Vocabulary

#401 Fundamentals of Skin

1. **Absorption – Fact:** The assimilation of one body by another such as digestion. **Benefit:** The state of being consumed by something. **Benefit:** Skin being able to absorb products will mean that the product was able to penetrate deeper. **Fact**: Gauze is absorbent.
2. **Adipose Tissue – Fact:** A protective cushion that contours the body and adds smoothness. **Benefit**: Also called fat which is we need fat on our bodies for cushion **Fact**: There are different kinds of adipose tissue. **Benefit**: One type of adipose tissue is good in case of starvation.
3. **Apocrine Glands – Benefit:** The glands are coiled and attached to hair follicles. They are found in the underarms and genital areas of the human body. **Fact:** Term used to classify exocrine glands. **Fact**: They can be found in the ear, around the breast, and eyelid. **Benefit**: They help product earwax which is a form of protection for the ear
4. **Arrector Pili Muscle - Benefit:** Tiny involuntary muscles at the base of the hair follicle. They cause goose bumps. These muscles contract and are referred to as sometimes called goose bumps. **Fact:** Small muscles attached to the hair follicles of mammals. **Fact**: When someone is cold the arrector pili muscle contracts causing the "goose bumps". **Benefit**: Fear or low body temperature can cause the muscle to contract.
5. **Barrier Function - Benefit:** Lipid (oil) that protects the skin's surface. It is the protective barrier for the epidermis. The intercellular matrix protects the surface of the skin from irritation and dehydration. **Fact:** The lipid barrier minimizes water loss and is essential for strong hydrated skin. **Fact**: The barrier is very impermeable. **Benefit**: The barrier keeps the skin's moisture in.
6. **Ceramides Benefit:** Glycolipid materials that are a natural part of skin's intercellular mix and barrier function. **Fact:** Waxy lipid molecules. **Fact**: They are in the upper layer of the skin. **Benefit**: Lacking ceramides can leave the skin more susceptible to environmental experiences.
7. **Collagen – Benefit:** It is produced by fibroblasts and called are proteins. It makes up 70% of the dermis. It is a fibrous, connective tissue made from protein. It is found in the reticular layer and gives skin its firmness. **Fact**: Main structural protein found in animal connective tissue. **Fact:** Collagen is a very important protein for hair, nails, and skin. **Benefit:** Collagen can be taken in pill form to help production increase.
8. **Coenocytes Benefit:** They are hard waterproof, keratinocytes. The proteins are dead cells are dried out. **Fact:** Terminally differentiated keratinocytes. **Fact:** Vitamin D allows for the keratinocytes become different. **Benefit:** They are protective.
9. **Dermal Papillae Benefit:** They are membranes of ridges and grooves that attach to the epidermis. They have nerve endings and supply nourishment from capillaries to skin and follicles. **Fact:** The blood vessels in this layer nourish all

	hair follicles and bring nutrients and oxygen to lower layers of the epidermis. **Fact:** The dermal papillae contain collagen. **Benefit:** Dermal papillae helps contour the fingers, palms, soles, and toes of our body to help with grip.
10.	**Dermis – Benefit:** Live layer of connective tissue under the epidermis. Also known as the true skin and support layers of connective tissue, collagen, and elastin. **Fact:** It is between the epidermis and the subcutaneous. **Fact:** It contains dense irregular connective tissues. **Benefit:** This helps with elasticity and resistance to wrinkles and sagging.
11.	**Desmosomes – Benefit:** These are structures that help hold cells together. Intercellular connections made of proteins. **Fact:** These are structures in which two adjacent cells are attached. **Fact:** Gives cells their spiny appearance. **Benefit:** Cell appendages turn into desmosomes.
12.	**Eccrine Glands – Benefit:** These are sweat glands found over the body and not attached to any hair follicles. They do not produce the offensive odor. **Fact:** They produce fluid secretions without removing cytoplasm from these cells. **Fact:** The eccrine gland causes the majority of sweating. **Benefit:** The secretion it produces is odorless and colorless.
