

Vocabulary

#204 Structure and Function of the Human Integumentary System

1. Absorption –

Definition: The assimilation of one body by another; the act of absorbing.

Benefit: The absorption of one thing into another. Ingredients absorbed by the skin are an example.

Fact: An example is water absorbed by a sponge.

2. Adipose Tissue –

Definition: A protective cushion that gives contour and smoothness to the body.

Fact: A protective cushion that gives contour and smoothness to the body.

Benefit: Also called fat.

3. Apocrine Glands –

Definition: Coiled structures attached to hair follicles found in the underarm and genital areas.

Benefit: These glands are coiled and attached to hair follicles found in the underarms and genital areas. They are sweat glands and scent glands.

Fact: Exocrine glands beginning in the dermis

4. Arrector Pili Muscle

Definition: Small, involuntary muscles in the base of the hair follicle that cause goose flesh when the appendage contracts, sometimes called goose bumps and papillae.

Benefit: Small muscles in the base of the hair follicle that cause goose bumps when the muscle contracts. These are involuntary muscles

Fact: They are small muscles attached to the hair follicles.

5. Barrier Function

Definition:- Lipid matrix that protects the skin's surface. Protective barrier

Vocabulary

#204 Structure and Function of the Human Integumentary System

of the epidermis; the corneum and intercellular matrix protect the surface from irritation and dehydration.

Benefit: Lipid layer that protects the skin's surface. This protects the barrier of the epidermis from irritation and dehydration. The lipid barrier lessens water loss and is important for hydrated skin.

Fact: The layer that protects the skin's surface. This protects the barrier of the epidermis from irritation and dehydration.

6. Ceramides

Definition: Glycolipid materials that are a natural part of skin's intercellular matrix and barrier function

Benefit: Glycolipid materials that are a part of skin's intercellular matrix and barrier function.

Fact: They are waxy lipids.

7. Collagen

Definition: Protein fiber produced by fibroblasts which makes up 70% of the dermis. Fibrous, connective tissue made from protein; found in the reticular layer of the dermis; gives skin its firmness.

Benefit: Protein fiber made by fibroblasts that makes up 70% of the dermis. It is a connective tissue made from protein and found in the reticular layer of the dermis. Collagen gives skin its firmness.

Fact: Main protein found in connective tissue.

8. Corneocytes

Definition: Hardened, waterproof, protective keratinocytes; these "dead" protein cells are dried out and lack nuclei.

Benefit: They are hard waterproof keratinocytes that serve as protection. They are considered dead protein cells.

Fact: They are dried out.

Vocabulary

#204 Structure and Function of the Human Integumentary System

9. Dermal papillae

Definition: Membranes of ridges and grooves that attach to the epidermis; contains nerve endings and supplies nourishment through capillaries to skin and follicles.

Benefit: These are membranes that have grooves that attach to the epidermis. They have nerve endings and nourish the capillaries of the skin and follicles.

Fact: The blood vessels in this layer nourish all hair follicles and bring nutrients to the lower layers of the epidermis.

10. Dermis –

Definition: Live layer of connective tissue below the epidermis. Also known as the derma, corium, cutis, or true skin; support layer of connective tissue, collagen, and elastin below the epidermis.

Benefit: The dermis is the live layer of connective tissue below the epidermis. Also known as the dermis and the skin. It is a supportive layer of connective tissue, collagen, and elastin lying below the epidermis.

Fact: It is between the epidermis and the subcutaneous.

11. Desmosomes –

Definition: The structures that assist in holding cells together. Intercellular connections made of proteins

Benefit: The structures that help in holding cells together. They are connections made of proteins.

Fact: These are structures in which two adjacent cells are attached.

12. Eccrine Glands –

Definition: Sweat gland found all over the body, not attached to hair follicles, and without producing an offensive odor.

Benefit: These are sweat glands found all over the body. They are not attached to the hair follicles. They do not produce an offensive odor.

Vocabulary

#204 Structure and Function of the Human Integumentary System

Fact: They produce fluid secretions.

