

# **FSBPT® NPTE-PT - Quiz Questions with Answers**

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# Integumentary System

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Integumentary System

1.

Physical therapy has been ordered for a 57-year-old female patient admitted to the ICU one week ago for myocarditis. During the physical exam, the therapist notes that the patient has partial-thickness skin loss on their left hip that currently presents as a blister on the skin. How should the therapist document this finding?

**Stage II pressure injury**

Stage I pressure injury

Stage III pressure injury

Stage IV pressure injury

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*Correct answer: Stage II pressure injury*

*Pressure injuries are graded based on the stage of their severity. A stage II pressure injury occurs when there is partial-thickness skin loss involving the epidermis and/or dermis skin layers and presents as a blister, abrasion, or shallow crater.*

*A stage I pressure injury occurs when the skin is fully intact, is nonblanchable, may have a temperature change (cool or warm), and may have a sensation (itching or pain). A stage III pressure injury occurs when there is full-thickness skin loss that involves subcutaneous tissue damage or necrosis, and presents as a deep crater. A stage IV pressure injury occurs when there is full-thickness skin loss that involves tissue necrosis and damage to bone, muscle, or other supporting structures.*

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**2.**

A physical therapist is conducting an evaluation of a patient in an outpatient facility for balance training. During the subjective portion, the patient notes that they have impaired light touch sensation, experience recurrent skin infections, and experience impaired melanin production.

Based on this information, which is the **MOST** likely affected structure?

**Epidermis**

Dermis

Hypodermis

Subcutaneous tissues

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*Correct answer: Epidermis*

*The epidermis is a skin layer that itself contains five layers. The five layers of the epidermis from outermost to innermost are as follows:*

- 1. Stratum corneum: shingle-like dead cells filled with keratin*
- 2. Stratum lucidum: formed from dead cells; only occurs in thick portions of the palms and soles of the feet*
- 3. Stratum granulosum: contains live keratinocytes and Langerhans cells*
- 4. Stratum spinosum: spiny layer which also contains keratinocytes and Langerhans cells*
- 5. Stratum basale: contains epidermal cells, melanocytes, and Merkel cells*

*Because the patient has reported problems with light touch sensation, skin infection, and melanin production, it is most likely that the epidermis is affected.*

*The dermis contains structures such as blood vessels, nerve endings, and hair follicles; these functions do not fit the patient's description as well as the epidermis. The hypodermis contains loose connective tissue and fat tissue for insulation and support. The term "subcutaneous tissue" is another name for the hypodermis.*

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**3.**

You are a physical therapist treating a patient in the hospital for wound care. During the wound assessment, you document a stage II pressure injury over the patient's lateral epicondyle. Since the wound is non-exudative, you would like to monitor it frequently.

Which of the following is the **BEST** dressing for the patient's wound?

Transparent film

Hydrocolloid

Foam

Alginate

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*Correct answer: Transparent film*

*Transparent films are adhesive dressings that are clear with semipermeable membranes. Transparent films are used for stage I and II pressure ulcers, skin donor sites, and autolytic debridement. They are permeable to moisture vapor and atmospheric oxygen, but impermeable to bacteria, water, and contaminants. An added benefit of transparent films is the ability to visualize a wound without the removal of the dressing, which is indicated in this scenario.*

*Hydrocolloids are adhesive wafers that form a gelatinous mass over the wound. Foams are hydrophilic or hydrophobic semipermeable membranes with varying adhesive and absorptive properties. Alginates and hydrofibers are soft, absorbent, nonwoven dressings derived from seaweed and have a fluffy cotton-like appearance.*

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**4.**

Use the following scenario to answer the question.

Which of the following forms of debridement is **MOST** appropriate for the patient's pressure injury?

**Enzymatic**

Mechanical

Sharp

Biological

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*Correct answer: Enzymatic*

*Pressure injuries are lesions caused by unrelieved pressure resulting in ischemic hypoxia and damage to underlying tissue. Pressure injuries are most commonly associated with prolonged pressure or shear forces and generally affect those who are immobilized. There are various methods used for debridement of wounds, including autolytic, enzymatic, mechanical, sharp, surgical, ultrasound, and biological. Enzymatic debridement is appropriate for individuals with moist necrotic wounds.*

*Mechanical debridement is most often used to remove foreign materials or contaminated tissue. Sharp debridement is most indicated for the excision of leathery eschar. Biological debridement is rarely used due to the psychological stress it causes for patients.*

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**5.**

While working in a hospital setting as a physical therapist, you are treating a patient with a chronic foot ulcer with poor healing. During the assessment, you observe that the wound has tunneling and large amounts of exudate which will require packing.

