue usually over a bony prominence, as a result of pressure or pressure in combination with shear.

MARK: So that is a more formal definition than the one we used before … a skin lesion caused by unrelieved pressure resulting in damage of the underlying tissue.

JILL: Yes, but the key point is that a pressure ulcer is damage to the skin caused by pressure or force.

2. Causes of Pressure Ulcers

2.1 Section Title



Narration

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2.2 Variability

Narration

JILL: In this section, we are going to review the causes of pressure ulcers.

MARK: And by knowing the causes, we will be better able to prevent pressure ulcers from developing.

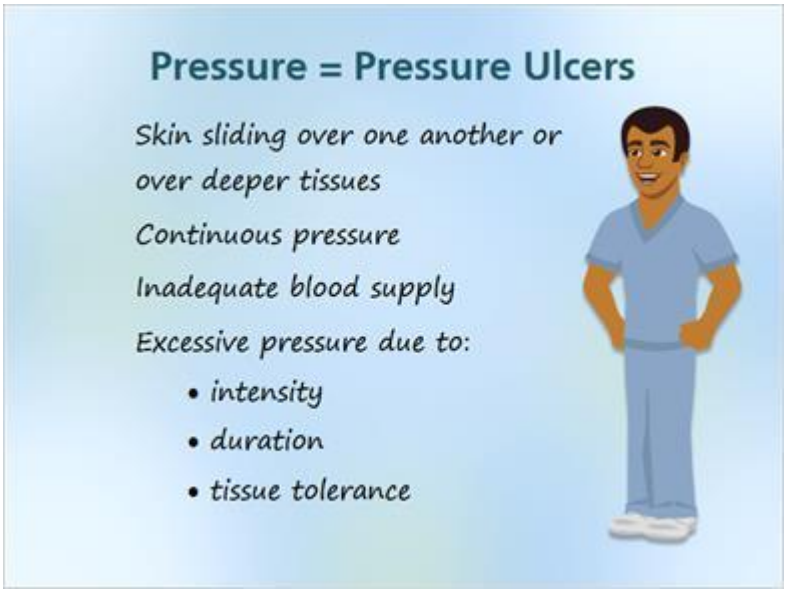
JILL: Right! But before we begin, I want to make it clear that every individual is different in their susceptibility to develop pressure ulcers.

MARK: Jill, do you mean that if I have two similar patients that their chances of developing pressure ulcers are NOT the same?

JILL: That is correct. Everyone has different limits to skin pressure … thus making them either more or less susceptible.

MARK: So when I'm doing risk assessment or prevention strategies, I can NOT assume that every patient is the same. I will have to remember that!

2.3 Pressure



Narration

JILL: Okay, let's start by looking at the two types of pressure. One type of pressure is a force occurring when the layers of the skin slide over one another or over deep tissues. Mark, can you think of an example when this could happen?

MARK: Sure, how about when a patient slides down in a bed or a chair?

JILL: Yes, sliding is certainly a frequent cause of this type of pressure. The other type of pressure is continuous pressure. This is when parts of the body press on a hard surface for a period of time. With continuous pressure, the skin and underlying tissue do not receive an adequate blood supply, which in turn, could result the development of pressure ulcers. Excessive pressure on soft tissue can be attributed to 3 factors. Any ideas of what these are, Mark?

MARK: I would think one factor would be how hard the skin is being pressed.

JILL: Correct … that factor is **intensity** of the pressure.

MARK: Another factor is probably how long the pressure is on.

JILL: Right. That factor is the **duration** of the pressure. Are there any others?

MARK: The only other thing I can think of is what we were discussing before. That is the ability of an individual's skin and tissue to endure pressure before becoming damaged.

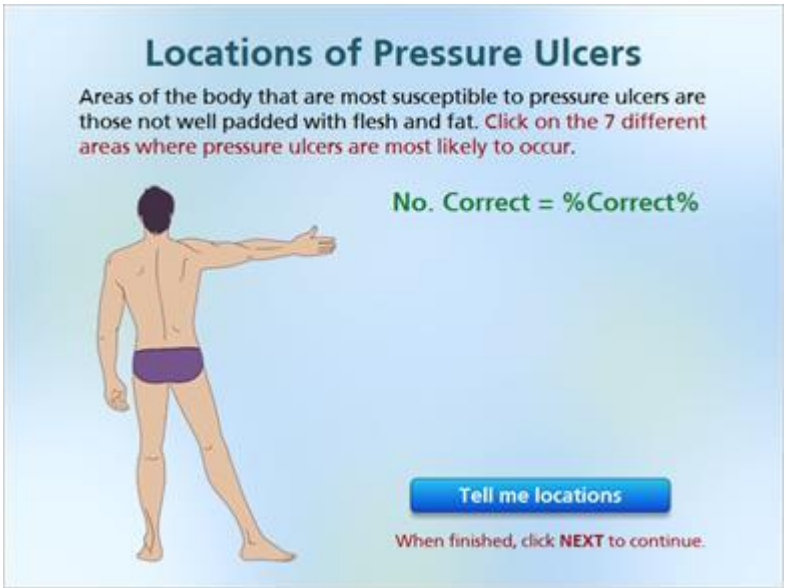
JILL: Yes, right on! This is the **tissue tolerance** factor. A related consideration is that there are certain parts of the body that are more susceptible to pressure ulcers. These typically are areas that are not well padded with flesh and fat.