13. **Elastin** –

Definition: Protein fiber found in the dermis, gives skin its elasticity and firmness

Benefit: Elastin is a protein fiber located in the dermis. It gives skin its elasticity. **Fact:** It is glycoprotein found in connective tissue

14. **Epidermal Growth Factor**

Definition: Abbreviated EGF; stimulates cells to reproduce and heal.

Benefit: It helps cells to reproduce and heal. It is a protein that might be involved in the physical processes of normal cell growth.

Fact: It is abbreviated EGF.

15. **Eumelanin**

Definition: A type of melanin that is dark brown to black in color. People with dark-colored skin mostly produce eumelanin. There are two types of melanin; the other type is pheomelanin.

Benefit: People with dark-colored skin mostly produce eumelanin. A type of melanin that is dark brown to black in color. There are two types of melanin. Another type is pheomelanin.

Fact: Pigment is produced in a specialized group of cells.

16. **Enzymes** –

Definition: Catalysts that break down complex food molecules to utilize extracted energy.

Benefit: Enzymes break down complex food molecules to utilize extracted energy. **Fact:** They are produced by an organism that acts as a catalyst to cause a certain reaction.

17. **Epidermis** –

Definition: The outermost lay of skin; a thin, protective layer with many

Vocabulary

#204 Structure and Function of the Human Integumentary System

nerve endings. Protective layer with many cells, mechanisms, and nerve endings. It is made up of five layers: stratum corneum, stratum lucidum, stratum granulosum, stratum spinosum, and stratum germinativum.

Benefit: The layer of the skin. It is a thin protective layer that contains nerve endings. It is a protective layer made of many cells, and nerve endings. It is made up of five layers: stratum corneum, stratum lucidum, stratum granulosum, stratum spinosum, and stratum germinativum.

Fact: The outermost layer of cells covering the organism.

18. **Excretion** –

Definition: That which is thrown off or eliminated from the body, such as sweat.

Benefit: This term means to eliminate from the body. An example is sweat.

Fact: It is the process of eliminating or expelling waste matter.

19. **Eumelanin**

Definition: A type of melanin that is dark brown to black in color. People with dark-colored skin mostly

Benefit: People with dark-colored skin mostly produce eumelanin. A type of melanin that is dark brown to black in color. There are two types of melanin. Another type is pheomelanin.

Fact: Pigment is produced in a specialized group of cells.

20. **Fibroblasts**

Definition: Cells that stimulate cells, collagen, and amino acids that form proteins.

Benefit: They are cells that stimulate cells, collagen, and amino acids that form proteins.

Fact: Produces collagen and other proteins.

Vocabulary

#204 Structure and Function of the Human Integumentary System

21. Glycation

Definition: Caused by an elevation in blood sugar, glycation is the binding of a protein molecule to a glucose molecule resulting in the formation of damaged, nonfunctioning structures, known as Advanced Glycation End products (a.k.a. AGES). Glycation alters protein structures and decreases biological activity.

Benefit: This is caused by an elevation in blood sugar. Glycation is the binding of a protein molecule to a glucose molecule resulting in the formation of damaged, nonfunctioning structures.

Fact: Glycation alters protein structures and decreases biological activity. sometimes called non-enzymatic glycosylation

22. Hair papillae

Definition: Cone-shaped elevations at the base of the follicle that fit into the hair bulb. The papillae are filled with tissue that contains the blood vessels and cells necessary for hair growth and follicle nourishment

Benefit: Elevations that are shaped like cones at the base of the follicle. They fit into the hair bulb. The papillae are filled with tissue that contains the blood vessels and cells important for hair growth and nourishment.

Fact: They are at the bottom of the hair follicle.

23. Histology –

Definition: Study of the structure and composition of tissue.

Benefit: It is the study of the structure and composition of tissue.

Fact: it is the study of microscopic structure of tissues.

24. Hydrolipidic

UERInc.

Definition: Hydrolipidic film is an oil–water balance that protects the skin's surface.

Benefit: Hydrolipidic film is an oil and water balance that protects the skin's surface.

Vocabulary

#204 Structure and Function of the Human Integumentary System

Fact: It is composed of mainly sweat, sebum and water.