Of the following, which is the **BEST** dressing for the patient's wound?

**Alginate**

Hydrocolloid

Hydrogel

Foam

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*Correct answer: Alginate*

*Alginates are nonwoven fluffy dressings that are derived from seaweed. They have a fluffy, cotton-like appearance. They react to the wound's exudate in order to form a viscous hydrophilic gel mass that covers the vicinity of the wound. Alginates are used for wounds that require packing and absorption.*

*Hydrocolloids are adhesive wafers that form a gelatinous mass over the wound. Hydrogels are water- or glycerin-based gels with varying absorptive capacities; these are insoluble in water. Foams are semipermeable membranes that can be either hydrophilic or hydrophobic, with varying adhesive and absorptive properties.*

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**6.**

Use the following scenario to answer the question.

During initial rehabilitation, what will be the **MOST** appropriate treatment to provide?

**Exercises to promote deep breathing and chest expansion**

Management of chronic pain

Training in activities of daily living

Scar management

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*Correct answer: Exercises to promote deep breathing and chest expansion*

*Burn injuries can result from heat, chemicals, electricity, sunlight, or radiation. Burn wounds are classified according to their depth, characteristics, and healing or scarring process. Third-degree wounds are characterized by complete destruction of the epidermis, dermis, and subcutaneous tissues, possibly extending into muscle. The overall goals of burn injury rehabilitation are to limit loss of ROM, reduce edema, prevent predictable contractures, and prevent or reduce complications of immobilization. For a patient with third-degree burn injuries on their chest and abdomen, deep breathing exercises to promote chest expansion are highly appropriate during early rehabilitation.*

*Management of chronic pain, training in activities of daily living, and scar management are considered effective treatments during the post-acute phase of rehabilitation.*

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**7.**

Use the following scenario to answer the question.

Which of the following interventions is **MOST** appropriate to address the patient's leg ulcer?

**Inelastic compression bandages worn during the day and night**

Inelastic compression bandages worn during the day only

Walking 30-60 minutes, 3-5 times per week

Duplex ultrasound

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*Correct answer: Inelastic compression bandages worn during the day and night*

*Venous ulcers can occur anywhere in the lower leg and are associated with chronic venous insufficiency, valvular incompetence, and venous hypertension. Venous ulcers present with dark pigmentation, are shallow, and may be fibrotic. Treatment of venous ulcers focuses on inelastic or short-stretch compression bandages worn during the day and night, with compression pumps and limb elevation as adjunct treatments.*

*Inelastic compression bandages should be worn during the day and night, not only during the day. Walking 30-60 minutes, 3-5 times per week is an exercise protocol used for arterial ulcers. Duplex ultrasound may be used to examine ulcer perfusion but is not considered a treatment for venous ulcers.*

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**8.**

Wound care has been ordered for a patient in the hospital ICU who has been unable to transfer out of bed for two weeks. During the assessment, the physical therapist notes a partial-thickness wound with mild exudate on the patient's sacrum.

Which of the following is the **BEST** dressing for the patient's wound?

**Hydrocolloid**

Transparent film

Hydrogel

Foam

*Correct answer: Hydrocolloid*

*Hydrocolloids are adhesive wafers that form a gelatinous mass over the wound. Hydrocolloids contain particles that are hydroactive and absorptive and interact with the fluid from the wound, which is what makes the gelatinous mass. Because this patient is unable to transfer out of bed and will likely be assisted with transfers, a dressing that minimizes friction, such as a hydrocolloid, should be used.*

*Transparent films are adhesive dressings that are clear with semipermeable membranes. Hydrogels are water- or glycerine-based gels that are available in solid sheets, amorphous gels, or impregnated gauze. Foams are semipermeable membranes that may be hydrophilic or hydrophobic.*

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**9.**

Use the following scenario to answer the question.

Which of the following **BEST** describes the patient's ulcer?

