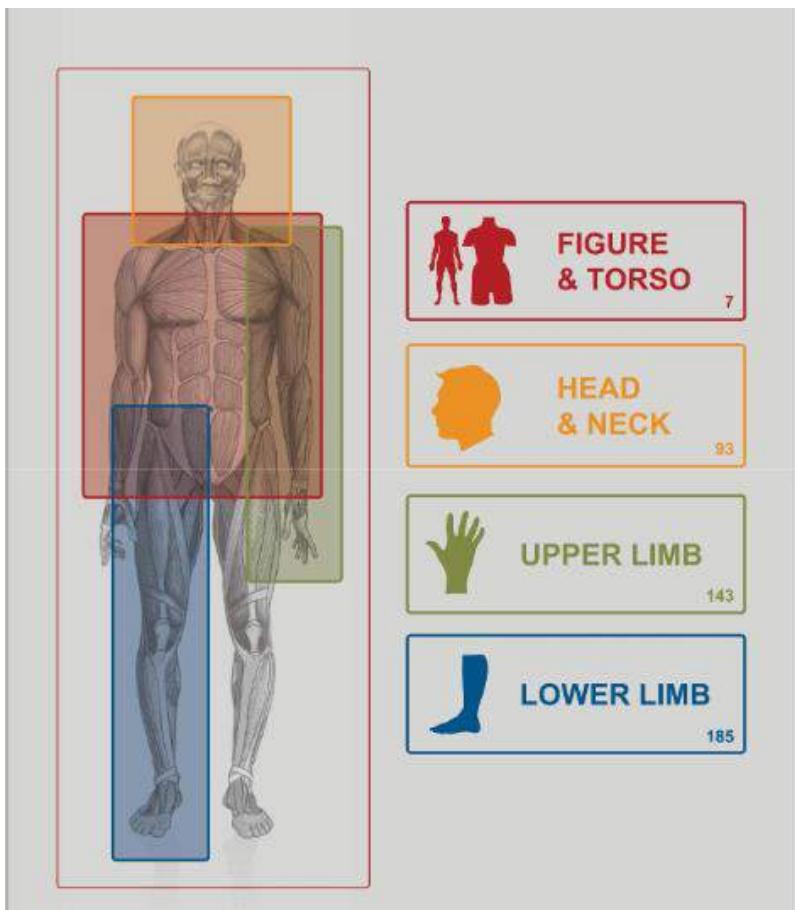
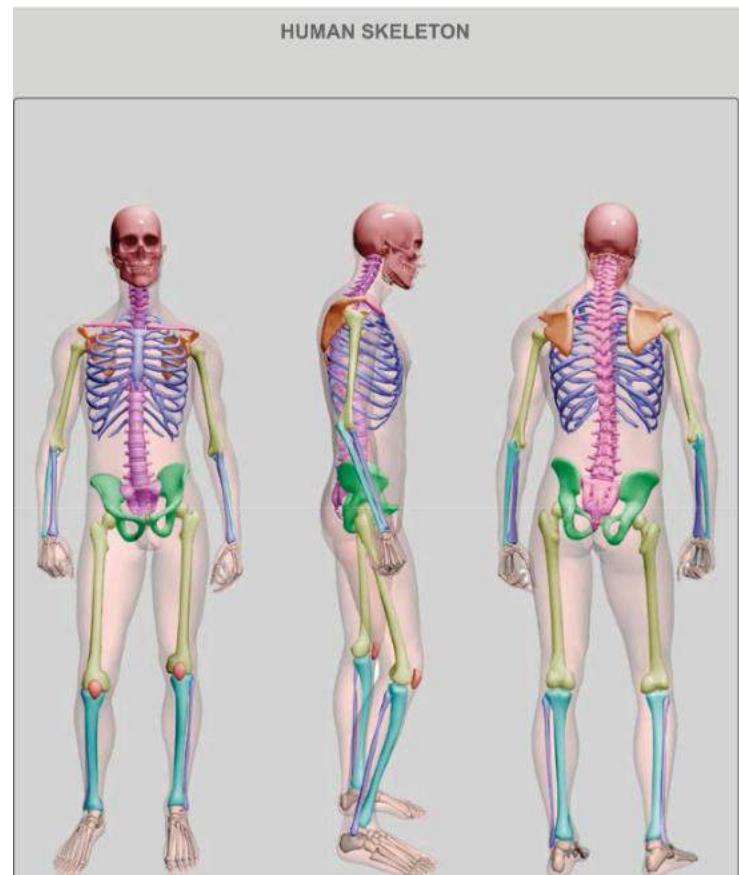


## Anatomical Landmarks :





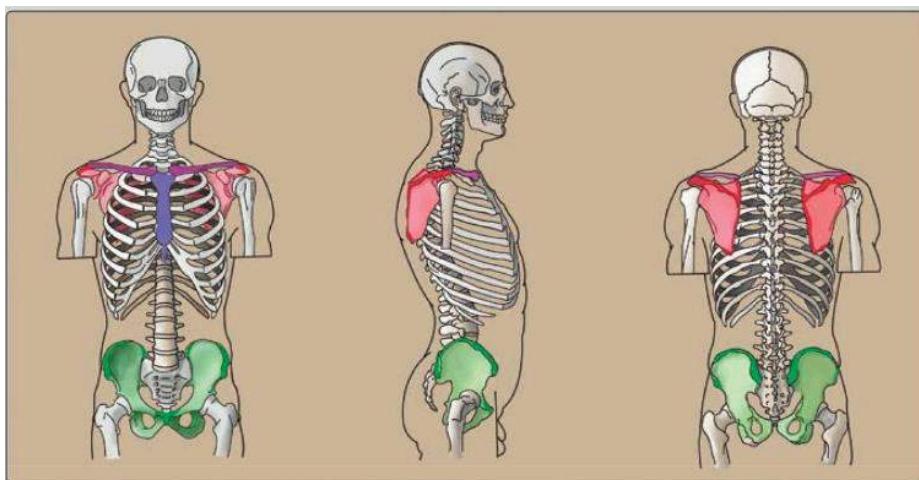
**Human Skeleton :**

## Important Landmarks of Torso :

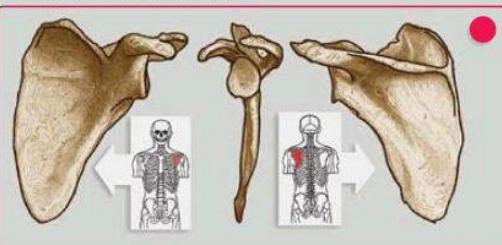
IMPORTANT LANDMARKS OF TORSO



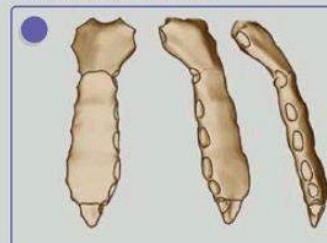
PROMINENT SUBCUTANEOUS PROTRUSIONS – GENERALLY POINTS OF BONE, THOUGH SOMETIMES FORMED BY ENTIRE BONES, ARE CALLED BONY LANDMARKS OR SIMPLY LANDMARKS. THEY MAY SERVE AS IMPORTANT PROPORTIONAL MEASURING POINTS OF THE BODY. LANDMARKS ARE THE KEY TO UNDERSTANDING THE EXACT POSITION OF THE ENTIRE SKELETON, WHICH FOR THE MOST PART IS EMBEDDED IN THE SOFT TISSUES OF THE BODY.



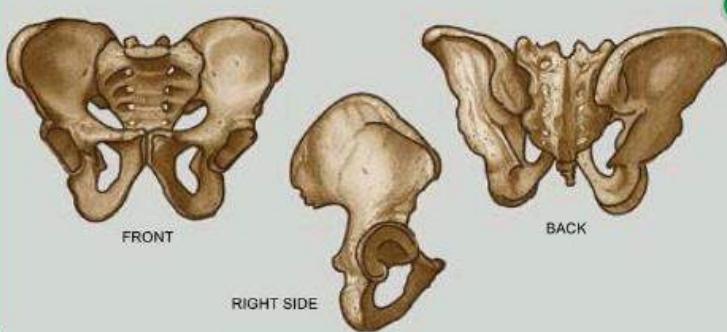
SHOULDER BLADE (SCAPULA)



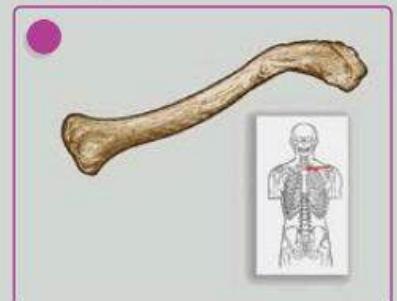
CHEST BONE (STERNUM)



PELVIS



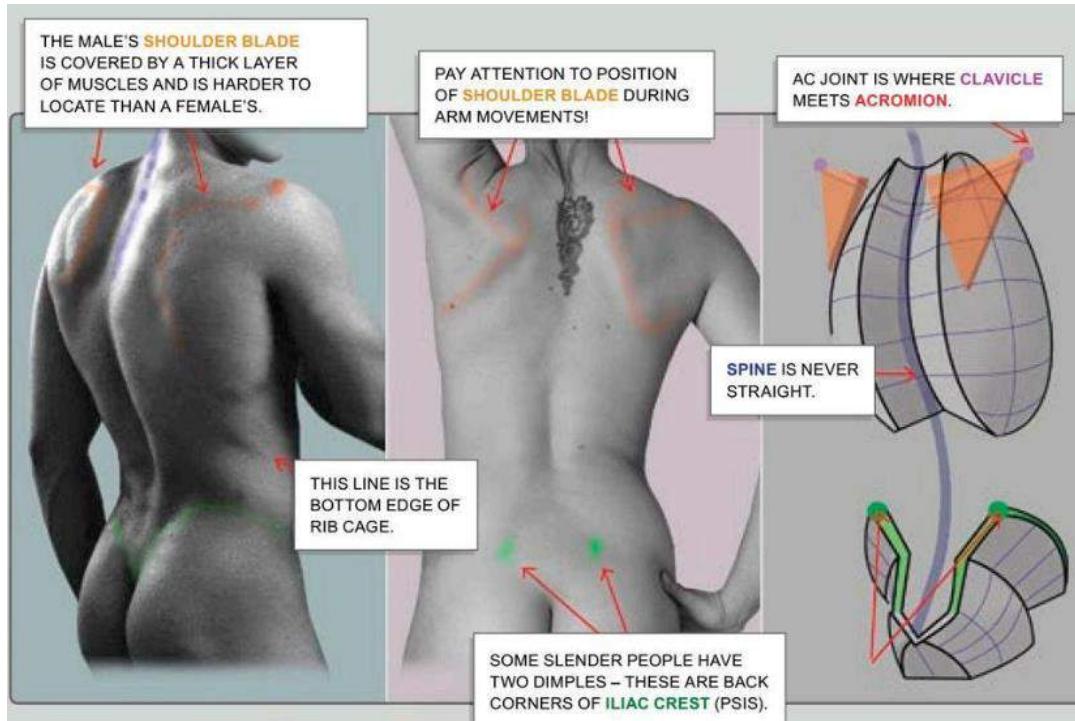
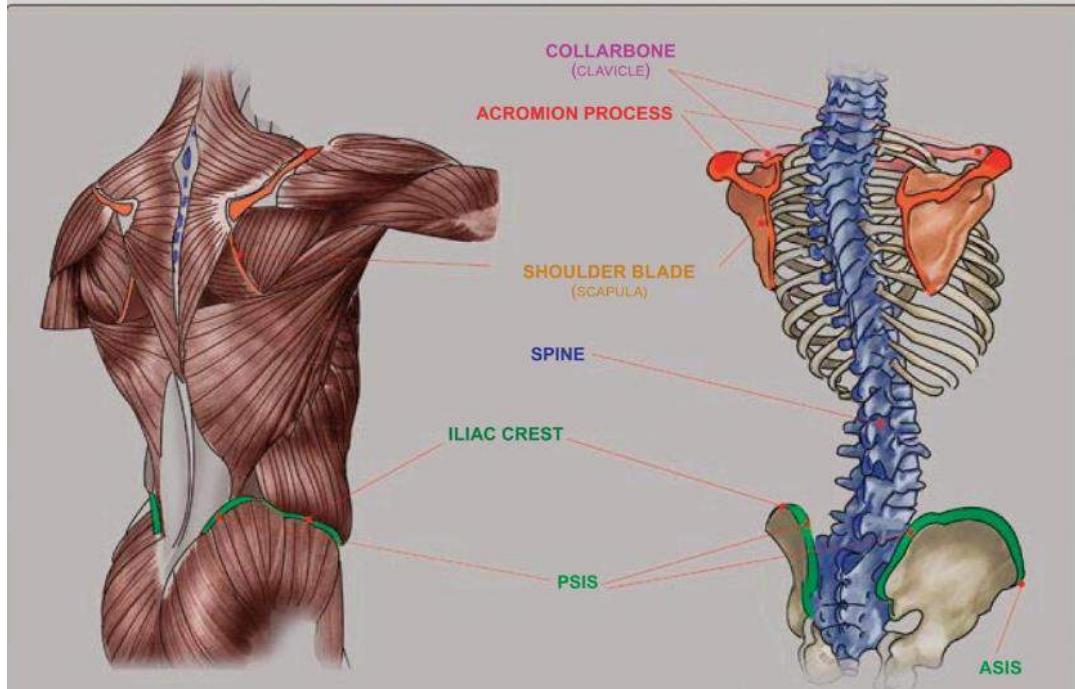
CLAVICLE