25. Hyaluronic Acid

Definition: Hydrating fluids found in the skin; hydrophilic agent with water-binding properties.

Benefit: This acid is a hydrating fluid found in the skin. It is a hydrophilic agent with water-binding properties.

Fact: Is distributed widely throughout connective tissue, epithelial tissue, and neural tissues.

26. Integumentary System –

Definition: The skin and its necessary organs, such as the oil and sweat sensory receptors, hair, and nails.

Benefit: The skin and its organs. Examples are oil and sweat sensory receptors, hair, and nails.

Fact: The system that protects the body from damage such as loss of water and abrasions from outside.

27. Intercellular (Matrix) Cement –

Definition: Lipids which protect the cells from water loss and provide hydration.

Benefit: They are lipids which protect the cells from water loss and provide hydration to the cell.

Fact: It is an adhesive substance that occurs between some epithelial tissue.

28. Keratin –

UERInc.

Definition: Fiber protein that provides resiliency and protection to the skin. Fibrous protein of cells that is also the principal component of skin, hair, and nails; provides resiliency and protection. Provides resiliency and protection.

Benefit: Keratin is a fiber protein. It provides protection to the skin. This

Vocabulary

#204 Structure and Function of the Human Integumentary System

protein is a bunch of fibrous cells that are also the components of skin, hair, and nails. It provides resiliency, protection, and resiliency

Fact: This fibrous protein forms the main structure for hair.

29. Keratinocytes –

Definition: Soft keratin which produce scale-like cells on the stratum corneum. Epidermal cells composed of keratin, lipids, and other proteins.

Benefit: This keratin produces cells on the stratum corneum that resemble scales. These cells are epidermal cells composed of keratin, lipids, and other proteins. **Fact:** These are found in the outer layer of the skin.

30. Langerhans Immune Cells

Definition: Guard cells of the immune system that sense unrecognized foreign invaders, such as bacteria, and then process these antigens for removal through the lymph system

Benefit: These are the guard cells of the immune system that sense foreign substances. An example is bacteria. They process these antigens for removal through the lymph system.

Fact: Antigen-presenting immune cells.

31. Leukocytes

Definition: White blood cells that have enzymes to digest and kill bacteria and parasites. These white blood cells also respond to allergies

Benefit: These are white blood cells that have enzymes that digest and kill bacteria and also parasites.

Fact: These white blood cells also respond to allergies involved in counteracting foreign substances.

32. Lymph Vessels –

Definition: Located in dermis, these supply nourishment within the skin.

Vocabulary

#204 Structure and Function of the Human Integumentary System

Benefit: They are located in dermis and they supply nourishment for the skin. **Fact:** They are similar to blood plasma.

33. Melanin –

Definition: Defense mechanisms in skin to protect it from the sun.

Benefit: Melanin acts as a defense in skin to protect it from the sun.

Fact: Dark brown to black pigment in the hair, skin and of the eyes in people.

34. Melanocytes –

Definition: Cells that produce pigment granules in the basal layer.

Benefit: These are cells that produce pigment granules in the basal layer.

Fact: They make melanin

35. Melanosomes

Definition: Pigment carrying granules that produce melanin, a complex protein

Benefit: These cells produce pigment that produce melanin which is a protein. **Fact:** They are responsible for color and photo protection.

36. Papillae –

Definition: Small cone-shaped structures at the bottom of hair follicles.

Benefit: Small structures at the bottom of hair follicles that look like cones.

Fact: They are small and vascular at the root of a hair.

37. Papillary Layer –

Definition: Connects the dermis to the epidermis.

Benefit: This layer connects the dermis to the epidermis.

Fact: It is the layer of the dermis that fits under the surface of the

Vocabulary

#204 Structure and Function of the Human Integumentary System

epidermis.

38. Physiology –

Definition: Study of the function of the skin.

Benefit: It is the study of the function of the skin.

Fact: It is the way in which living organisms function

39. Pheomelanin

Definition: A type of melanin that is red and yellow in color. People with light-colored skin mostly produce pheomelanin. There are two types of melanin; the other is eumelanin

Benefit: A type of melanin that is red and yellow. People with light-colored skin mostly produce pheomelanin. There are two types of melanin; the other is eumelanin.