**Venous**

Arterial

Pressure

Contusion

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*Correct answer: Venous*

*Venous ulcers can occur anywhere in the lower leg and are associated with chronic venous insufficiency, valvular incompetence, and venous hypertension. Venous ulcers present with dark pigmentation, are shallow, and may be fibrotic. Pain is usually mild and comfort is often improved with leg elevation. Venous ulcers typically present with exudate and are not associated with diminished pedal pulses.*

*Arterial ulcers are often associated with arteriosclerosis, are usually deep, typically diminish pedal pulses, are generally painful, and generally do not present with drainage. Pressure injuries may present similarly to venous ulcers but vary in patient history. Contusions are a category of skin injury but are not classified as ulcers.*

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**10.**

Wound care has been ordered for a 57-year-old male patient recently admitted to the hospital for multiple lower extremity wounds and poor wound healing. During the assessment, the physical therapist notes a full-thickness wound on the patient's left medial leg with minimal to moderate exudate which will require packing.

Of the following, which dressing will be **MOST** appropriate for the patient's wound?

**Foam**

Hydrocolloid

Hydrogel

Transparent film

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*Correct answer: Foam*

*Foams are hydrophilic or hydrophobic semipermeable membranes with varying adhesive and absorptive properties. This type of dressing is used for partial and full-thickness wounds with minimal to moderate exudate. Foams are used as a secondary dressing for wounds with packing to provide additional absorption. Foams can vary in thickness and absorption capacity.*

*Hydrocolloids are adhesive wafers that form a gelatinous mass over the wound, which are used for protection of partial-thickness wounds with mild exudate. Hydrogels are water-based gels contained within impregnated gauze, which are used with partial and full-thickness wounds or burns. Transparent film is a clear, adhesive, semipermeable membrane dressing that is used with stage I and II pressure ulcers, autolytic debridement, and skin donor sites.*

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**11.**

A physical therapist is seeing a patient in an outpatient clinic for left shoulder pain. At the beginning of the session, the patient informs the therapist that they fell onto their left thigh earlier in the day. The physical therapist decides to assess the patient's thigh and observes a bluish discoloration of the skin.

Of the following, what is the **MOST** likely explanation for this presentation?

**Ecchymosis**

Contusion

Petechiae

Laceration

*Correct answer: Ecchymosis*

*Ecchymosis is a skin trauma described as skin that has bluish discoloration due to the extravasation of blood in the subcutaneous tissue. It is the result of trauma to the underlying vessel walls. While the superficial epithelial cells may also be damaged, this type of damage does not cause bluish discoloration. Given the information in this scenario, this is the most likely explanation.*

*A contusion is a skin trauma described as skin that is not broken but is discolored and swollen. Petechiae is a skin trauma described as skin that contains purple hemorrhagic spots. A laceration is an irregular tear of the skin that produces a torn, jagged wound.*

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**12.**

Use the following scenario to answer the question.

Which of the following **BEST** indicates how much water the patient should be encouraged to drink per day?

**3 or more liters**

1 liter

2 liters

2.5 liters

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*Correct answer: 3 or more liters*

*Pressure injuries are lesions caused by unrelieved pressure resulting in ischemic hypoxia and damage to underlying tissue. Pressure injuries are commonly associated with prolonged pressure or shear forces and are most often seen in those who are immobilized. Patients with wounds require approximately 3 or more liters of water per day to promote adequate hydration for healing.*

*1 liter, 2 liters, and 2.5 liters are less than the required amount of hydration to promote wound healing.*

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**13.**

A patient who has recently been admitted to the hospital for a full-thickness burn requires skin grafting for closure of the wound. Due to minimal viable donor sites on the patient's body, the overseeing hospitalist has recommended culturing of the patient's skin and temporary use of an allograft.

Of the following, which is the **MOST** likely graft to be used?