13.	**Elastin – Benefit:** Protein in the dermis that gives skin elasticity and firmness. **Fact:** It is glycoprotein found in connective tissue. **Fact:** The protein is actually made to snap back into place after being moves. **Benefit:** Someone whose body produces enough elastin will have good elasticity in their skin. www.annmariegianni.com
14.	**Epidermal Growth Factor Benefit:** EGF stimulates cells to reproduce and heal. It is a protein thought to be involved in the physical processes as normal cell growth. **Fact:** It is abbreviated EGF. **Fact:** EGF is released then picked up by a cell that is ready for growth. **Benefit:** They help in multiplying the cells.
15.	**Eumelanin Benefit:** People with dark-colored skin mostly produce eumelanin. It is melanin that is dark brown to black in color. There are two types of melanin; the other type is pheomelanin. **Fact:** Pigment is produced in a specialized group of cells. **Fact:** The melanin found in skin is also found in hair too. **Benefit:** This pigment gives everyone their skin color.
16.	**Enzymes –Benefit:** Enzymes are catalysts that break down complex food molecules to utilize the energy. **Fact:** A substance produced by a living organism that acts as a catalyst to cause a specific biochemical reaction. **Fact:** Many people who have inherited human diseases have a deficiency of some kind of enzyme. **Benefit:** Enzymes are in every reaction that the cells have.
17.	**Epidermis - Benefit:** The outermost layers of the skin. It is a thin protective layer with many 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. **Fact:** The outermost layer of cells covering an organism. **Fact:** The epidermis contains the melanocytes that give the skin its melanin. **Benefit:** This layer is the skins first level of protection against the environment.
18.	**Excretion – Benefit:** This term means to eliminate from the body. An example is sweat. **Fact:** It is the process of eliminating or expelling waste matter. **Fact:** This

controls the osmotic pressure. **Benefit:** It also keeps out pH balanced out.
19. **Elastin Benefit:** Elastin is a fiber mad of protein found in the dermis. **Fact:** It gives skin its elasticity and firmness. **Fact:** The protein is actually made to snap back into place after being moves. **Benefit:** Someone whose body produces enough elastin will have good elasticity in their skin.
20. **Eumelanin Benefit:** A type of melanin that is dark brown to black in color**. Fact:** People with dark-colored skin mostly have this type. **Fact:** The melanin found in skin is also found in hair too. **Benefit:** This pigment gives everyone their skin color.
21. **Fibroblasts Benefit:** They are cells that stimulate collagen, and amino acids which form proteins for our bodies.. **Fact:** Produces collagen and other proteins. **Fact:** It helps produce a gel-like matrix that fills in spaces between cells and tissues. **Benefit:** When injured they send collagen to the cut to help with the healing process.
22. **Glycation - Benefit:** This is caused by an elevation in blood sugar. Glycation is where a protein molecule binds to a glucose molecule which results in the formation of damaged, nonfunctioning structures. **Fact:** Glycation alters protein structures and decreases biological activity and may be called non-enzymatic glycosylation **Fact:** Glycation has a lot to do with the aging process of skin. **Benefit:** There are nutrients in certain foods that fights back to prevent glycation from taking over.
23. **Hair Papillae - Benefit:** Cone or spike shaped elevations at the base of the follicle and 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. **Fact:** They are at the bottom of the hair follicle. **Fact:** The papillae keeps hair activity going even after it has been there a long time. **Benefit:** It helps in hair growth and cycling.
24. **Histology – Benefit:** It is the scientific study of the structure and composition of tissue. **Fact:** It is the study of microscopic structures of tissues. **Fact:** Understanding tissues and cells is important when working with skin. **Benefit:** Studying histology gives you a better understanding of how everything works.
25. **Hydrolipidic Benefit:** This is a film of an oil and water balance. The importance is it that protects the skin's surface. **Fact:** It is composed of mainly sweat, sebum and water. **Fact:** Its main function is to protect against bacteria. **Benefit:** It stops some bacteria from entering the skin.