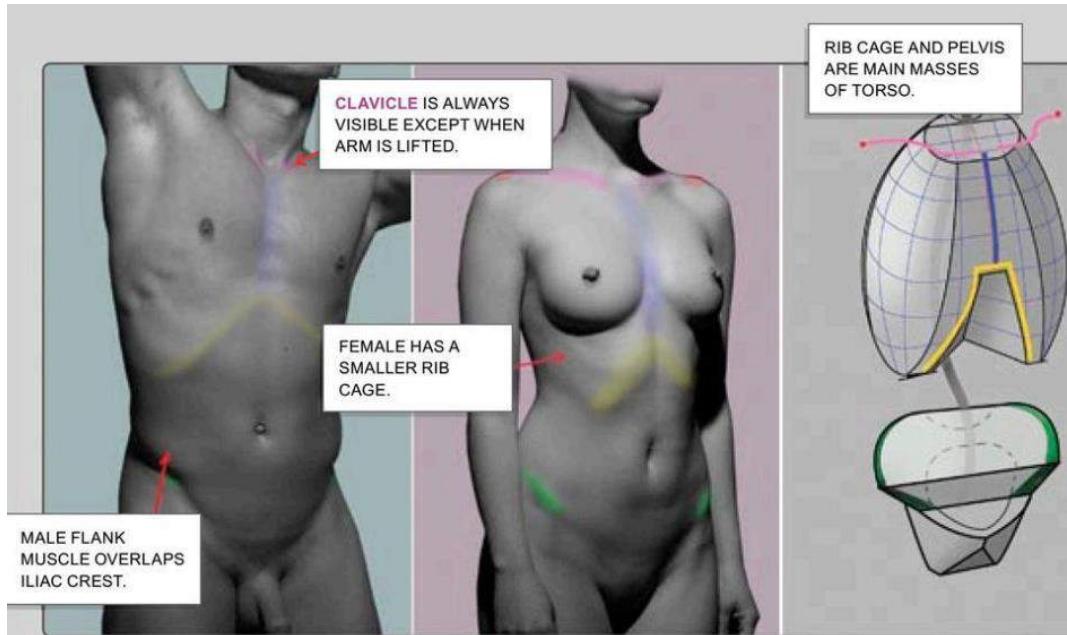
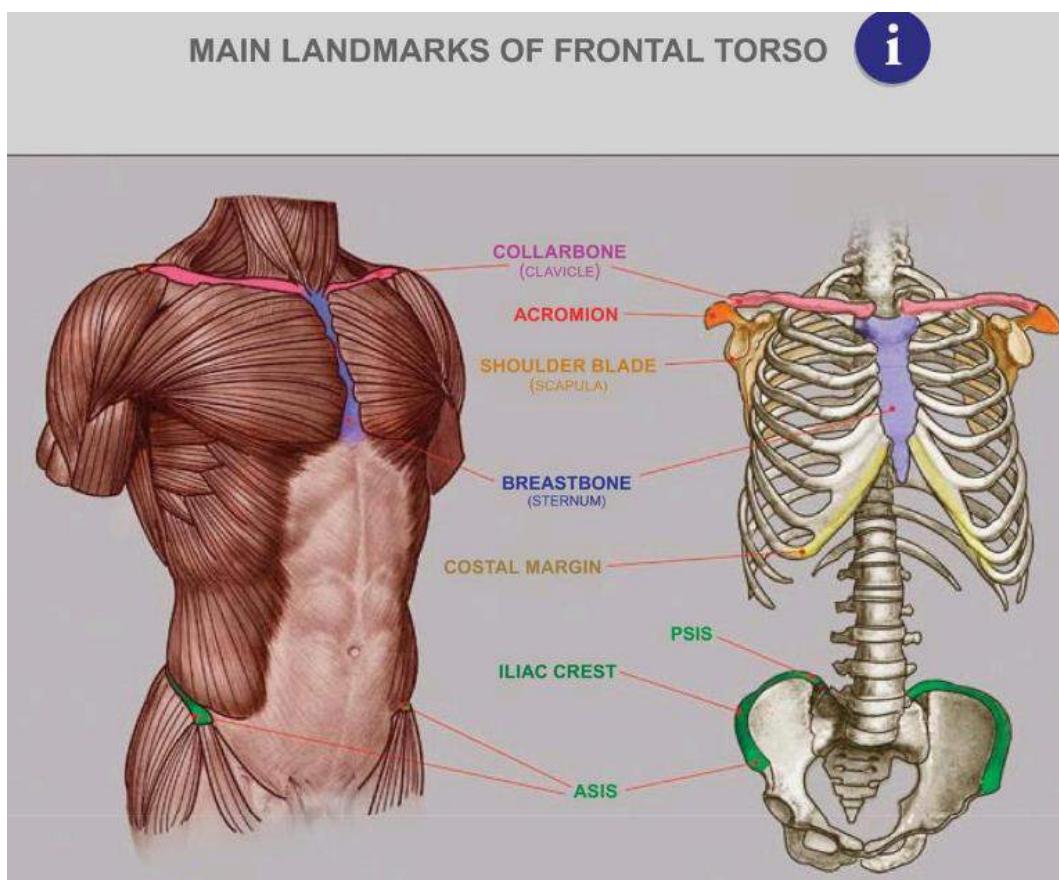
## Main Landmarks of the Back of the Torso :

### MAIN LANDMARKS OF BACK OF THE TORSO

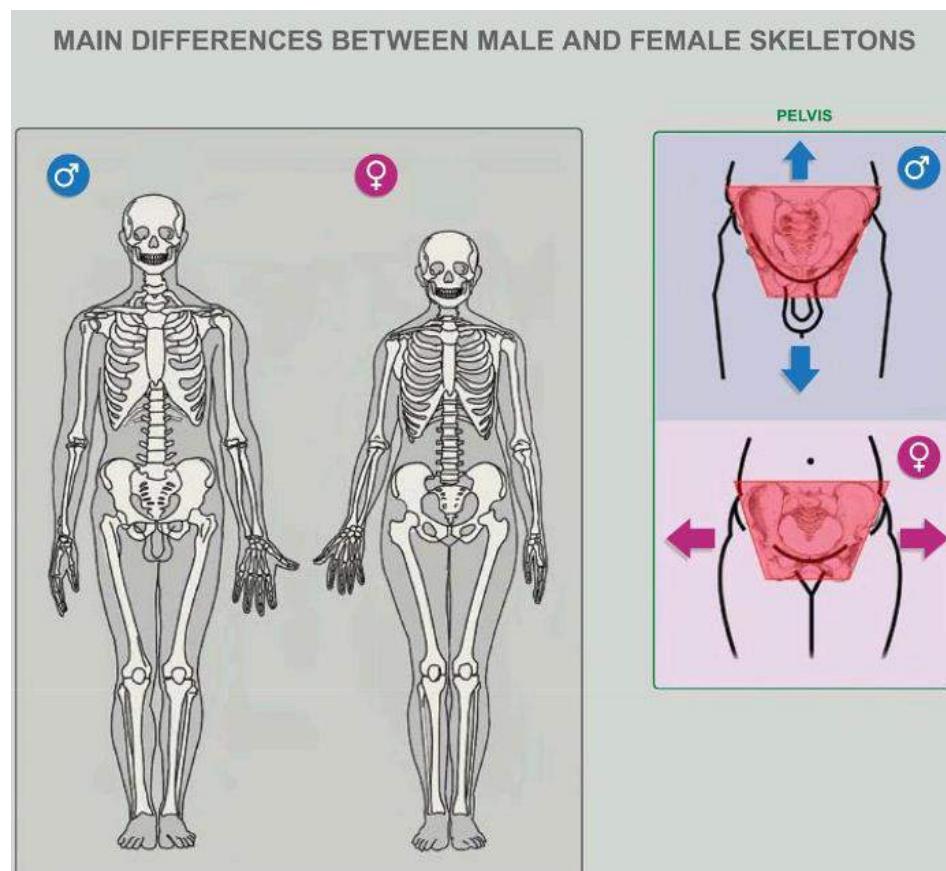
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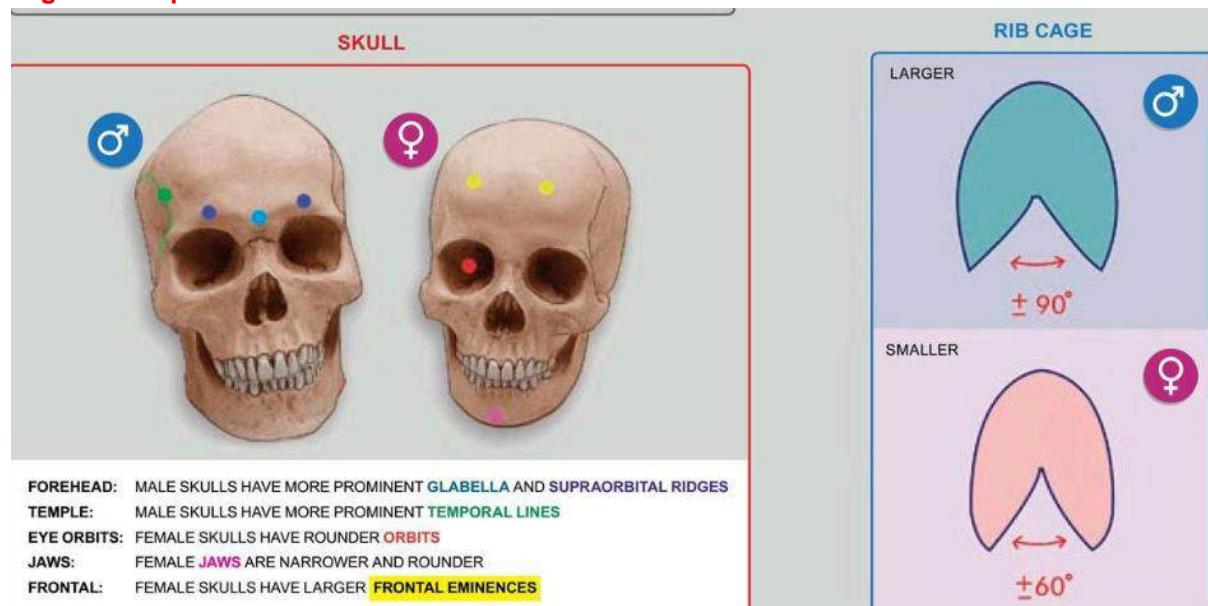
## Main Landmarks of the Front of the Torso :