**Cultured skin graft**

Allograft

Split-thickness graft

Autograft

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*Correct answer: Cultured skin graft*

*A cultured skin graft is conducted using skin that is grown in a laboratory from the patient's own skin. In this scenario, an allograft may be used temporarily until an autograft or cultured graft is available.*

*An allograft is conducted using the skin from another human, such as cadaver skin. In this scenario, an allograft is already being used temporarily while the cultured skin graft is being prepared. An autograft is conducted using skin from the actual patient. A split-thickness graft contains the epidermis and upper layers of the dermis from the donor site. Neither an autograft nor a split-thickness graft will be used in this case since the hospitalist has decided to use a cultured skin graft.*

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**14.**

While working as a travel physical therapist, you are reviewing the medical chart for a patient who was admitted to the hospital's burn unit and evaluated by a different physical therapist. In the patient's chart, the burn wound evaluation describes a burn that has completely destroyed the affected epidermis, dermis, and subcutaneous tissues. The chart also shows that the patient has little pain and the affected area appears white.

How is this burn wound **BEST** classified?

**Full-thickness burn (third-degree)**

Deep partial-thickness burn (second-degree)

Superficial partial-thickness burn (second-degree)

Full-thickness burn (fourth-degree)

*Correct answer: Full-thickness burn (third-degree)*

*A full-thickness burn (third-degree) is a burn that completely destroys the epidermis, dermis, and subcutaneous tissues. A full-thickness burn may or may not involve the muscle. This type of burn requires the removal of eschar and skin grafting, which makes scarring likely. Full-thickness burns typically involve little pain because nerve endings are destroyed. The other categories of burn wounds are:*

- An epidermal burn (first-degree) is a burn that only damages the epidermal skin layer, leaving a pink/red appearance but no blistering. This type of burn does not scar and heals within three to seven days.*
- A superficial partial-thickness burn (second-degree) is a burn that damages the epidermis skin layer and the upper layers of the dermis skin layer.*
- A deep partial-thickness burn (second-degree) is a burn that severely damages the epidermis and dermis skin layers and causes damage to the sweat glands, hair follicles, and nerve endings.*
- A subdermal burn (fourth-degree) is a burn that completely destroys the epidermis and dermis skin layer and damages subcutaneous tissues and muscle.*

*Note that a fourth-degree burn is subdermal, not full-thickness.*

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**15.**

Use the following scenario to answer the question.

Which of the following **BEST** describes the patient's burn wound?

**Third degree**

First degree

Second degree

Fourth degree

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*Correct answer: Third degree*

*Burn injuries can result from heat, chemicals, electricity, sunlight, or radiation. Burn wounds are classified according to their depth, characteristics, and healing or scarring process. Third-degree wounds are characterized by complete destruction of the epidermis, dermis, and subcutaneous tissues, possibly extending into muscle. Third-degree wounds may be white, charred, tan, or black and are often dry or leathery.*

*First-degree burns are characterized by damage to the epidermis only. Second-degree burns are characterized by damage to the epidermis and dermis. Fourth-degree burns are characterized by complete destruction of the epidermis and dermis with the involvement of subcutaneous tissue and muscle.*

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**16.**

A physical therapist is providing gait training to a 25-year-old patient in the hospital. During the session, the patient scrapes their arm against the wall and reports pain. Upon further examination, the therapist notes minor abrasion of the patient's arm without any sign of redness or bleeding.

What layer of skin has **MOST** likely been affected by this injury?

**Epidermis**

Dermis

Hypodermis

Corium

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*Correct answer: Epidermis*

*The epidermis is the most superficial layer of the skin and does not contain blood vessels. Because there are no signs of redness or bleeding, it is not likely that the injury has reached the dermis, which contains blood vessels.*

*The dermis contains blood vessels and, if damaged, would likely cause bleeding or redness in this scenario. The hypodermis is the layer of skin beneath the dermis and will likely cause more bleeding if affected during an injury. The term "corium" is an alternative name for the dermis.*

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**17.**

Use the following scenario to answer the question.

Based on this presentation, which of the following is **MOST** likely to improve comfort for the patient?

**Leg elevation**

Standing upright

Sitting upright

Leg dependency

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*Correct answer: Leg elevation*

*Venous ulcers can occur anywhere in the lower leg and are associated with chronic venous insufficiency, valvular incompetence, and venous hypertension. Pain is usually mild with venous ulcers, and comfort is often improved with leg elevation.*

*Positions promoting leg dependency, such as sitting and standing upright, are generally used to improve pain for patients with arterial ulcers.*

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**18.**

Physical therapy has been ordered for a patient in a skilled nursing facility presenting with a stage III pressure injury. Based on this information alone, which of the following patients is **LEAST** likely to be seen for this condition?