26. **Hyaluronic Acid - Benefit:** This is a type of acid and 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. **Fact:** This acid will keep skin looking younger and give the skin a soft feel. **Benefit:** There are products to add the acid back into the skin so those who have experienced reduction of it can start gaining it back.
27. **Integumentary System – Benefit:** The skin and the body organs for example oil and sweat sensory receptors, and hair. **Fact:** The organ system that protects the body from various kinds of damage such as loss of water and abrasions from outside. **Fact:** The integumentary system protects the skin from many things, like

	UV lights and chemicals. **Benefit:** This system allows sweating which removes waste from the body and helps with temperature control.
28.	**Intercellular Cement – Benefit:** They are lipids which protect the cells from water loss and provide hydration to the cell. **Fact:** It is like an adhesive substance that occurs between some epithelial tissues. **Fact:** Keeps epithelial tissues together. **Benefit:** Helps skin from dehydration.
29.	**Keratin – Benefit:** Keratin is a fiber protein that provides strength and protection to the skin. These proteins are cells that are also the principal component of skin, hair, and nails. It provides resiliency, & protection. **Fact:** This fibrous protein forms the main structural constituent or hair, feathers, hoofs, and claws. **Fact:** Keratin is made of polypeptide bonds. **Benefit:** People can put keratin products on skin, hair, and nails to help with growth and health.
30.	**Keratinocytes – Benefit:** This keratin produces scale-like (similar to shingles on a roof) cells on the stratum corneum. These cells are epidermal cells composed of keratin, lipids, and proteins. **Fact:** These are found in the outer layer of the skin. **Facts:** 95% of the cells in the epidermis are keratinocytes. **Benefits:** They help prevent loss of heat and moisture in the body.
31.	**Langerhans Immune Cells - Benefit:** These are the sentry or guard cells of the immune system that sense unrecognized foreign attackers such as bacteria. They process these antigens for removal through the lymph system. **Fact:** Antigen-presenting immune cells. **Fact:** It protects the skin from viral and parasitic infections. **Benefit:** Scientists debate whether the cells are immune stimulatory cells for the skin.
32.	**Leukocytes Benefit:** These are white blood cells. They have enzymes to digest and kill bacteria and also parasites. **Fact:** These white blood cells also respond to allergies involved in counteracting foreign substances and disease. **Fact:** There are 5 classes of leukocytes. **Benefits:** All classes have different ways of protecting the body.
33.	**Lymph Vessels – Benefit:** They are located in dermis. They are the suppliers of nourishment for the skin. **Fact:** They are similar to blood plasma. **Fact:** A thin tube that carries the lymph and white blood cells through the body. **Benefit:** Prevents against infections.
34.	**Melanin – Benefit:** Melanin acts as a defense mechanism in skin to protect it from the sun. **Fact:** Dark brown to black pigment in the hair, skin and iris of the eye in people and animals. **Fact:** There are two types of melanin in the skin. **Benefit:** Darker melanin has a greater ability to protect against UV rays.
35.	**Melanocytes – Benefit:** These are cells that make pigment granules in the basal layer**. Fact:** They make melanin **Fact:** They are found all over the body too. **Benefit:** Melanocytes are even in those who have albinism.
36.	**Melanosomes – Benefit:** These are the cells that produce melanin which is a protein and pigment. **Fact:** They are responsible for color and photo protection. **Fact:** They are tissue-specific organelles made of pigment cells. **Benefit:** They are part of the system that gives color.
37.	**Papillae – Benefit:** These are cone-shaped structures at the bottom of hair follicles. **Fact:** They are small vascular processes at the root of a hair. **Fact:** The

	papillae keeps hair activity going even after it has been there a long time. **Benefit:** It helps in hair growth and cycling.