## Main difference between Male and Female Skeletons :



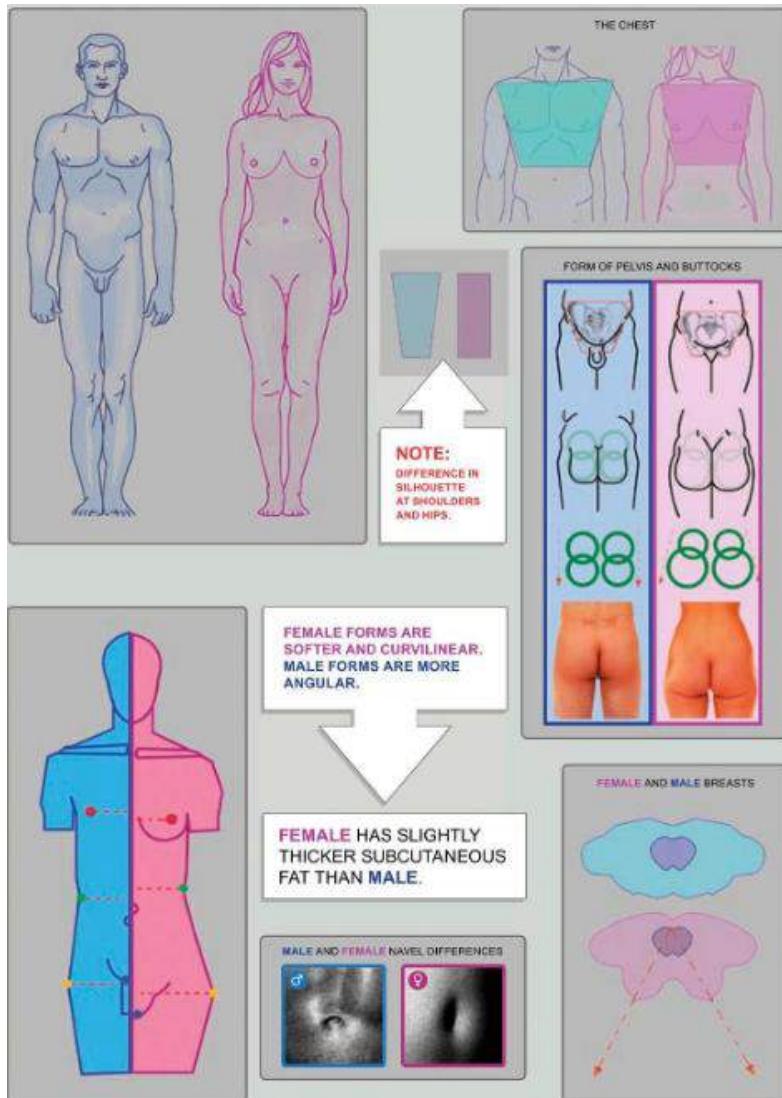
Male Have large Rib cage as compared to Female



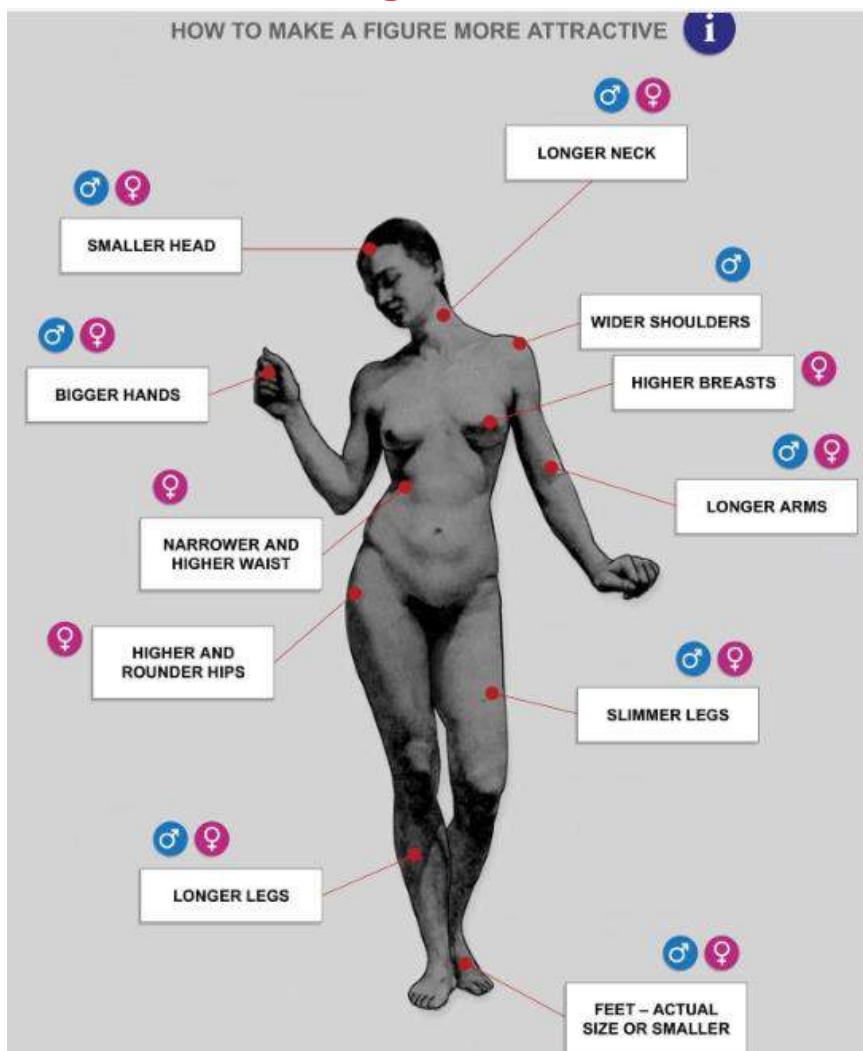
# Main Differences between Male and Female Body

## MOST IMPORTANT DIFFERENCES BETWEEN MALE AND FEMALE BODY SHAPES

Shapes :

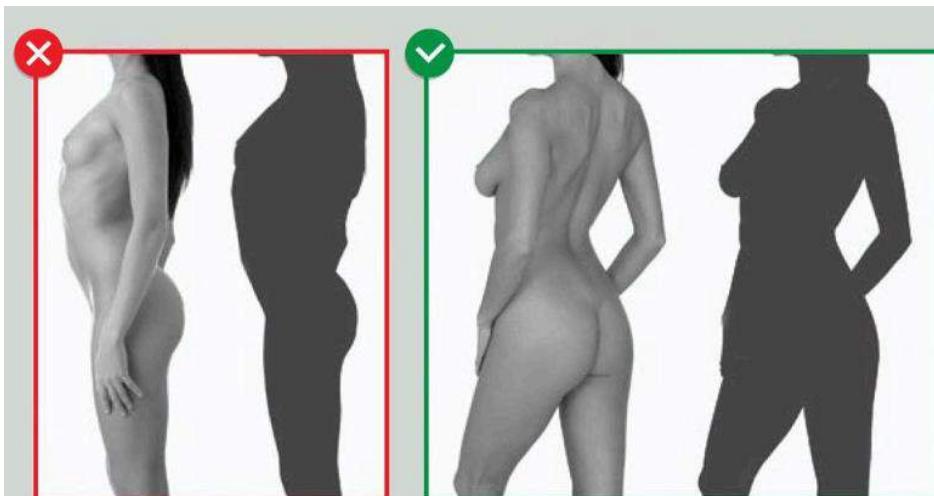


## How to make a Figure more attractive :



## Essential elements in Figure , You should be able to distinguish your

character by silhouette alone . Symmetrical Figure seems lifeless and boring:



! THE MOST ESSENTIAL ELEMENTS IN FIGURE SCULPTURE NEED TO BE FAR ENOUGH FROM THE BODY. IF YOU CAN'T EASILY DISTINGUISH YOUR CHARACTER BY SILHOUETTE ALONE, THEN RECONSIDER THE COMPOSITION! AN UNCLEAR SILHOUETTE IS THE "SILENT KILLER" OF DESIGN!



! ANOTHER KILLER IS SYMMETRY! SYMMETRICAL FIGURE SEEMS LIFELESS AND BORING.

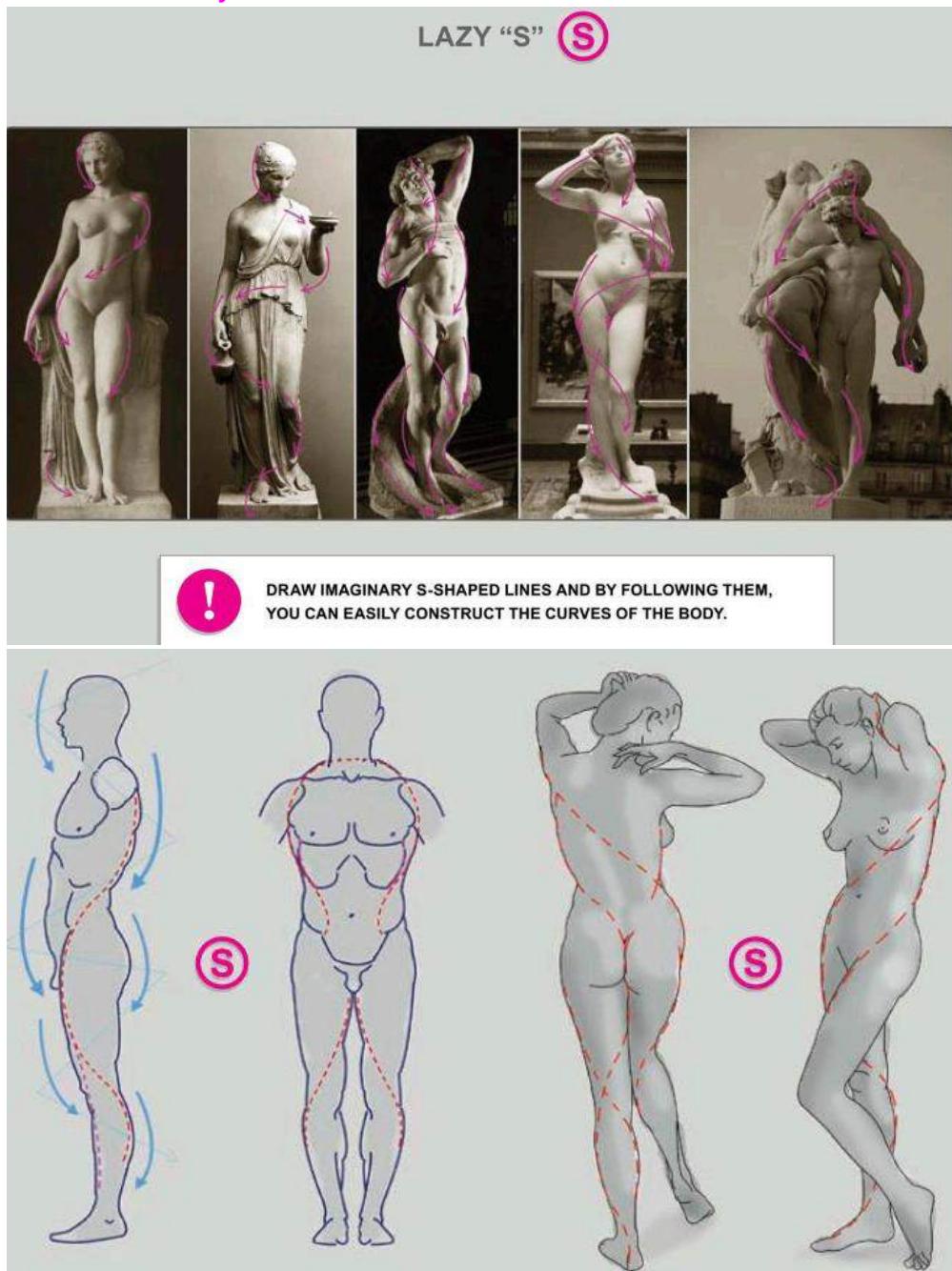
**Contrapposto**, this term describes the position of the figure in which hips and legs are turned in different directions from that of the shoulder and head . The figures body posture is depicted as a sinuous or serpentine "S" shape :