**A 90-year-old woman who has a body mass index of 26 and ambulates three times per day with her caregiver**

A dependent 85-year-old woman who requires extensive assistance for bed mobility and is non-ambulatory

An 82-year-old woman who has a body mass index of 16.5 and ambulates with her caregiver 3 times per day

A 91-year-old woman who has venous stasis and uses a wheelchair

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*Correct answer: A 90-year-old woman who has a body mass index of 26 and ambulates three times per day with her caregiver*

*This woman is slightly overweight, so she is likely to have ample soft tissue to protect her bony prominences. In addition, she ambulates. Mobilization is important for reducing pressure injury development.*

*Immobilization, friction, nutritional deficiency, peripheral vascular disease, and maceration are all risk factors that are associated with pressure injuries. Pressure injuries are graded by the stage of tissue damage, and they will progress to the next stage if left untreated. The 82-year-old woman with a low body mass index would have little soft tissue to protect her bony prominences, making them more susceptible to pressure injuries. The 85-year-old woman who is dependent on bed mobility is not mobile, making her at high risk for pressure injuries. In addition, she would likely experience high amounts of friction during transfers. The 91-year-old woman with vascular disease and limited mobility would have an increased likelihood of developing a pressure injury.*

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**19.**

A physical therapy evaluation has been ordered for a 45-year-old female patient who has recently undergone an appendectomy. During the evaluation, the therapist notes wound dehiscence at the surgical site. Which of the following wound care treatments would be **MOST** beneficial for wound closure?

**Vacuum-Assisted Closure (VAC)**

Whirlpool therapy (WP)

Wet-to-dry gauze dressings

Kilohertz ultrasound

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*Correct answer: Vacuum-Assisted Closure (VAC)*

*Negative pressure wound therapy is used as an adjunct to wound healing in order to facilitate wound closure. Vacuum-Assisted Closure (VAC) is a wound closure technique that uses an open-cell foam dressing placed into the wound. It is sealed with a drape and controlled subatmospheric pressure is applied via a specialized device. This controls edema, increases blood flow, and removes infectious material.*

*Whirlpool therapy (WP) is a form of hydrotherapy that is indicated for ulcers with large amounts of exudate, slough, and necrotic tissue. It increases circulation and assists in the debridement of wounds or removal of dressings. It would not be indicated in this case. Wet-to-dry gauze dressings consist of wet gauze applied to the wound bed and allowed to dry on the wound. Removal of the dry dressing debrides the wound and pulls away any necrotic tissue. It is a form of nonselective debridement and would not be appropriate in this case. Kilohertz ultrasound is a form of selective debridement. This long-wave low-frequency ultrasound removes necrotic tissue and increases angiogenesis, preparing the wound bed for grafting or flap closure.*

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**20.**

A physical therapist is preparing to see a 30-year-old male patient admitted to the hospital for loss of functional mobility and symptoms related to the progression of an autoimmune disease. Upon entering the room, the physical therapist determines they will not need to wear personal protective equipment to conduct the session.

Which of the following is the **MOST** likely comorbidity this patient has?

**Psoriasis**

Impetigo

Herpes 1

Tinea pedis

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*Correct answer: Psoriasis*

*Psoriasis is a chronic autoimmune disorder of the skin. It is characterized by dry, scaly, erythematous plaques which are commonly found on the ears, scalp, knees, elbows, and genitalia. It is hereditary and not spread through direct contact.*

*Impetigo is a bacterial infection that is associated with inflammation, small pus-filled vesicles, and itching. It is contagious through direct contact, especially in the elderly and pediatric populations. Herpes 1 is a viral infection of the skin. Its symptoms include itching and soreness, followed by a vesicular eruption of the skin on the face or mouth, called a cold sore. It is spread by contact. Tinea pedis, or athlete's foot, is a fungal infection. It causes erythema, inflammation, pruritus, itching, and pain. The condition is treated with antifungal creams and is spread via direct contact.*

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**21.**

A physical therapist is working with a female patient in a skilled nursing facility on therapeutic exercise. The patient has a known history of diabetes and hypothyroidism. During the session, the therapist notes that the patient's skin is very dry and flaky.