Fact: Pheomelanin is responsible for red hair

40. Pores

Definition: Tube-like opening for sweat glands on the epidermis.

Benefit: Pores that look like tubes and are openings for sweat glands on the epidermis.

Fact: They are small openings in the skin that gases, liquids and microscopic organisms can pass through.

41. Reticular Layer –

Definition: The deeper layer of the dermis, containing proteins that give the skin its strength and elasticity. Supplies the skin with oxygen and nutrients; contains fat cells, blood vessels, sudoriferous (sweat) glands, hair follicles, lymph vessels, arrector pili muscles, sebaceous (oil) glands, and nerve endings

Benefit: This is a deeper layer of the dermis that contains proteins. They give skin strength and elasticity. The reticular layer for example supplies the skin with oxygen and nutrients. It contains fat cells, blood vessels,

Vocabulary

#204 Structure and Function of the Human Integumentary System

sudoriferous (sweat) glands, and hair follicles.

Fact: It is composed of dense connective tissue and fibers made of collagen

42. Retinoic Acid (Retin A) –

Definition: Topical vitamin A prescription cream used to treat acne.

Benefit: It is vitamin A. It is a prescription cream used to treat acne.

Fact: It helps the skin renew itself.

43. Rosacea

Definition: Chronic condition that appears primarily on the cheeks and nose and is characterized by flushing (redness), telangiectasia (distended or dilated surface blood vessels), and, in some cases, the formation of papules and pustules.

Benefit: This is a condition that appears usually on the cheeks and nose and is characterized by redness, and telangiectasia and sometimes has papules and pustules.

Fact: It is thought to be caused by a mite on the skin.

44. Sebaceous Glands –

Definition: Also known as oil glands; protect the surface of the skin. Sebaceous glands are appendages connected to follicles. They secrete oil to keep the skin soft and protected.

Benefit: These glands also known as oil glands and protect the surface of the skin. Sebaceous glands are connected to follicles. They secrete oil to keep the skin soft and protected.

Fact: They lubricate the hair and skin.

45. Sebum –

Definition: Oil that provides protection for the epidermis from external factors and lubricates both the skin and hair. Provides protection from

Vocabulary

#204 Structure and Function of the Human Integumentary System

external factors for the epidermis and lubricates both the skin and hair.

Benefit: Sebum is oil that provides protection to the epidermis from external things and lubricates both the skin and hair.

Fact: It comes from the sebaceous glands.

46. **Secretion** –

Definition: A product manufactured by a gland for a special purpose. Secretions are produced between skin cells and from the sebaceous glands in hair follicles.

Benefit: Secretions are products manufactured by a gland for a reason. Secretions are made between skin cells and from the sebaceous glands.

Fact: These substances are produced and let go by a cell, gland, or organ.

47. **Stratum Corneum** –

Definition: Outermost layer of the epidermis, which is what the esthetician is most concerned with. Also known as horny layer

Benefit: It is the outer layer of the epidermis. The esthetician treats this layer. **Fact:** It is referred to as the horny outer layer.

48. **Stratum Germinativum** –

Definition: First layer of the epidermis above the papillary layer of the dermis, also known as basal layer. Cell mitosis takes place here that produces new epidermal skin cells and is responsible for growth.

Benefit: This is the first layer of the epidermis above the papillary layer. It is also known as the basal layer. Cell mitosis takes place here and makes new epidermal skin cells.

Fact: Deepest layer of the 5 epidermis layers.

49. **Stratum Granulosum** –

Definition: Layer composed of cells resembling granules, which replace cells, shed from the stratum corneum. Layer of the epidermis composed of

Vocabulary

#204 Structure and Function of the Human Integumentary System

cells filled with keratin

Benefit: Layer composed of cells that look like granules. They replace cells, that fall from the stratum corneum.

Fact: It is the layer of the epidermis made of cells filled with keratin..

50. **Stratum Lucidum –**

Definition: Clear layer under the stratum corneum; only found on the palms of hands and soles of feet. Clear, transparent layer of the epidermis thickest on the palms of hands and soles of feet.