### CONTRAPPOSTO

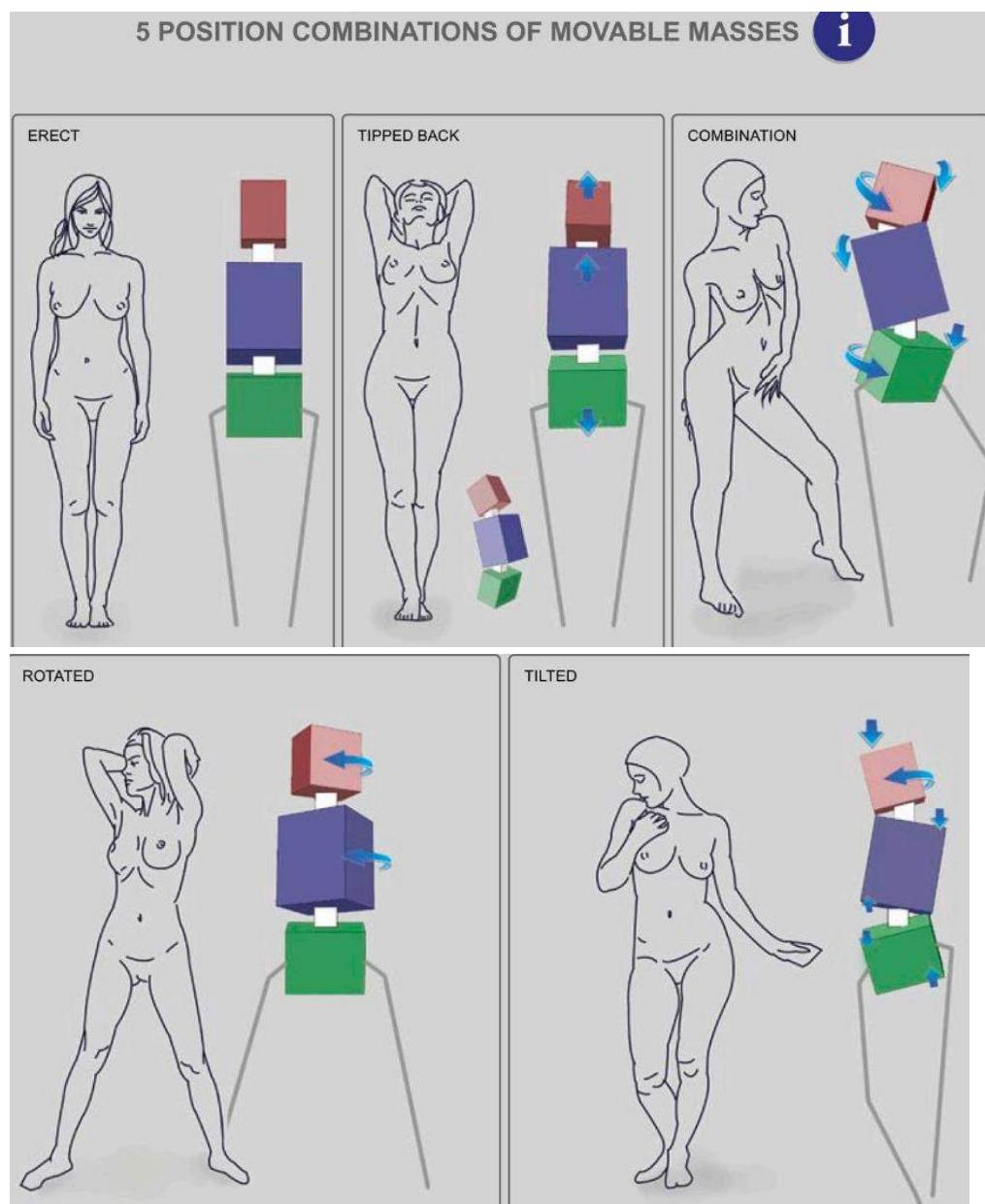
THIS TERM DESCRIBES THE POSITION OF A FIGURE IN WHICH THE HIPS AND LEGS ARE TURNED IN A DIFFERENT DIRECTION FROM THAT OF THE SHOULDERS AND HEAD; THE FIGURE TWISTS ON ITS OWN VERTICAL AXIS. THE FIGURE'S BODY AND POSTURE IS DEPICTED AS A SINUOUS OR SERPENTINE "S" SHAPE.



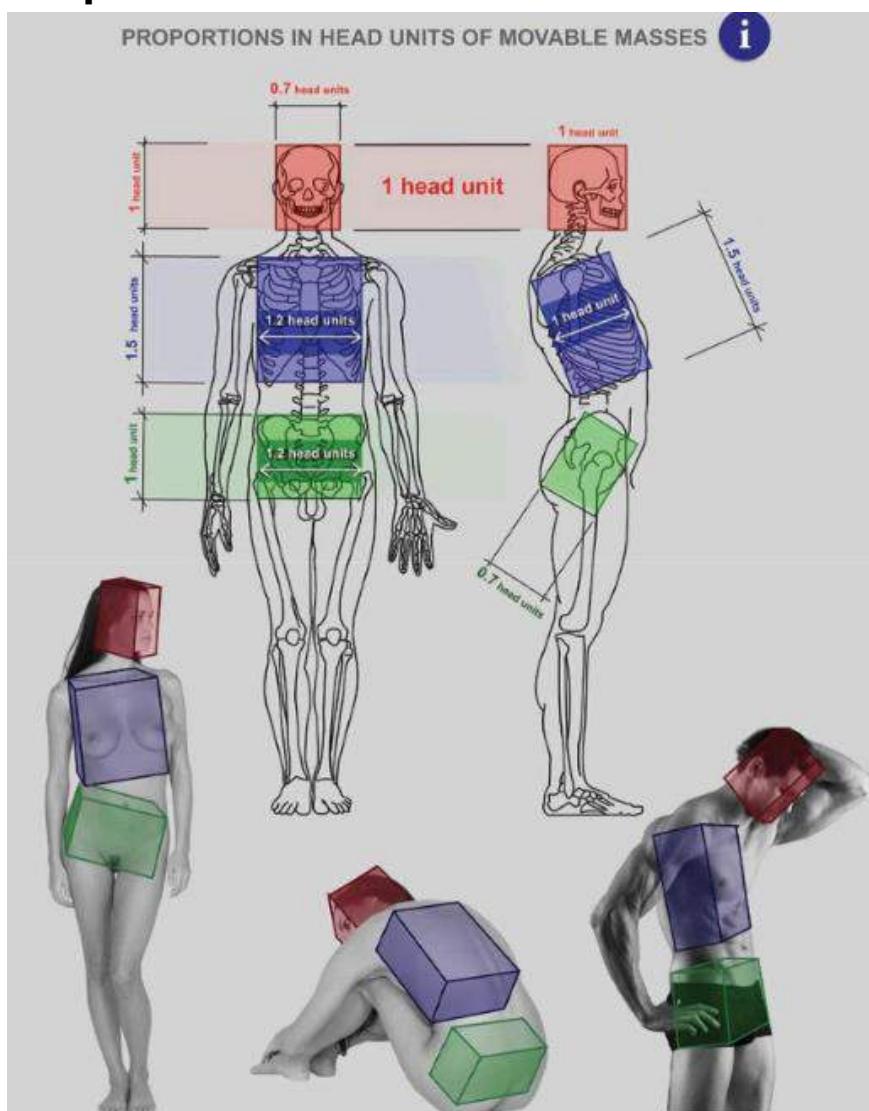
**S Shape :** Draw imaginary S-shaped lines and by following them you can construct the curves of the body.



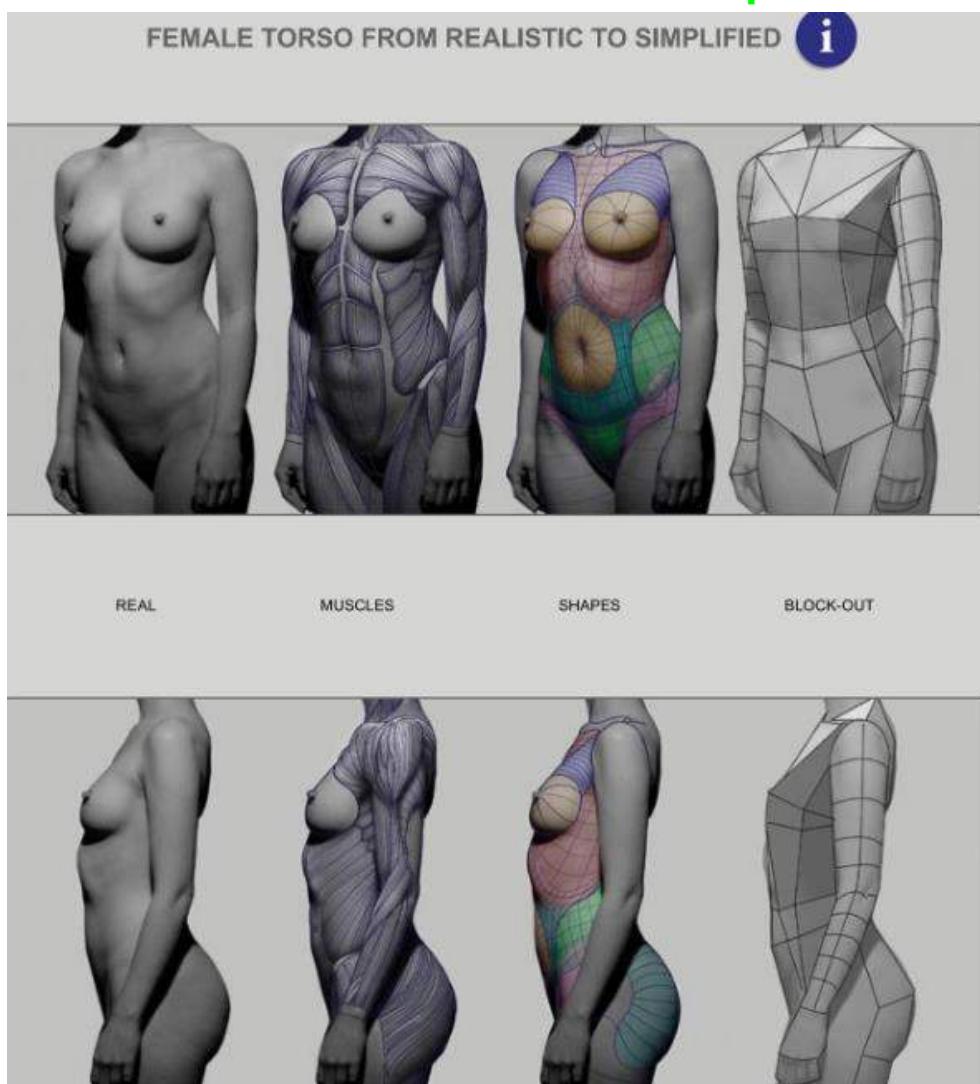
## 5 Position combinations of movable masses :