38.	**Papillary Layer – Benefit:** This layer connects the dermis to the epidermis. **Fact:** It is the layer of the dermis that fit into the inner outside of the epidermis. **Fact:** Provides nutrients for the skin. **Benefit:** They help to regulate body temperature and they help with senses.
39.	**Physiology - Benefit:** It is the study of the functioning of the skin. **Fact:** It is the way in which living organisms function **Fact:** Studying physiology helps with understanding the body. **Benefit:** If doing procedures on the body it is important to understand how organisms function.
40.	**Pheomelanin 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. **Fact:** Pheomelanin has a lower protection rate of UV rays. **Benefit:** Those with pheomelanin skin need to be cautious about sun exposure.
41.	**Pores** – **Benefit:** Pores are small tube-like opening for sweat glands on the epidermis. **Fact:** They are very small openings in the skin through which gases, liquids and microscopic organisms pass. **Fact:** Those who have dry skin have very small pores. **Benefit:** There is machinery that helps penetrate products into the tightest pores.
42.	**Reticular Layer – Benefit:** The deeper layer of the dermis which contains proteins that give skin its strength and elasticity. The reticular layer for example supplies the skin with oxygen and nutrients. It contains fat cells, blood vessels, sudoriferous (sweat) glands, and hair follicles. **Fact:** It is composed of dense irregular connective tissue and collagen fibers. **Fact:** It is dense and closer to the papillary layer. **Benefit:** It is the thickest layer of skin.
43.	**Retinoic Acid (Retin A) – Benefit:** It is topical vitamin A. It is a prescription cream used to treat acne. **Fact:** It helps the skin renew itself. **Fact:** It has many purposes for the skin. **Benefit:** It can help with acne, discoloration, and wrinkles.
44.	**Rosacea – Benefit:** This is a chronic condition that appears mostly on the cheeks and nose and is characterized by redness, telangiectasia (dilated capillaries) and sometimes papules and pustules. **Fact:** It is thought to be caused by a mite on the skin. This redness of the skin and mainly occurs after the age of 30. **Fact:** Some face ear problems from the condition. **Benefit:** Easily controllable once on the right medicines.
45.	**Sebaceous Glands – Benefit:** These glands also known as oil glands which protect the surface of the skin. Sebaceous glands are appendages connected to follicles. They secrete oil to keep the skin protected and also soft. **Fact:** They lubricate the hair and skin. **Fact:** Those with dry skin have underactive sebaceous glands. **Benefit:** There are ways to help activate the sebaceous glands if they are under active.
46.	**Sebum – Benefit:** Sebum is oil that provides protection to the epidermis from external forces and lubricates both the skin and hair. **Fact:** It comes from the sebaceous glands. **Facts:** Pus is made of sebum. **Benefits:** Not all sebum causes bad things.

47.	**Secretion – Benefit:** Secretions are products made by a gland for a special purpose. Secretions are produced between skin cells and from the sebaceous glands. **Fact:** These substances are produced and discharged by a cell, gland, or organ. **Fact:** The body has different things that it secrets. **Benefit:** Secretion can help with regulating body temperature.
48.	**Stratum Corneum – Benefit:** It is the outermost layer of the epidermis which is what the esthetician is most concerned with**. Fact:** Horny outer layer of the skin. **Fact:** It is at least 30 or more layers of cells. **Benefit:** It is the first layer of defense in the epidermis layer.
49.	**Stratum Germinativum – Benefit:** This is the first layer of the epidermis above the papillary layer of the dermis known as the basal layer. Cell mitosis happens here. This creates new epidermal skin cells and is responsible for growth. **Fact:** Deepest layer of the 5 epidermis layers. **Fact:** This layer contains the melanin. **Benefit:** Skin coloring is determined in this layer.
50.	**Stratum Granulosum – Benefit:** The third epidermal layer composed of cells that look like granules. They replace cells, shed from the stratum corneum. Layer of the epidermis composed of cells filled with keratin. Thin layer of cells in the epidermis. **Fact:** It has cells that have shed from the stratum corneum. **Benefit:** Highest layer in the epidermis that has living cells.