Benefit: Found only on the palms of the hands and soles of the feet it is a protective layer.

Fact: This is a clear layer under the stratum corneum.

51. **Stratum Spinosum –**

Definition: Spiny layer above the basal layer; not always listed as a separate layer. Above the stratum germinativum (basal) layer containing desmosomes, the intercellular connections made of proteins.

Benefit: It is the spiny layer above the basal layer. It is not always listed as a separate layer. It is above the stratum germinativum also referred to as the basal layer containing desmosomes. These connections are made of proteins.

Fact: This layer is found between the stratum granulosum and the basal layer

52. **Subcutaneous Layer**

Definition: Also known as hypodermis; subcutaneous adipose (fat) tissue located beneath the dermis; a protective cushion and energy storage for the body

Benefit: This layer is also known as hypodermis layer. It is also called the subcutaneous layer or adipose tissue beneath the dermis. It is a protective cushion and serves as energy storage for the body.

Vocabulary

#204 Structure and Function of the Human Integumentary System

Fact: Subcutaneous means below the skin

53. Subcutis Tissue

Definition: Also known as adipose tissue; fatty tissue found below the dermis that gives smoothness and contour to the body, contains fat for use as energy, and also acts as a protective cushion for the outer skin

Benefit: It is a fatty tissue found below the dermis that gives smoothness and shape to the body. It has fat for used as energy and also acts as a protective layer for the outer skin.

Fact: Another term is the hypodermis.

54. Sudoriferous (sweat) Glands –

Definition: Excretes perspiration regulates body temperature, and detoxifies the body by excreting excess salt and unwanted chemicals.

Benefit: These glands excrete perspiration and regulate body temperature. This is done by excreting salt and chemicals.

Fact: Small tubular structure in the skin producing sweat.

55. T-Cells

Definition: Identify molecules that have foreign peptides and also help regulate immune response.

Benefit: T cells identify molecules that are foreign and also help regulate immune response.

Fact: Processed by the thymus gland.

56. Telangiectasia

Definition: Capillaries that have been damaged and are now larger, or distended, blood vessels; commonly called couperose skin.

Benefit: They are capillaries that have been damaged and are now larger. There are treatments that can reduce or get rid of these.

Vocabulary

#204 Structure and Function of the Human Integumentary System

Fact: They are called couperose skin or spider veins

57. Transepidermal Water Loss

Definition: Abbreviated TEWL; water loss caused by evaporation on the skin's surface

Benefit: Water loss caused by evaporation on the skin's surface.

Fact: Measurement of the amount of water that passes from inside of the body through the epidermal layers.

58. Tyrosinase

Definition: The enzyme that stimulates melanocytes and thus produces melanin

Benefit: This protein enzyme that stimulates melanocytes and thus produces melanin.

Fact: Copper containing enzyme present in plant and animal tissue that catalyzes the production of melanin.

59. UVA Radiation

Definition: Also known as aging rays; longer wavelengths ranging between 320 - 400 nanometers that penetrate deeper into the skin than UVB; cause genetic damage and cell death. UVA contributes up to 95 percent of the sun's ultraviolet radiation

Benefit: UVA rays are known as aging rays. Wearing sunscreen helps absorb them. They are longer wavelengths and penetrate deeper into the skin. These rays cause genetic damage. UVA rays contribute to a great deal of the sun's ultraviolet radiation.

Fact: Invisible rays that are part of the energy that comes from the sun.

60. UVB Radiation

Definition: Also known as burning rays; UVB wavelengths range between 290 - 320 nanometers. UVB rays have shorter, burning wavelengths that are stronger and more damaging than UVA rays. UVB causes burning of

Vocabulary

#204 Structure and Function of the Human Integumentary System

the skin as well as tanning, skin aging, and cancer

Benefit: UVB rays are known as burning rays. A benefit is to protect the skin with topical creams and protective clothing. UVB rays have shorter burning wavelengths that are stronger and more damaging than UVA rays.

Fact: UVB causes burns to the skin as well as tanning, skin aging, and cancer