MARK: You mean places such as …

JILL: WAIT! Before you mention some common sites for pressure ulcers, we have a little exercise on the next slide. Let's do it that way!

MARK: Okay!

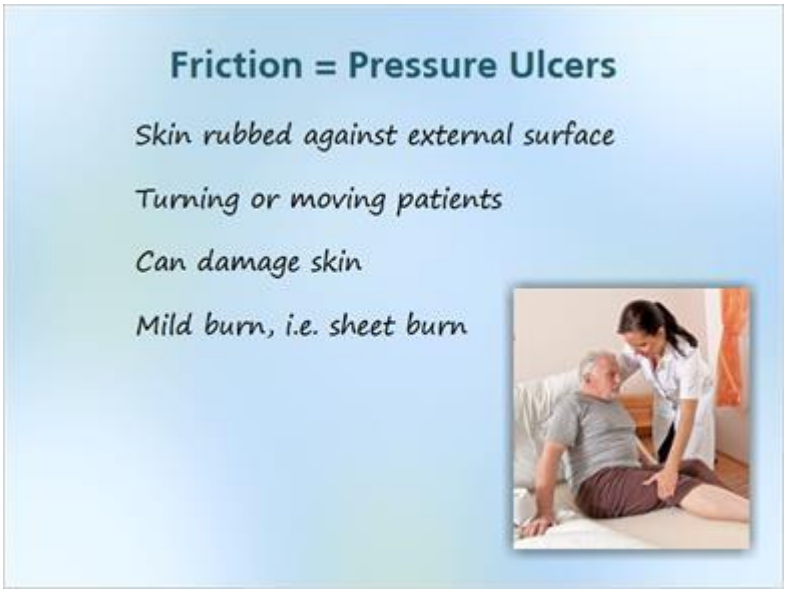
2.4 Vulnerable Areas



Narration

No narration.

2.5 Friction



Narration

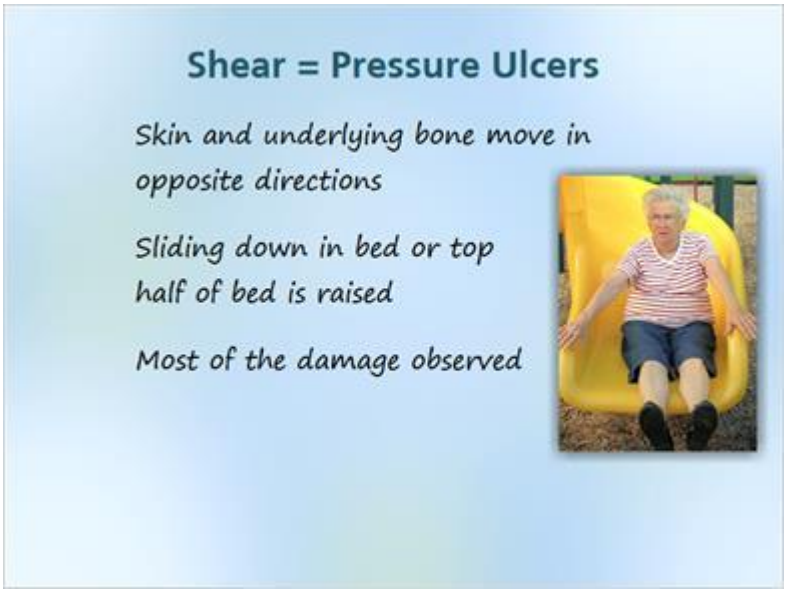
JILL: The second cause of pressure ulcers is **friction**. Friction occurs when the skin is rubbed against an external surface.

MARK: I imagine that this happens a lot when turning or moving patients, such as boosting patients in bed.

JILL: Yes it does. If the patient has thin and frail skin and poor circulations, friction may damage the skin. Friction alone has the ability to cause skin damage, but it is often confined to the epidermal and upper dermal layers. In the mildest form, friction can cause a mild burn … this "sheet burn" is quite common.

MARK: Yes, I have certainly seen my share of "sheet burn" at the hospital.