Which of the following is the **MOST** likely condition the therapist is observing?

**Xeroderma**

Rash

Urticaria

Psoriasis

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*Correct answer: Xeroderma*

*Xeroderma is a skin condition that is best described as excessively dry skin. Xeroderma also causes epithelium shedding. Xeroderma can indicate a deficiency of thyroid function or diabetes.*

*A rash is characterized by local redness and eruption on the skin's surface. Urticaria is characterized by smooth, red, elevated patches of skin. Psoriasis is an auto-immune skin condition characterized by the appearance of dry, silvery, scaly patches of skin.*

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**22.**

A physical therapist is conducting an evaluation with a patient who has recently been admitted to a skilled nursing facility for loss of functional mobility and recurring falls. During the session, the therapist notes gangrenous skin on the patient's lower legs and feet, which prompts the therapist to contact the patient's physician.

Which of the following is the **MOST** likely cause of the therapist's concern?

**Arterial ulcer**

Pressure ulcer

Venous ulcer

Decubitus ulcer

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*Correct answer: Arterial ulcer*

*Gangrene is black skin that is a result of the death of body tissue, commonly due to lack of blood flow to the area. Arterial ulcers are caused by arterial insufficiency, which refers to a lack of adequate blood flow to a part of the body, typically occurring over the lower legs and feet. With arterial ulcers, black, gangrenous skin can develop in the skin adjacent to the ulcer.*

*A pressure ulcer, also called a decubitus ulcer, is caused by unrelieved pressure on an area, resulting in ischemic hypoxia and damage to the tissue. Clinical features include location over bony prominences, red, brown/black, or yellow color, and pain. The degree of pressure ulcer involvement depends on the thickness of skin loss. A venous ulcer is due to chronic venous insufficiency and is typically associated with edema. It can occur anywhere in the lower leg and is common over the medial malleolus. Gangrene is absent.*

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**23.**

A 52-year-old female patient in the hospital currently recovering from abdominal surgery is demonstrating compromised healing of their surgical site. The wound currently includes moist necrotic tissue and leathery eschar.

Of the following, what is the **BEST** debridement technique for this patient?

Sharp

Autolytic

Mechanical

Surgical

*Correct answer: Sharp*

*Sharp debridement is a selective debridement method that uses sterile instruments to remove necrotic wound tissue only and does not require anesthesia. It is appropriate for removing moist necrotic tissue and leathery eschar.*

*Autolytic debridement is a selective debridement method that uses occlusive or semi-occlusive dressings to solubilize necrotic tissue. Mechanical debridement is a nonselective debridement method that uses physical forces to remove contaminated tissue. Surgical debridement is a selective debridement method performed by a physician or surgeon using sterile instruments, which removes most or all necrotic tissue.*

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**24.**

Use the following scenario to answer the question.

Based on the location of the patient's burn, which of the following is the physical therapist's **GREATEST** concern?

**Restrictive lung disease**

Sepsis

Increased metabolic activity

Acute kidney failure

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*Correct answer: Restrictive lung disease*

*Burn injuries can result from heat, chemicals, electricity, sunlight, or radiation. Burn wounds are classified according to their depth, characteristics, and healing or scarring process. Pulmonary complications may occur from burn injuries, including pulmonary edema due to smoke inhalation, restrictive lung disease due to burns to the trunk, and pneumonia. Because the patient has experienced injuries consistent with the description of third-degree burns to her abdomen and chest, restrictive lung disease is the most appropriate option related to burn location.*

*Sepsis, increased metabolic activity, and acute kidney failure are all major concerns for burn injuries. However, they are not as related to the position of the patient's burn injuries as lung restriction.*

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**25.**

A physical therapist is preparing for an evaluation with a patient in a skilled nursing facility. During the chart review, the therapist notes a condition related to the patient's sebaceous glands. During the physical exam, where will the physical therapist be **LEAST** likely to observe this condition?

**The patient's palms**

The patient's axilla

The patient's posterior thigh

The patient's forehead

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*Correct answer: The patient's palms*

*Sebaceous glands are exocrine glands that are found on all skin surfaces except the soles and palms. Sebaceous glands secrete sebum through hair follicles that defend the skin from fungus and bacteria.*

*Sebaceous glands are normally found everywhere except the soles and palms. This means that the patient's axilla, posterior thigh, and forehead are likely to have sebaceous glands.*

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**26.**

Physical therapy has been ordered for a 68-year-old female patient in a skilled nursing facility. During the evaluation, the therapist notes marked edema in the patient's leg with dark pigmentation and thick, fibrous tissue over the medial malleolus. The patient's pedal pulse is normal and they report little to no pain.

