# **Guided Lecture Notes, Chapter 29, The Integumentary System**

Learning Objective 1. List the layers of the skin. (Refer to PowerPoint slides 2 to 8.)

### Explain how the integumentary system gets its name (from the Latin word integumentum).

### Describe the layers of the skin. Discuss the characteristics and functions of the epidermis, the dermis, the subcutaneous tissue, and the substances produced by the cells, keratin and melanin.

### Have the students observe the color of the hair and eyes of at least five students in the class, and state whether each person has “less” or “more” melanin.

### Explain the terms jaundice, pallor, flushing, and cyanosis. Explain that a change in skin color should be immediately reported to the nurse because it may indicate a serious health problem.

### Have learners refer to learning activities located at the end of the chapter.

Learning Objective 2. Describe the accessory structures of the skin. (Refer to PowerPoint slides 9 to 14.)

### State that the integumentary system is made up of the skin and the accessory structures or appendages.

### List the accessory structures of the skin.

### Explain the functions of the sebaceous glands.

### Explain the functions of the sweat glands. Explain the difference between eccrine and apocrine glands.

### Explain the characteristics of hair.

### Explain the characteristics and the functions of nails.

### Have learners refer to learning activities located at the end of the chapter.

Learning Objective 3. Discuss the major functions of the integumentary system. (Refer to PowerPoint slides 17 to 21.)

### List the functions of the integumentary system.

### Emphasize that the body’s first line of defense against the invasion of harmful microbes is intact skin.

### Explain the three important ways in which the integumentary system helps to maintain the body’s homeostasis.

### Explain the process that shows how skin maintains the body’s fluid balance.

### Explain how the skin helps regulate body temperature. Consider drawing a comparison between opening or closing a window to cool down or warm up a house, and the way the body works to cool or heat itself.

### State that, in addition to the three functions mentioned above, the skin is capable of sensation, vitamin D production, and elimination and absorption of material.

### Have learners refer to learning activities located at the end of the chapter.

Learning Objective 4. Describe how normal aging processes affect the integumentary system. (Refer to PowerPoint slides 22 to 27.)

### Discuss the effects of aging on the integumentary system with regard to the changes that occur in physical appearance.

### Explain that knowledge of the normal changes that occur in the body with aging will allow the nursing assistant to provide better care for elderly patients or residents.

### Discuss the effects of aging on the integumentary system with regard to fragile, dry skin. Emphasize that the skin of older people can be damaged very easily, so it is important to use care when assisting with repositioning, dressing, and other activities. Point out that the use of lotion after bathing is often recommended for older people to help seal in moisture.

### Discuss the effects of aging on the integumentary system with regard to the thickening of the nails. Remind students that this is why a podiatrist or nurse is usually responsible for trimming an older person’s toenails.

### Discuss the effects of aging on the integumentary system with regard to the less efficient temperature regulation that occurs as people age. Emphasize that, as a result, older people are very susceptible to heat-related problems, such as heat stroke.

### Have learners refer to learning activities located at the end of the chapter.

Learning Objective 5. Explain how pressure ulcers are formed and what conditions may increase a patient’s or resident’s risk of developing a pressure ulcer. (Refer to PowerPoint slides 30 to 40.)

### Explain the term pressure ulcer, where pressure ulcers are likely to occur, and how they develop.

### Explain the term necrosis.

### Define the term pressure points and list the most common sites for pressure ulcers to form.

### State that poor mobility is the basic cause of all pressure ulcers, but the presence of other risk factors such as advanced age, poor nutrition and hydration, incontinence, cardiovascular and respiratory problems, and friction and shearing injuries place the person at greater risk of getting pressure ulcers.

### Explain the four stages in which pressure ulcers develop.

### Have learners refer to learning activities located at the end of the chapter.

Learning Objective 6. Describe how the nursing assistant helps to prevent residents and patients from developing pressure ulcers. (Refer to PowerPoint slides 41 to 50.)

### Emphasize that the nursing team must make every effort to prevent a pressure ulcer from forming. Stress that pressure ulcers are very painful, very difficult to treat, and may be fatal; therefore, prevention is always the best approach. Discuss the different ways in which a nursing assistant can help keep a person’s skin healthy.

### Describe the different types of special beds used to help avoid problems associated with prolonged bed rest and immobility. Highlight the advantage of each type.

### Have learners refer to learning activities located at the end of the chapter.

Learning Objective 7. Describe the different types of wounds that a patient or resident might have. (Refer to PowerPoint slides 51 to 79.)

### Describe the types of wounds that a patient or a resident might have. List a few examples of intentional and unintentional wounds.

### Discuss the wound healing process and state the factors that affect it.

### Explain that the wound must be closed to prevent body from infection. Emphasize that if a wound is left alone to heal, the risk of infection and scarring increases; however, sometimes there are advantages to doing this. Describe first-, second-, and third-intention wound healing.

### Explain that wound drains are often used to allow blood and other fluids to flow out of the wound because blood or fluid that is allowed to collect in a wound can promote infection, thereby delaying the healing process.

### Explain that dressings are applied to wounds to prevent microbes from entering the body, to keep the wound dry during procedures such as bathing, or to absorb drainage from the wound. List the factors that help to determine what type of dressing is used.

### Show students the examples of different types of dressings and wound drainage systems.

### Discuss how burns can cause damage to skin, muscles, and bones. Explain that burns are classified according to the depth of the damage caused, and list the different types of burns.

### Discuss the different types of lesions.

### Have learners refer to learning activities located at the end of the chapter.

Learning Objective 8. Discuss the nursing assistant’s duties regarding wound care. (Refer to PowerPoint slides 60, 61, 80 to 82.)

### Discuss the nursing assistant’s duty regarding wound care for a person who has a drain.

### Discuss the role of a nursing assistant in caring for a person with skin lesions.

### Have learners refer to learning activities located at the end of the chapter.

Learning Objective 9. Define terms used to describe skin lesions. (Refer to PowerPoint slides 51, 73 to 79.)

### Define the term wound.

### Describe the terms lesions, rash, dermatitis, eczema, erythema, macules, papules, vesicles, pustules, excoriation, fissure, and ulcer.

### Have learners refer to learning activities located at the end of the chapter.