

# Anatomy: Dr. Mohamed El-Badry

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## ملخص الجلد والعضلات (كامل)

QUESTION	ANSWER
What is the location of the skin?	The outer layer covering the body.
What are the parts of the skin?	<p>➤ <b>EPIDERMIS:-</b></p> <ul style="list-style-type: none"> <li>-Keratinized stratified squamous epithelium.</li> <li>-Formed of several layers of cells.</li> <li>-Uppermost layer is thick and formed of keratinized cells.</li> <li>-Basal layer contains melanocytes to form melanin pigments.</li> <li>-Ectodermal in origin</li> </ul> <p><b>1. Thick epidermis:</b></p> <ul style="list-style-type: none"> <li>✓ In Palms of the hands and soles of the feet</li> <li>✓ To withstand the wear and tear that occurs in these regions.</li> </ul> <p><b>2. Thin epidermis:</b></p> <ul style="list-style-type: none"> <li>✓ Anterior surface of the arm and forearm</li> </ul> <p>➤ <b>DERMIS:-</b></p> <ul style="list-style-type: none"> <li>- Deep connective tissue layer.</li> <li>- Contains many blood vessels, lymphatic vessels and nerves.</li> <li>- Mesodermal in origin.</li> </ul> <p>➤ <b>Sebaceous Glands (Appendage of the skin):</b></p> <ul style="list-style-type: none"> <li>✓ Pours sebum; an oily material that helps preserve flexibility of emerging hair.</li> <li>✓ It also oils surface of epidermis around mouth of follicle.</li> </ul> <p>➤ <b>Sweat Glands (Appendage of the skin):</b></p> <ul style="list-style-type: none"> <li>✓ Most deeply penetrating structure of all epidermal appendages.</li> </ul>
What is the content of dermis?	<ul style="list-style-type: none"> <li>• blood vessels</li> <li>• lymphatic vessels</li> <li>• nerves</li> </ul>
What are the appendages of the skin?	Nails, hair follicles, sebaceous glands and sweat glands.
Where is the dermis thinnest?	on anterior than posterior surface and in women than on men

<b>Why is the Palms of the hands being thick epidermis?</b>	To withstand the wear and tear that occurs in these regions.
<b>What is meaning of nails?</b>	Keratinized plates on dorsal surfaces of tips of fingers and toes.
<b>What are the parts of nails?</b>	It has root of the nail, nail folds and nail bed.
<b>What are the parts of hairs?</b>	Hair follicles, hair bulbs and hair papilla.
<b>What are the sites of skin having no hairs?</b>	Lips, Palms of the hands, sides of the hands, sides of fingers, sole of the feet, sides of the feet, sides of the toes, Glans penis, Clitoris, Labia minora and Internal surface of the labia majora.
<b>What are the sites of skin having no sweat glands?</b>	Red margin of the lips, nail beds, glans penis and clitoris.
<b>What is (Rule of Nines)?</b>	9% head and neck, 18% upper limbs (9X2), 36% lower limbs (18X 2), 18% front of the trunk, 18% back of the trunk, 1% external genitalia = <b>100%</b>
<b>What does Skin Creases attach to?</b>	attached to underlying structures by fibrous tissue.
<b>What is the Function of The Skin?</b>	<ol style="list-style-type: none"> <li><b>1. Protection:</b> of the body from environmental effects such as fluid loss, ultraviolet radiations.</li> <li><b>2. Sensation</b> (pain, temperature, touch) by way of superficial nerves and their sensory endings</li> <li><b>3. Heat-regulation:</b> through dilation or constriction of superficial blood vessels.</li> <li><b>4. Synthesis and storage of vitamin D.</b></li> <li><b>5. Containment for the body's structures</b> and vital substances preventing dehydration.</li> </ol>
<b>What is the location of FASCIAE?</b>	lie between the skin and underlying muscles and bones.
<b>What are the parts of FASCIAE?</b>	<ul style="list-style-type: none"> <li>➤ <b>SUPERFICIAL FASCIA (SUBCUTANEOUS TISSUE):</b> <ul style="list-style-type: none"> <li>✓ Mixture of loose areolar and adipose tissues that unites dermis of skin to underlying deep fascia.</li> <li>✓ Consists of: Superficial fatty layer and Deep membranous layer</li> </ul> </li> <li>➤ <b>DEEP FASCIA:</b> <ul style="list-style-type: none"> <li>✓ Membranous layer of connective tissue that invests muscles and other deep structures.</li> </ul> </li> </ul>
<b>Why does the Extensions of the investing layer pass deeply?</b>	to form intermuscular septa and sheaths for neurovascular bundles such as axillary sheath.

