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| **September 12: Tissues/Integument**  *Greg Chen, HTH SCI 2F03* |  |
| What are the four tissue types? | .Epithelial, connective, muscle, nervous |
| Which is bigger: centrioles or centrosomes? | Centrosomes// – they are made of a pair of centrioles |
| What are the two types of membrane proteins that facilitate passive transport? | .Channel proteins and Carrier proteins |
| What intracellular component help the plasma membrane maintain shape? | Cytoskeleton |
| In increasing order of size, what 3 classifications of proteins make up the cytoskeleton? | .Microfilaments, intermediate filaments, microtubules |
| What are 5 types of cell junctions? | .Gap junctions, desmosomes, hemidesmosomes, tight junctions, adherens junctions |
| Do Gap Junctions or Desmosomes allow things to travel between cytoplasms? | Gap junctions |
| What structure connects cells to the extracelluar matrix? | Hemidesmosomes |
| Which two cell junctions use cadherins in plaque (dense proteins) to link cells? | .Desmosomes, adherens junctions |
| What intracellular component do cadherins in desmosomes attach to? | Intermediate filaments |
| What intracellular component do cadherins in adherens junctions attach to? | Microfilaments |
| What type of protein do desmosomes use? | Cadherins |
| What cell junction is used to waterproof the intestine? | Tight junctions |
| What cell junction creates an even tighter connection than tight junctions? | Adherens junctions |
| What are 3 components of ECM? | .Structural proteins, specialized proteins, proteoglycans |
| What do "specialized" proteins in ECM do? | .Signal cells to alter function |
| Fibronectin and laminin are examples of what component of the ECM? | Specialized proteins |
| What component of ECM affects water level of tissue? | Protetoglycans |
| What type of membrane protein connects ECM to the cytoskeleton? | Linker proteins | linker |
| What type of tissue acts as covering, or lining? | Epithelial |
| What type of tissue acts as support? | Connective |
| What type of tissue aids movement? | Muscle |
| What type of tissue is generally for control of other tissues? | Nervous |
| What is the term used when an epithelium has a single layer? | Simple |
| What is the term used when an epithelium has multiple layers? | Stratified |
| What is the name for a flattened out cell? | Squamous |
| What type of cell is generally as tall as it is wide? | Cuboidal |
| What type of cell is generally skinny and tall? | Columnar |
| What is the layer between the epithelium and connective tissue? | Basement membrane |
| What are four functions of connective tissue? | .Binding/support, protection against infection, repair of tissue damage, insulation |
| Which of the four tissue types is blood? | Connective |
| Which of the four tissue types is adipose tissue? | Connective |
| Which of the four tissue types is bone? | Connective |
| Which of the four tissue types is cartilage? | Connective |
| What are four subdivisions of connective tissue? | .Connective tissue proper, cartilage, bone, blood |
| How is connective tissue proper subdivided? | .Loose and Dense connective tissue |
| How is Loose connective tissue subdivided? | .Areolar, reticular (filtering type functions, e.g. lymph nodes), adipose tissues |
| Which type of loose connective tissue is widely distributed and provides strength, elasticity, and support? | Areolar |
| Which type of loose connective tissue makes up lymph nodes and has filtering functions? | Reticular |
| How is Dense connective tissue subdivided? | .Regular, irregular, elastic |
| How is cartilage subdivided? | .Hyaline, fibrocartilage, elastic cartilage |
| Mast cells, macrophages, fibroblasts, plasma cells, and adipose cells are in loose or dense connective tissue? | Loose |
| What type of dense connective tissue forms tendons and most ligaments? | Regular |
| What type of dense connective tissue is made of mostly collagen, usually comes in sheets, and forms fasciae and bone periostium? | Irregular |
| What type of dense connective tissue makes up lungs? | Elastic |
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| **Skin** |  |
| What is the name of the system, latin for covering, which encompasses skin, nails, and hair? | Integumentary system |
| What is the adjective for blue skin? | Cyanotic |
| What is the condition of having yellow skin? | Jaundice |
| What is the condition of having redness of the skin? | Erythema |
| What is the condition of having whiteness of the skin? | Pallor |
| What organ is commonly associated with jaundice when dysfunctional? | Liver |
| What chemical is commonly associated with jaundice? | Biliruben |
| What is the name for having not enough blood cells to an area? | Anemia |
| What are six functions of the skin? | .1) Thermoregulation  2) Blood reservoir  3) Protection  4) Cutaneous sensations  5) Metabolism  6) Excretion and absorption (minor) |
| What do blood vessels near the skin do to decrease body temperature? | Dilate |
| What do blood vessels near the skin do to increase body temperature? | Constrict |
| What is the blood vessel structure that sticks into surface of the skin? | Dermal papillary loop |
| The dermis carries approximately what percent of total blood volume? | 8-10% | 8-10 | 8 to 10 |
| How do oily secretions on the skin protect the body? | .Waterproofs the body; creates an acidic environment that repels microbes |
| What is a feature of skin which helps it withstand abrasion? | Stratification// (top layers can break off, etc) |
| What is the specialized dentritic cell type in the skin? | Langerhans cells |
| What cell type in the skin engulfs invading cells? | Macrophages |
| What vitamin's precursor requires UV exposure to be synthesized? | Vitamin D |
| What two organs 'active' vitamin D? | .Liver, kidney |
| From the outside in, what two layers make up the skin, and what is the layer below that? | .Epidermis, dermis, subcutaneous layer |
| True or false: the epidermis is thicker on the eyelids than on the palms and soles | False |
| What are the five layers of the epidermis? | .Stratum corneum (cornified)  Stratum lucidum (clear)  Stratum granulosum (granular)  Stratum spinosum (spiny)  Stratum germinativum (dividing), aka stratum basale |
| Which of the four tissue types is the dermis? | Connective |
| What is the reason why Stratum lucidum is clear? | Fat |
| Which epidermal layer is the transition between living and dead cells? | Stratum granulosum |
| What is the thickest layer of the epidermis? | Stratum spinosum |
| The Stratum spinosum is spiny because of what type of cell junction linking them together? | Desmosomes |
| What epidermal cell layer is closest to the dermis? | Stratum basale | Stratum germinativum |
| What is the name of the part of the epidermis that invaginates into the dermis? | Epidermal peg |
| What is the name of the extensions of the dermis into the epidermis? | Dermal papilla | Dermal papillae |
| What is the general name for a nipple-like structure? | Papilla |
| What is a fingerprint a type of? | Epidermal ridge |
| Blisters are caused by extracellular fluid accumulating where in the skin? | Dermal-epidermal junction |
| What cell makes keratin in the epidermis? | Keratinocyte |
| What type of filament is keratin? | Intermediate filaments | Intermediate |
| What type of cell junction binds keratinocytes together in the stratum spinosum together? | Desmosomes |
| What cell makes malanin in the epidermis? | Melanocyte |
| What cell in the epidermis signals neurons to fire? | Merkel cell |
| Does the epidermis have blood vessels? | No |
| What chemical in the skin protects against UV? | Melanin |
| What three compounds contribute to skin colour? | .Melanin, carotene, hemoglobin |
| Freckles and moles contain a concentration of what cell type? | Melanocytes |
| What is not produced in an individual with alibism? | Melanin |
| What condition is characterized by a loss of skin pigment in patches? | Vitiligo |
| What is the name for a cancerous mole? | Melanoma |
| What are the ABCD's of melanomas? | .Asymmetrical, Borders uneven, two or more Colours, larger than 6mm |
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