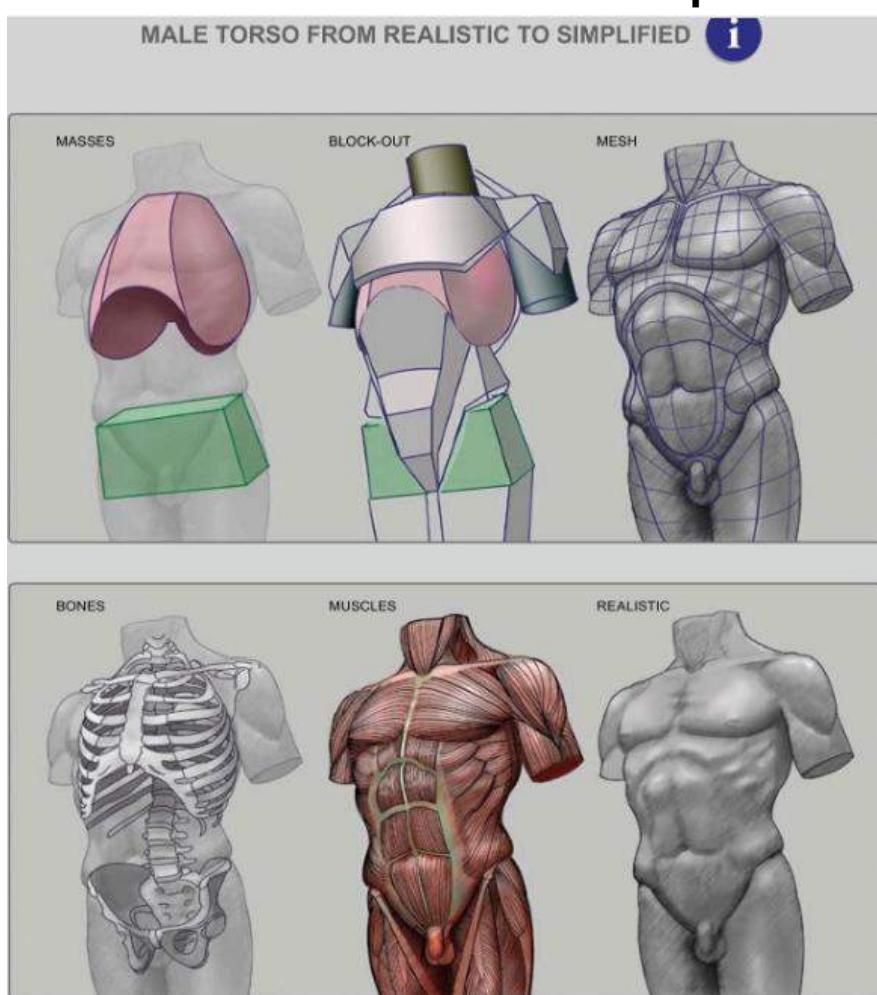
## Proportions in Head Units of movable masses :



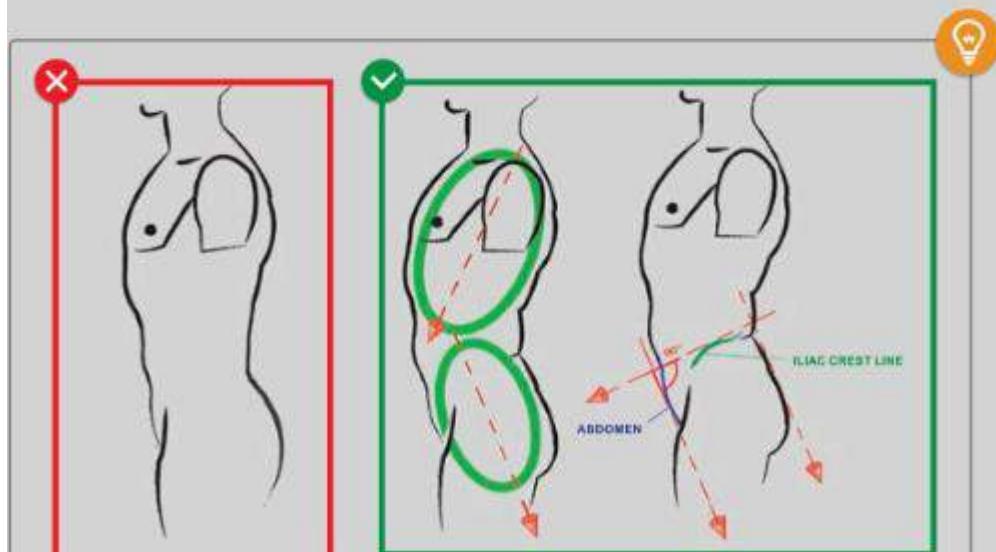
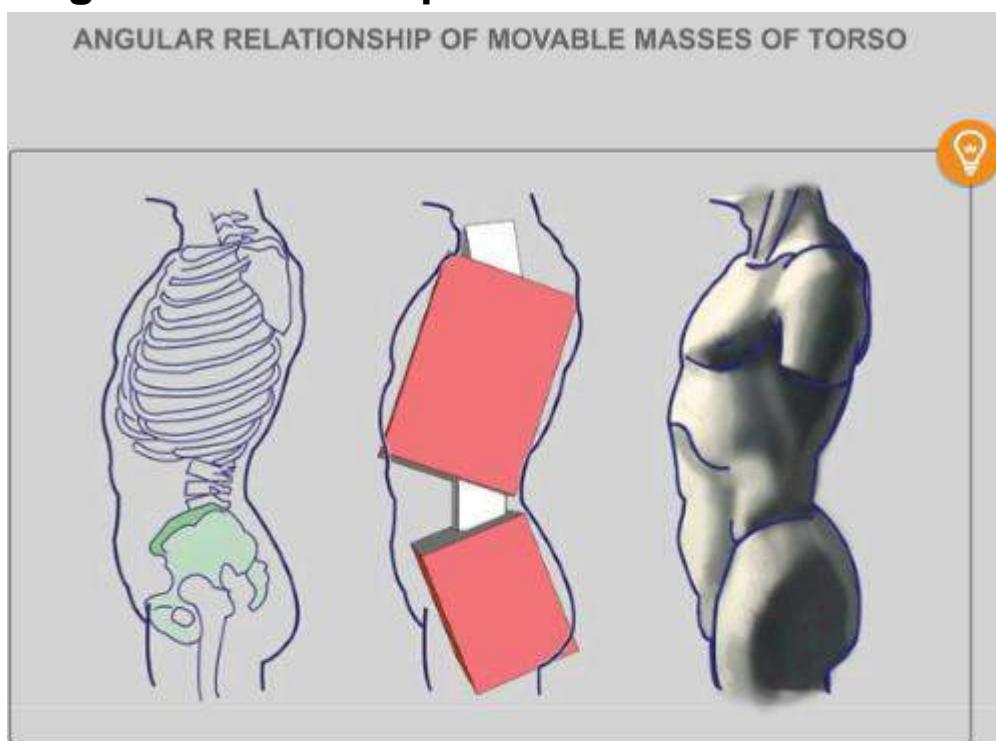
## Female Torso from realistic to simplified :



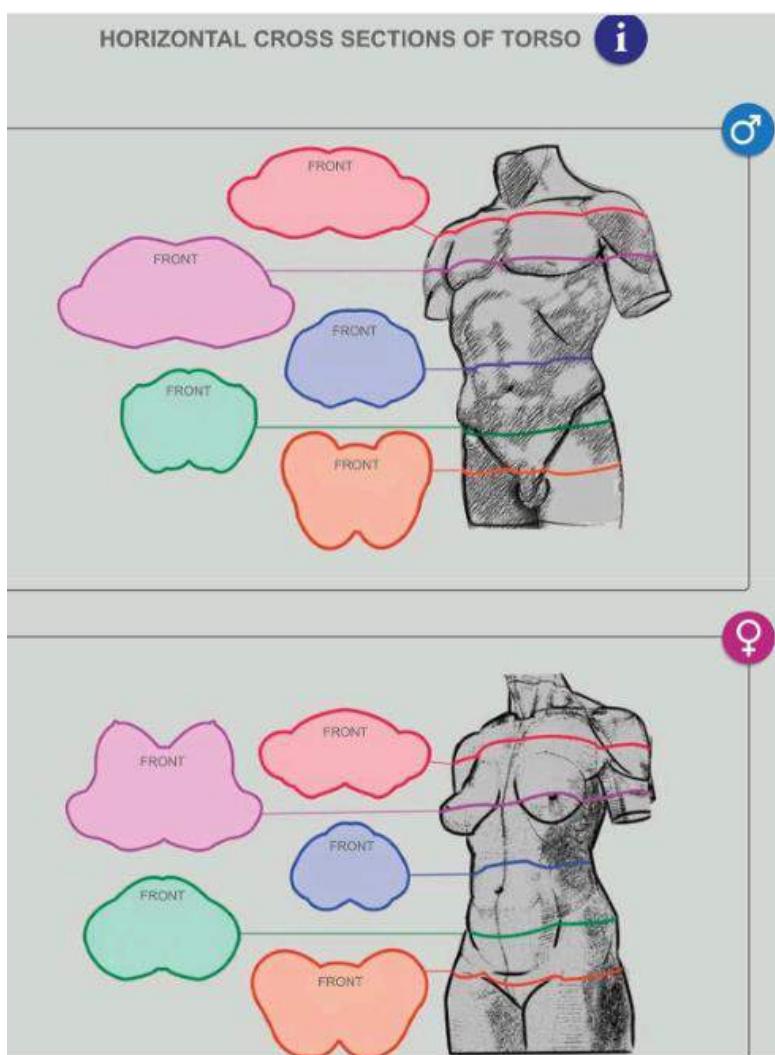
## Male Torso from realistic to simplified :