<p><b>What does the Different forms and names of deep fascia?</b></p>	<p><b>In some places</b>, it splits to enclose structures as glands; submandibular and parotid glands.  <b>In anterior wall of axilla</b>, it forms <u>clavipectoral fascia</u>.  <b>In thorax and abdomen</b>, <u>a thin film of areolar tissue</u> covering the muscles and aponeurosis.  <b>In thigh</b>, it is called <u>fascia lata</u>.  <b>In region of the joints</b>, it is thickened to form <u>bands</u> to hold the underlying tendons in position <b>or</b> to serve as <u>pulleys</u> around which the tendons may move.</p>
<p><b>Where do Deep fascia, contracting muscles and venous valves work together?</b></p>	<p>They work together as Musculo-venous pump to return blood to heart.</p>
<p><b>What are Sites of superficial fascia having numerous bundles of collagen fibers?</b></p>	<p>Scalp, back of the neck, Palms of the hands, Sole of the feet.</p>
<p><b>What are Sites of superficial fascia devoid of adipose tissue?</b></p>	<p>Eyelids, Auricle of the ear, Penis, Scrotum, Clitoris, Nipple and areola of the breast.</p>
<p><b>What are Functions of Superficial Fascia?</b></p>	<ol style="list-style-type: none"> <li>1) Acts as a distributing layer in which blood vessels, lymphatics and nerves can travel before entering the dermis.</li> <li>2) Allows for mobility of the skin on underlying structures particularly over the joints since its loss as in severe burns can lead to restriction of movement.</li> <li>3) Provides a depot for food storage.</li> <li>4) Forms a useful insulating layer over body.</li> </ol>
<p><b>What is the definition of muscles?</b></p>	<p>Muscles represent fleshy tissue of the body which have a power of contraction.</p>
<p><b>What are the types of muscles?</b></p>	<ol style="list-style-type: none"> <li>1. Voluntary, skeletal, striated.</li> <li>2. Unvoluntary, unstripped, smooth plain group.</li> <li>3. The cardiac muscle.</li> </ol>
<p><b>What is description of Voluntary muscles?</b></p>	<ul style="list-style-type: none"> <li>✓ Under control of will and desire. skeletal</li> <li>✓ Composed of groups of parallel bundles of muscle fibers→ striated or stripped.</li> <li>✓ Represent more than 40% of whole-body weight.</li> <li>✓ Total number is 620 muscles all over the body.</li> </ul>



<b>What is the Structure of Voluntary Muscles?</b>	<p><b>Origin:</b> Beginning part of the muscle          - Rigid and less mobile part          - Single or multiple</p> <p><b>Insertion:</b> Terminal mobile part, attached to bone, skin, cartilage or contralateral muscle; lumbricals, levator ani.</p> <p><b>Belly of the muscle:</b> Fleshy part of the muscle.</p> <p><b>Tendon of the muscle:</b> non-fleshy part by which the muscle is commonly inserted.</p>
<b>What is Forms of tendons?</b>	<ol style="list-style-type: none"> <li>1. Cord-like</li> <li>2. Sheet-like (aponeurosis)</li> <li>3. Raphe: interdigitate fibers</li> </ol>
<b>What are Forms of Voluntary Muscles? (According to shape and arrangement of fibers)</b>	<ol style="list-style-type: none"> <li>1- <b>Strap or parallel muscles:</b> Parallel fibers; sartorius</li> <li>2- <b>Quadrante muscle:</b> pronator quadratus</li> <li>3- <b>Triangular muscle:</b> temporalis</li> <li>4- <b>Fusiform muscle:</b> biceps, flexor carpi radialis.</li> <li>5- <b>Pennate muscle:</b> <ol style="list-style-type: none"> <li>a. Uni-pennate</li> <li>b. Bi-pennate</li> <li>c. multi-pennate</li> <li>d. Circum-pennate</li> </ol> </li> </ol>
<b>muscles may work in: .....</b>	<ol style="list-style-type: none"> <li>1. Prime mover</li> <li>2. Antagonist</li> <li>3. Fixator</li> <li>4. Synergist</li> </ol>
<b>What are Characters of Unvoluntary muscle?</b>	<ul style="list-style-type: none"> <li>✓ Not controlled by will</li> <li>✓ Not attached to bones</li> <li>✓ Their fibers are smooth, plane, unstripped</li> <li>✓ They contract and relax in ring fashion (peristalsis)</li> <li>✓ Examples: Smooth muscles in wall of gastrointestinal tract, respiratory tract and wall of the blood vessels</li> </ul>
<b>What is description the cardiac muscle?</b>	<ul style="list-style-type: none"> <li>✓ Not voluntary, not smooth</li> <li>✓ Single and the most important muscle in the body</li> <li>✓ Contracts in rhythmic fashion (pumping).</li> </ul>

**NOTES**

Important photos