Which of the following is the **MOST** likely cause of the patient's presentation?

**Valvular incompetence**

Chronic arterial insufficiency

Peripheral neuropathy

Ischemic hypoxia

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*Correct answer: Valvular incompetence*

*Valvular incompetence is associated with venous ulcers. Other causes associated with venous ulcers include chronic venous insufficiency, venous hypertension, and a history of Deep Vein Thrombosis (DVT). Indicators such as dark pigmentation, fibrotic tissue, normal pedal pulse, and minimal pain can be helpful in differentiating venous ulcers from arterial ulcers in this scenario.*

*Chronic arterial insufficiency is a cause associated with arterial ulcers. Peripheral neuropathy is a cause associated with diabetic ulcers. Ischemic hypoxia is a cause associated with pressure ulcers.*

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**27.**

A physical therapist is performing an evaluation on a 67-year-old male patient with a known history of cardiovascular disease in a subacute facility. During the physical exam, the therapist notices that a patient's skin color has taken on a new bluish, slate-colored discoloration compared to the recent findings in his medical chart.

Of the following, what is the **MOST** likely explanation for this presentation?

**Congestive heart failure**

Liver disease

Internal hemorrhage

Anemia

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*Correct answer: Congestive heart failure*

*Cyanosis or bluish, slate-colored discoloration of skin could indicate that the patient has a venous obstruction. Cyanosis of the skin could also indicate that the patient has congestive heart failure, advanced lung disease, congenital heart failure, or is lacking in oxygen. Since this patient has a known history of cardiovascular disease, congestive heart failure may be more likely.*

*Skin that has a cherry-red appearance is indicative of liver disease. Pallor, or paleness of the skin, might indicate an internal hemorrhage, anemia, or a lack of exposure to sunlight.*

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**28.**

Use the following scenario to answer the question.

A physical therapist assesses the patient's ankle-brachial index and observes a reading of 0.5. Which of the following is **MOST** appropriate regarding compression?

**All sustained compression is contraindicated**

High compression is contraindicated

High compression is indicated

The lowest effective compression is indicated

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*Correct answer: All sustained compression is contraindicated*

*Venous ulcers can occur anywhere in the lower leg and are associated with chronic venous insufficiency, valvular incompetence, and venous hypertension. Venous ulcers typically present with exudate and are rarely associated with diminished pedal pulses, although this patient's ABI is low. For patients with venous ulcers, high compression is contraindicated with  $ABI < 0.7$ , and all sustained compression is contraindicated with  $ABI < 0.6$ . Because the patient's ABI is 0.5, all sustained compression is contraindicated.*

*High compression is indicated with  $ABI > 0.7$  and contraindicated with  $ABI < 0.7$ . The lowest level of effective compression is preferred when possible for patients with  $ABI > 0.6$ .*

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**29.**

A physical therapist is performing an evaluation on a 67-year-old male patient in a skilled nursing facility. During the physical exam, the therapist notes small, grainy skin growths on the patient's hands and fingers. The patient notes that these occur frequently and often feel better if he uses an ice pack on them.

What is the **MOST** likely condition the therapist is observing?

**Warts**

Tinea pedis

Cellulitis

Impetigo

*Correct answer: Warts*

*Warts are a common, benign infection caused by Human Papillomaviruses (HPVs). Warts typically present as small bumps which often appear on an individual's hands, fingers, or feet. Transmission occurs through direct contact.*

*Impetigo is a superficial skin infection caused by staphylococci or streptococci. It is a bacterial infection. Cellulitis is characterized by inflammation of cellular or connective tissue of the skin and tends to be poorly defined and widespread. Cellulitis is commonly characterized by infection from streptococcal or staphylococcal bacteria. Tinea pedis, commonly known as athlete's foot, is a fungal infection of the foot. It typically appears between the toes. Athlete's foot causes erythema, inflammation, pruritus, itching, and pain.*

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