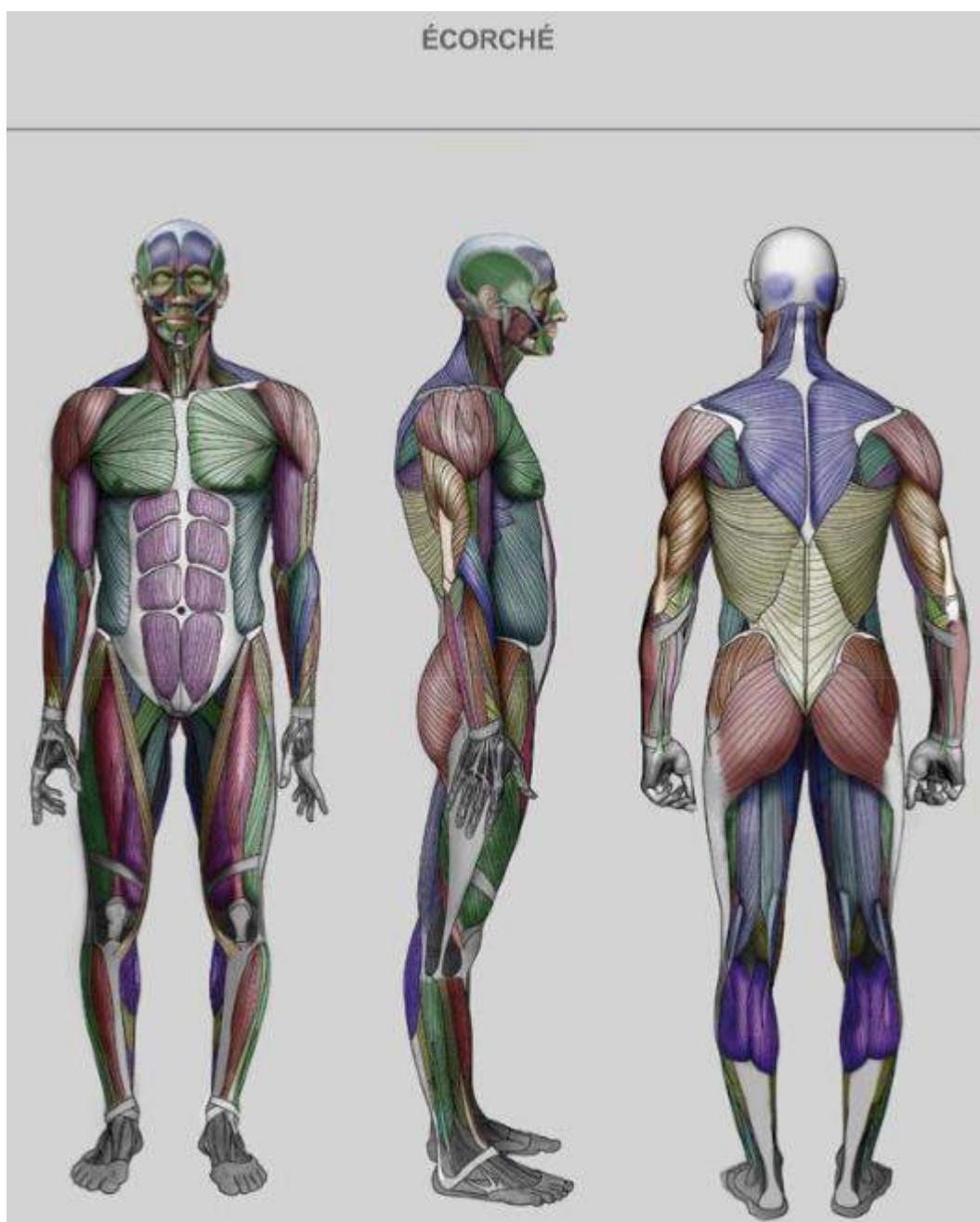
## Angular relationship of movable masses of Torso :



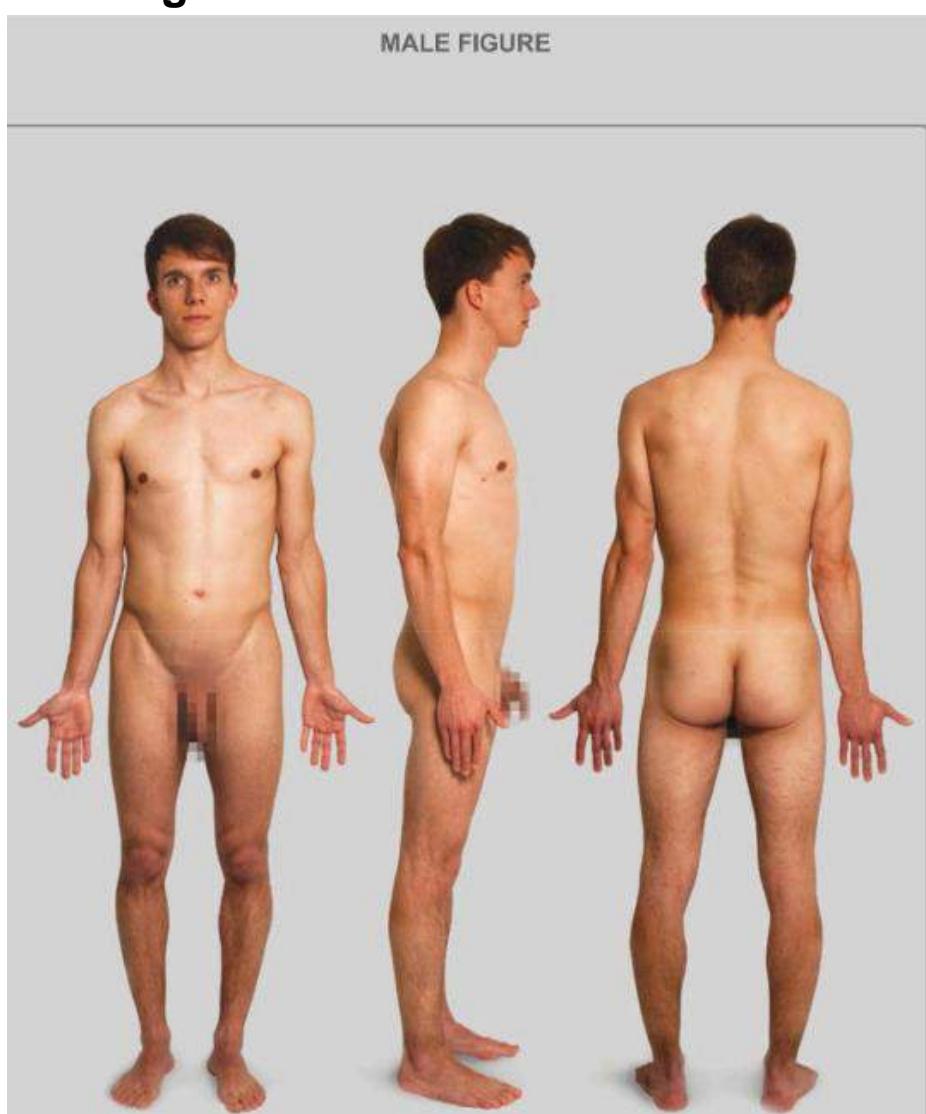
## Horizontal cross sections of Torso :