2.6 Shear

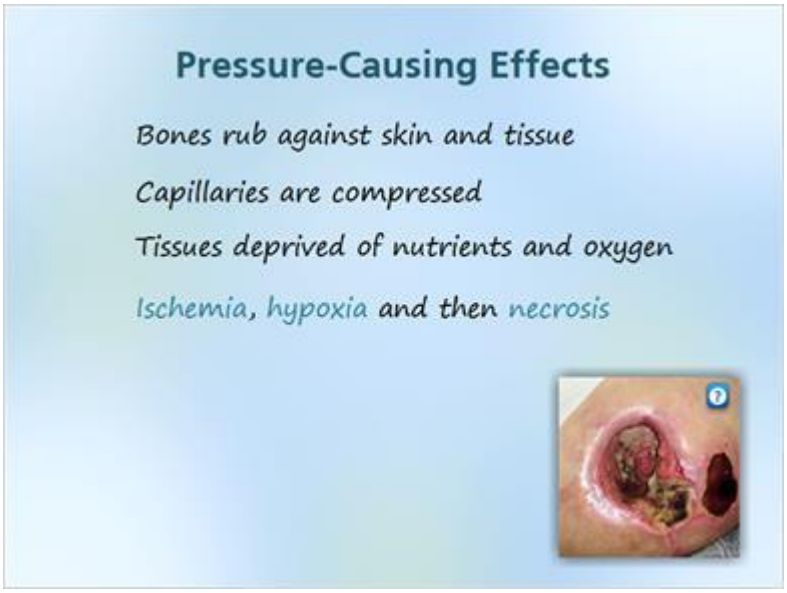


Narration

JILL: The third cause of pressure ulcers is **shear**. Shear occurs when the skin moves one way while the underlying bone moves in the opposite direction. For example, a patient slides down in a bed or on a chair or raises the top half of a bed too much. Shear occurs in these instances when the cell walls and blood vessels stretch and tear. Shear causes much of the damage observed with pressure ulcers.

MARK: Yes, now I see why.

2.7 Pressure-Causing Effects



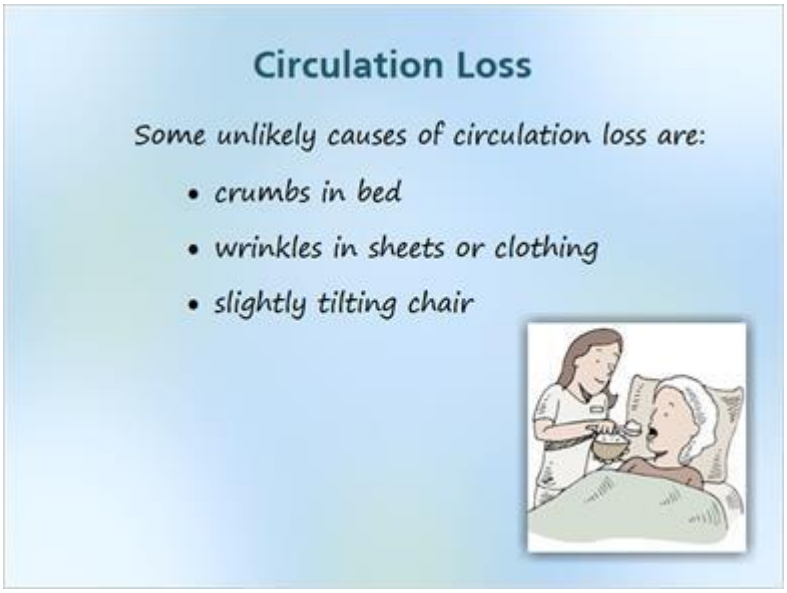
Narration

JILL: Pressure-causing effects take place when the bones rub against the skin and underlying deeper tissue. What would be the effects Mark?

MARK: The blood vessels are compressed, and therefore the oxygen and nutrients cannot reach the tissue. After a period of time, this will cause ischemia, or local anemia, hypoxia and finally necrosis or cell death.

JILL: That's right. And so is born a pressure ulcer.

2.8 Circulation Loss



Narration

JILL: There are some causes of circulation loss that we would not normally consider.

MARK: Yeah, like what?

JILL: How about crumbs in the patient's bed, wrinkles in the sheet and clothing and a slightly tilting chair. All of these can cause pressure and ultimately obstruct the blood supply.

MARK: Who would have thought? Does that mean no letting patients eating in bed, and that I have to iron their bed sheets? (jokingly)

JILL: (laughs) I wouldn't go that far! But these are some things we need to be aware when working with at-risk patients and residents.

2.9 Blood Flow

Narration

JILL: Restoration of blood flow becomes a problem if it leads to reperfusion injuries. These are thought to occur with high- or low-pressure surfaces. Reperfusion can cause the pressure ulcer to enlarge or become more chronic. This may occur, for example, when a paraplegic patient is turned from one side to the other in an effort to combat prolonged pressure on a given side.

2.10 Summary

Narration

JILL: This brings us to the end of the first unit in Module 2 of this Pressure Ulcers course. Mark, would you mind briefly summarizing what we covered in this lesson?

MARK: Sure thing. We started out by reviewing the terms and definitions of a pressure ulcer. We then took a look at the general causes of pressures ulcers that included pressure, friction and shear. We discussed the effects of pressure on the skin and how that contributes to the development of pressure ulcers.

JILL: Very good. I'm Jill, along with Mark, and we will see you again soon.

MARK: Goodbye.

2.11 The End

Narration

No narration … music only.