51.	**Stratum Lucidum – Benefit:** Clear barrier layer of some sort under the stratum corneum; only found on the palms of hands and soles of feet. It is the clear transparent layer of the epidermis. It is thickest on the palms of hands and soles of feet. Latin term for clean layer. **Fact:** The thickness varies depending on the epidermis. **Benefit:** Keratinocytes do not have boundaries.
52.	**Stratum Spinosum – Benefit:** It is the spiny shaped layer above the basal layer. It is not always listed as its own layer. It is above the stratum germinativum (basal) layer containing desmosomes which is the intercellular connections made of proteins. **Fact**: This layer is found between the stratum granulosum and the stratum basal. **Fact:** Thickness varies on the epidermis. **Benefit:** Nutrients in fluids are exhausted before reaching this layer.
53.	**Subcutaneous Layer – Benefit:** This layer is also known as hypodermis or fat layer. It is also called the subcutaneous layer or adipose (fat) tissue located beneath the dermis. It is considered a protective cushion and energy storage for the body. **Fact:** Subcutaneous means below the skin. **Fact:** Found at the bottom of the reticular layer. **Benefit:** Monitors the body with heat gain or loss.
54.	**Subcutis Tissue – Benefit:** This tissue is known as adipose or fat tissue. It is a fatty tissue found below the dermis that gives smoothness and gives shape to the body. It has fat for use as energy and also acts as a protective cushion for the outer skin. **Fact:** Another term is the hypodermis. **Fact:** It is found in the subcutaneous layer. **Benefit:** It helps the skin cover veins and arteries.
55.	**Sudoriferous (sweat) Glands – Benefit:** These glands excrete perspiration, help regulate the body temperature, and detoxify. This is done by excreting excess salt and unwanted chemicals. **Fact:** Small tubular structure in the skin producing sweat. **Fact:** It is found deep in the dermis. **Benefit:** This removes waste from the body.

56.	**T-Cells – Benefit:** T cells identify molecules that are foreign and also help regulate immune response. **Fact:** Processed by the thymus gland. **Fact:** There are about 20 million T cells in the human skin**. Benefit:** There are more T cells in the skin than in the blood
57.	**Telangiectasia – Benefit:** They are capillaries that have been damaged and are now larger and called distended vessels. **Fact:** They are called couperose skin or spider veins **Fact:** This can be caused by an illness or just damaged capillaries. **Benefit:** This can be healed through certain treatments for appearance purposes.
58.	**Transepidermal Water Loss** – **Benefit:** Water loss caused by evaporation from the skin's surface. **Fact:** Measurement of the quantity of water that passes from inside of the body through the epidermal layer. **Fact:** It can be caused by injury or barrier issues. **Benefit:** Keeping the skin moisturized helps out the dryness it causes the skin.
59.	**Tyrosine – Benefit:** This is a protein enzyme that stimulates melanocytes and produces melanin. **Fact:** Copper containing enzyme present in plant and animal tissue that catalyzes the production of melanin. **Fact:** It is used in skin care products because it can produce melanin. **Benefit:** It is found in a lot of food.
60.	**UVA Radiation – Benefit:** UVA rays are known as aging rays which have long wavelengths and penetrate deeper into the skin than UVB rays. These rays cause genetic damage and eventually cell death. UVA rays contribute to a great percentage of the sun's ultraviolet radiation**. Fact:** Invisible rays that are part of the energy that comes from the sun. **Fact:** Darker melanin has a better protection against the UVA rays. **Benefit:** Sunscreen helps prevent penetration
61.	**UVB Radiation – Benefit:** UVB rays are known as burning rays. UVB rays have short burning wavelengths that are stronger and more damaging than UVA rays. **Fact:** UVB causes burning of the skin as well as tanning, skin aging, and cancer. **Fact:** Can cause skin cancers. **Benefit:** There are some ways to reverse some of the damage done to the skin from the sun.