## Ecorche :

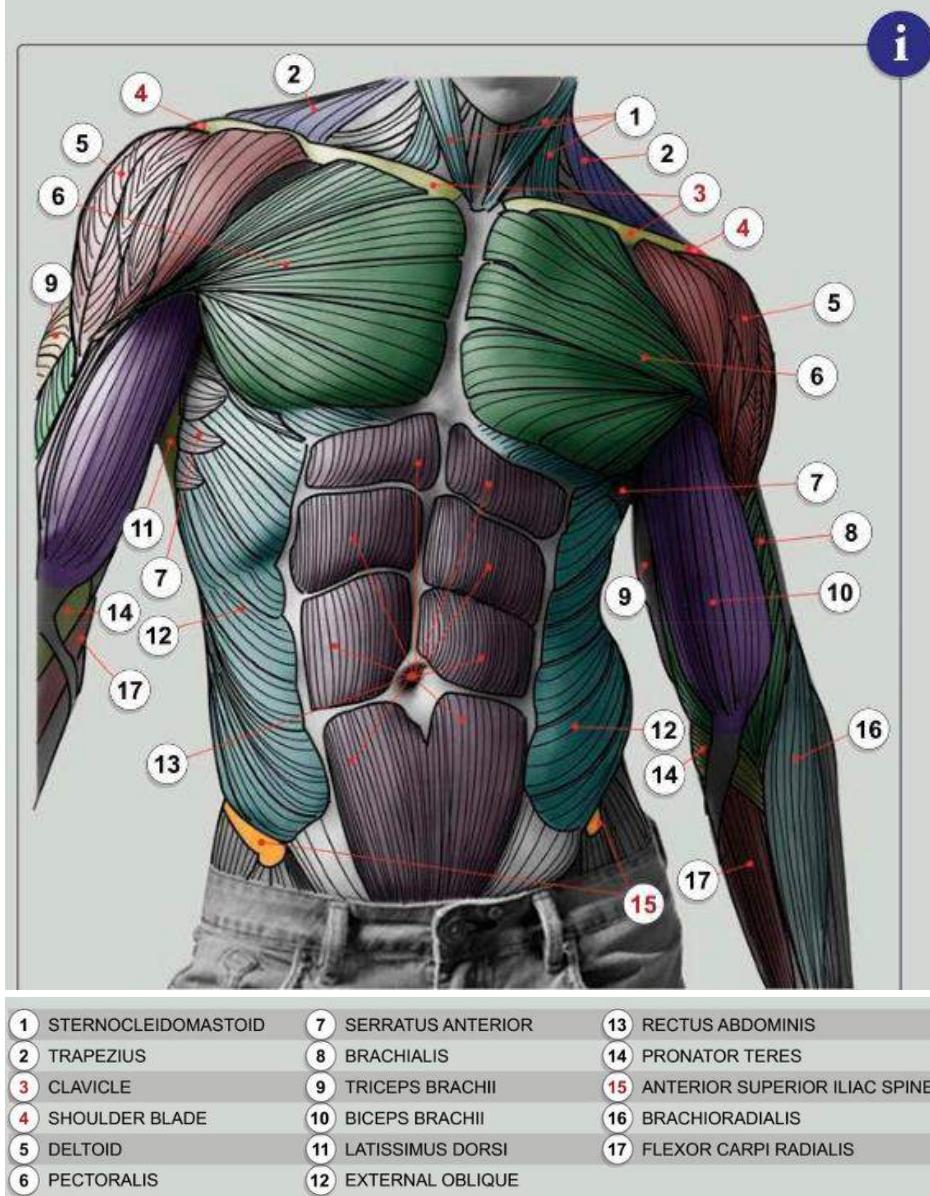


## **Male Figure :**

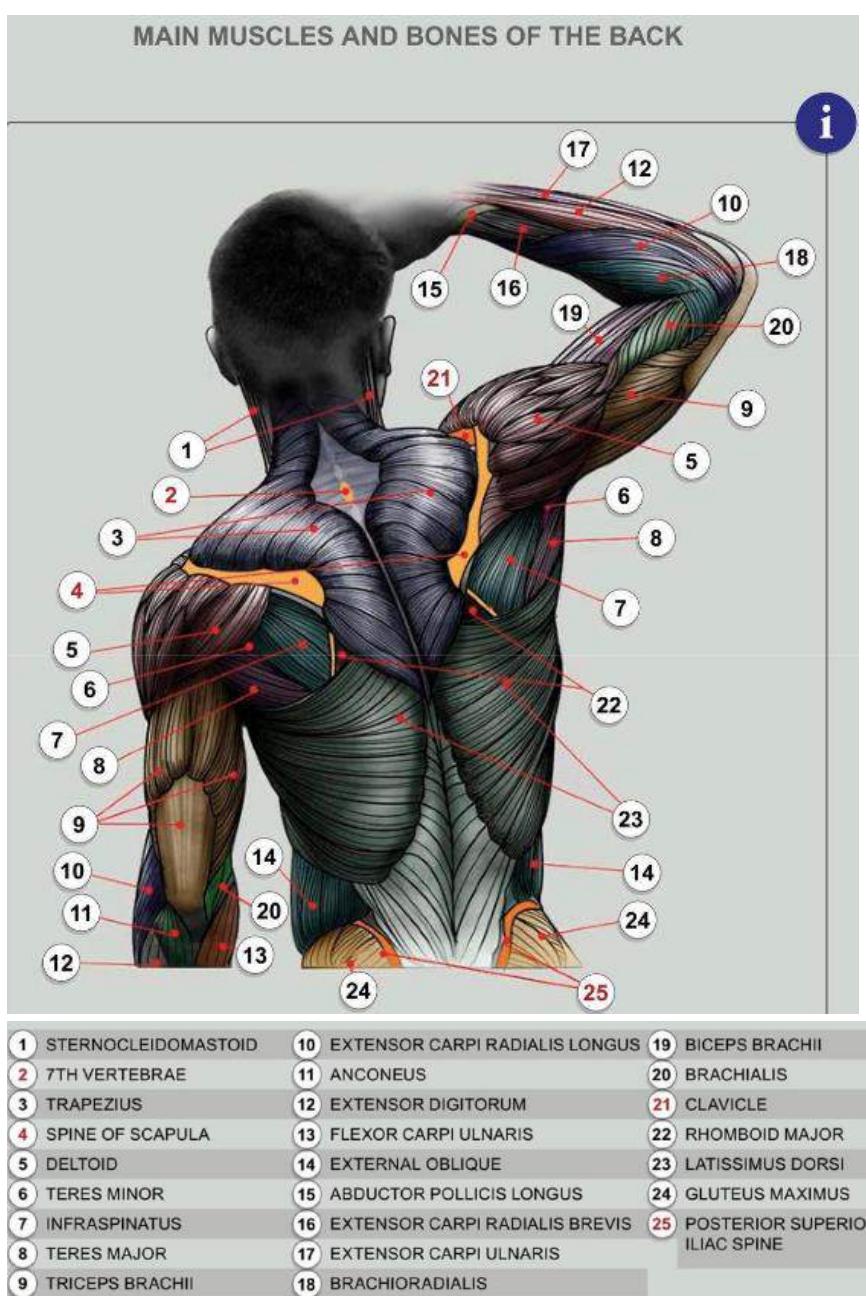


## Main Muscles and Landmark points of frontal Torso :

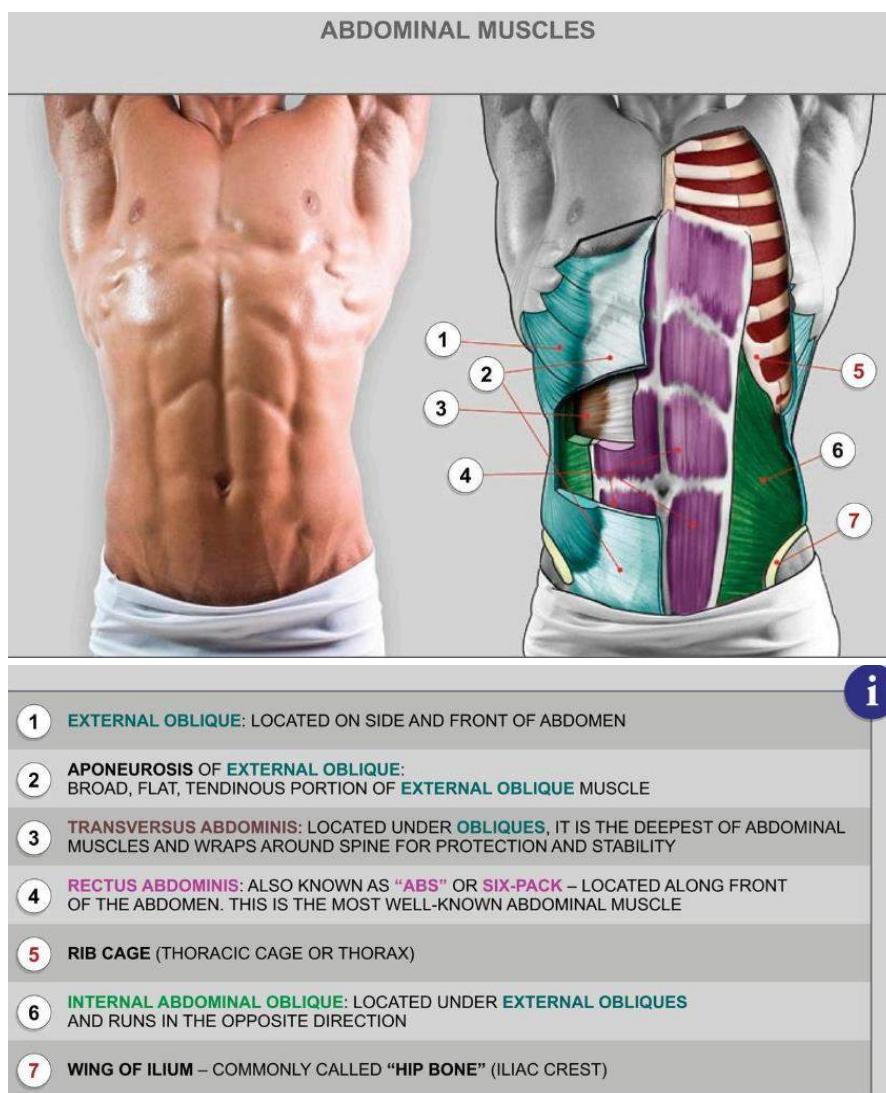
### MAIN MUSCLES AND LANDMARK POINTS OF FRONTAL TORSO



## Main Muscles and Bones of the back :



## Abdominal Muscles :



## Six-Pack :

IS A "SIX-PACK" REALLY AN "EIGHT-PACK"?



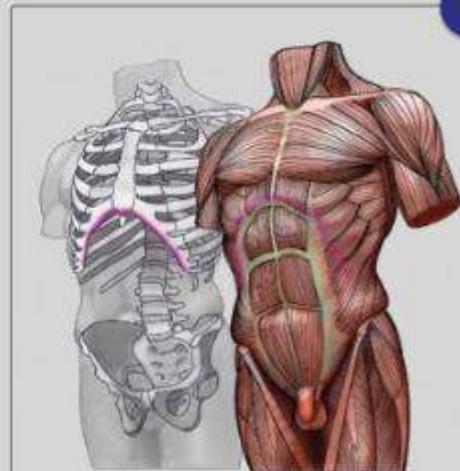
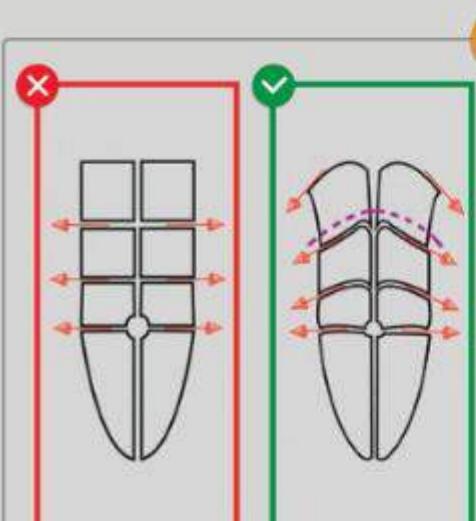
CLASSIC SCULPTURE



FITNESS



SKINLESS

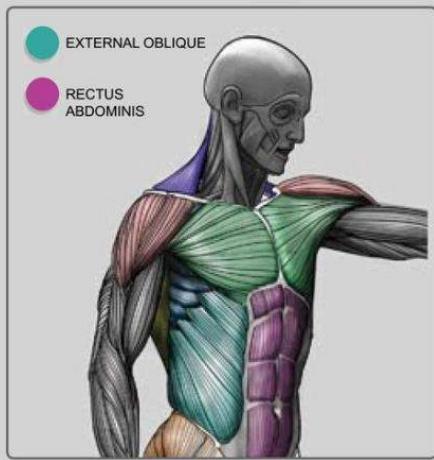
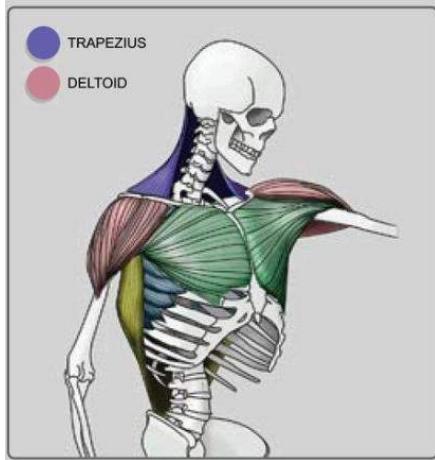
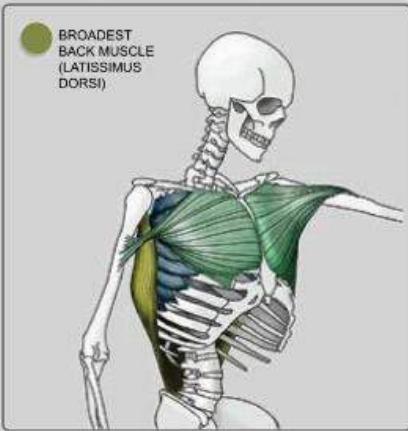
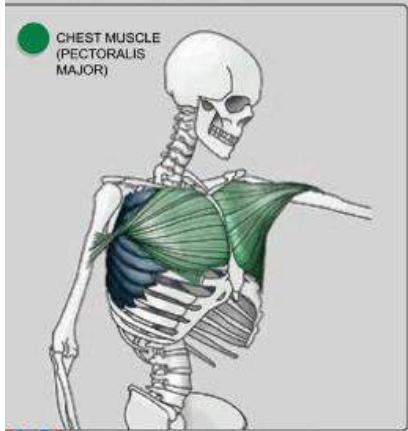
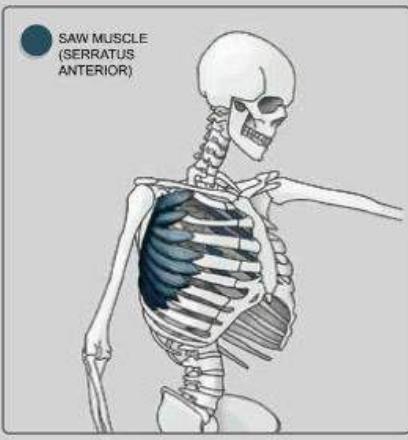


## Most important muscles of Frontal Torso :

### MOST IMPORTANT MUSCLES OF FRONTAL TORSO

(LAYER BY LAYER)

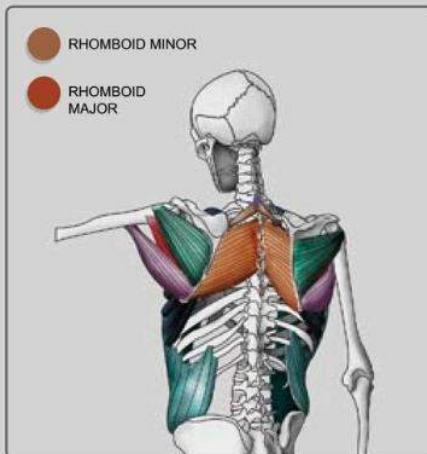
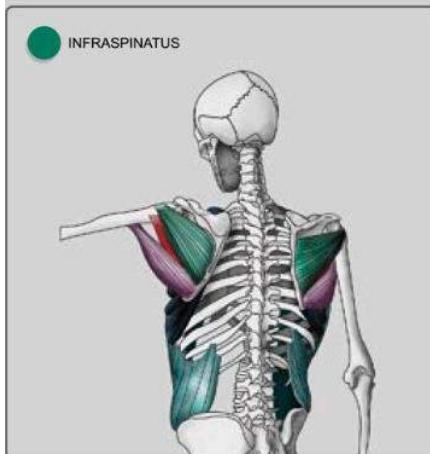
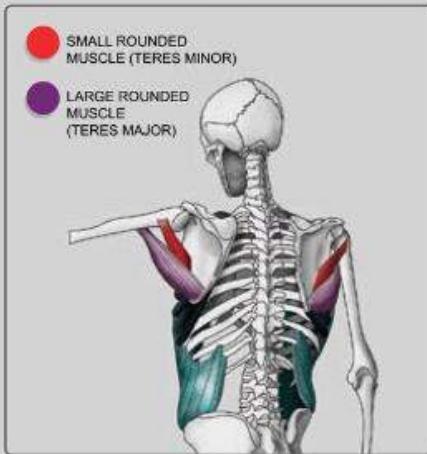
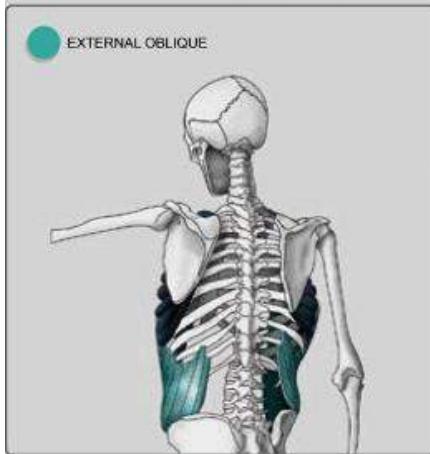
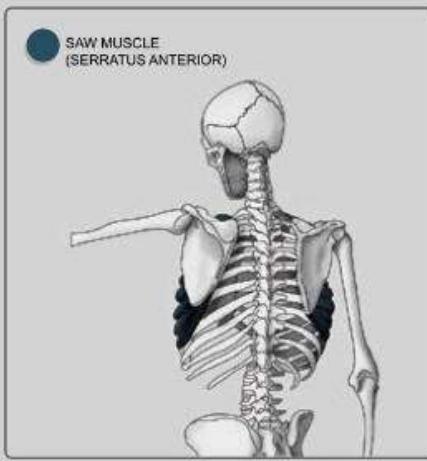
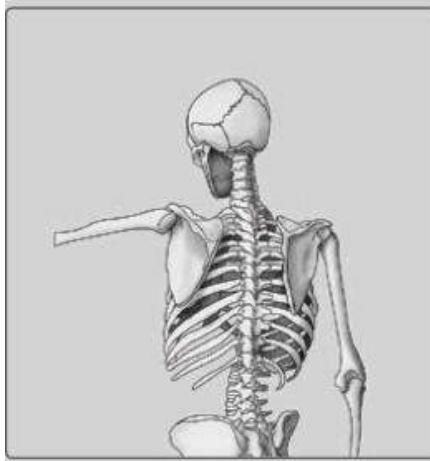
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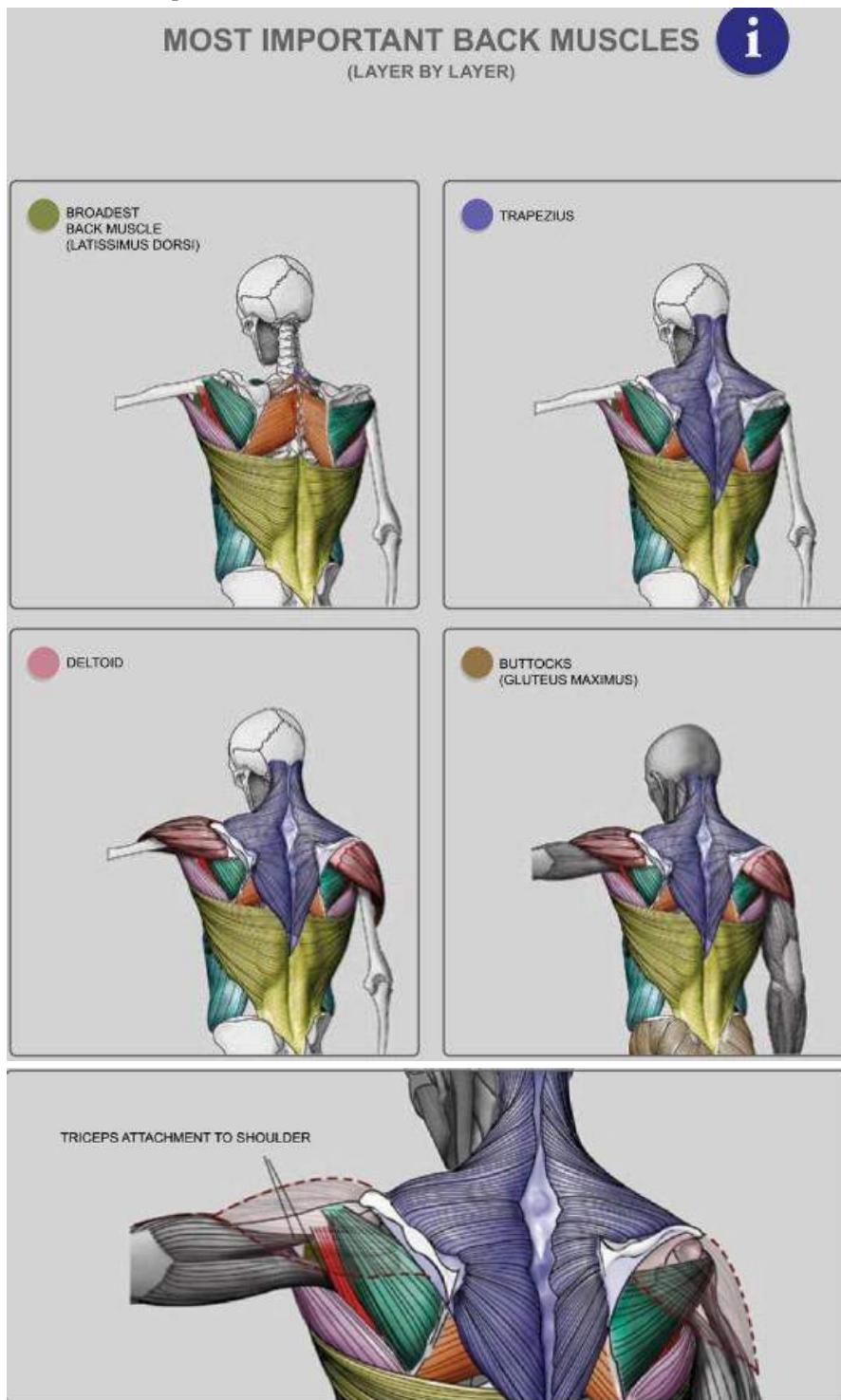
## Most Important Back Muscles :

### MOST IMPORTANT BACK MUSCLES (LAYER BY LAYER)

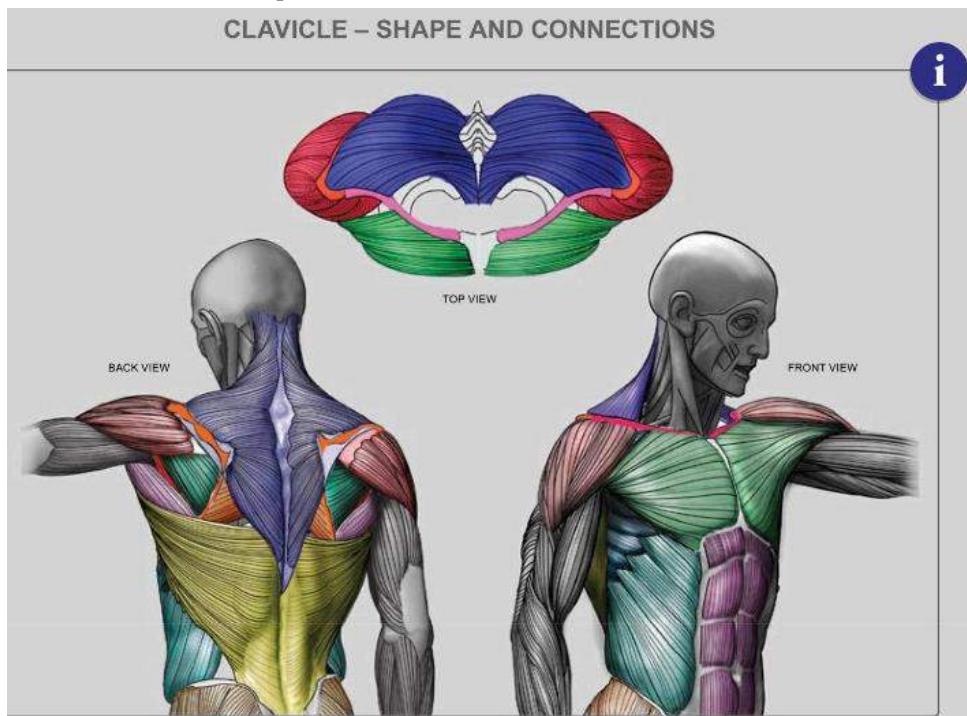
1



## Most Important Back Muscles :



## Clavicle Shape and Connections :



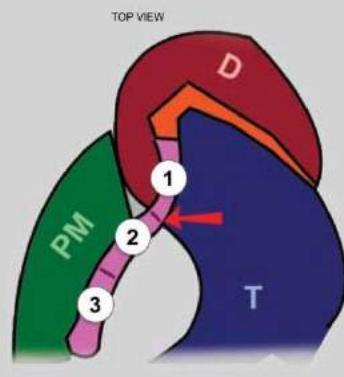
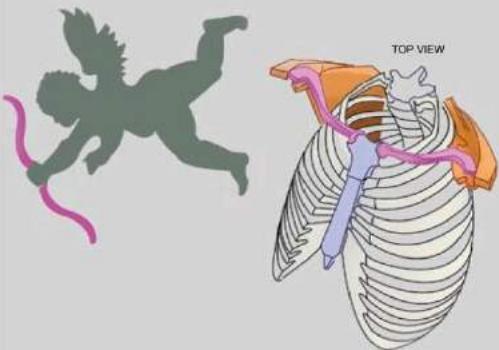
i

IF YOU LOOK AT THE CLAVICLE FROM ABOVE, YOU CAN SEE IT'S AN "S" SHAPE.



BOTH, (D) AND (T) CONNECT ON THE LATERAL THIRD OF THE CLAVICLE.

i



## Great Chest Muscle :

**GREAT CHEST MUSCLE**  
(PECTORALIS MAJOR)

ONE END OF PM IS CONNECTED TO THE HUMERUS AND OTHER END CONNECTS:

A: TO 3/5 OF CLAVICLE  
B: TO STERNUM BONE  
C: TO RIBS  
D: LYING ON ABDOMINAL MUSCLES

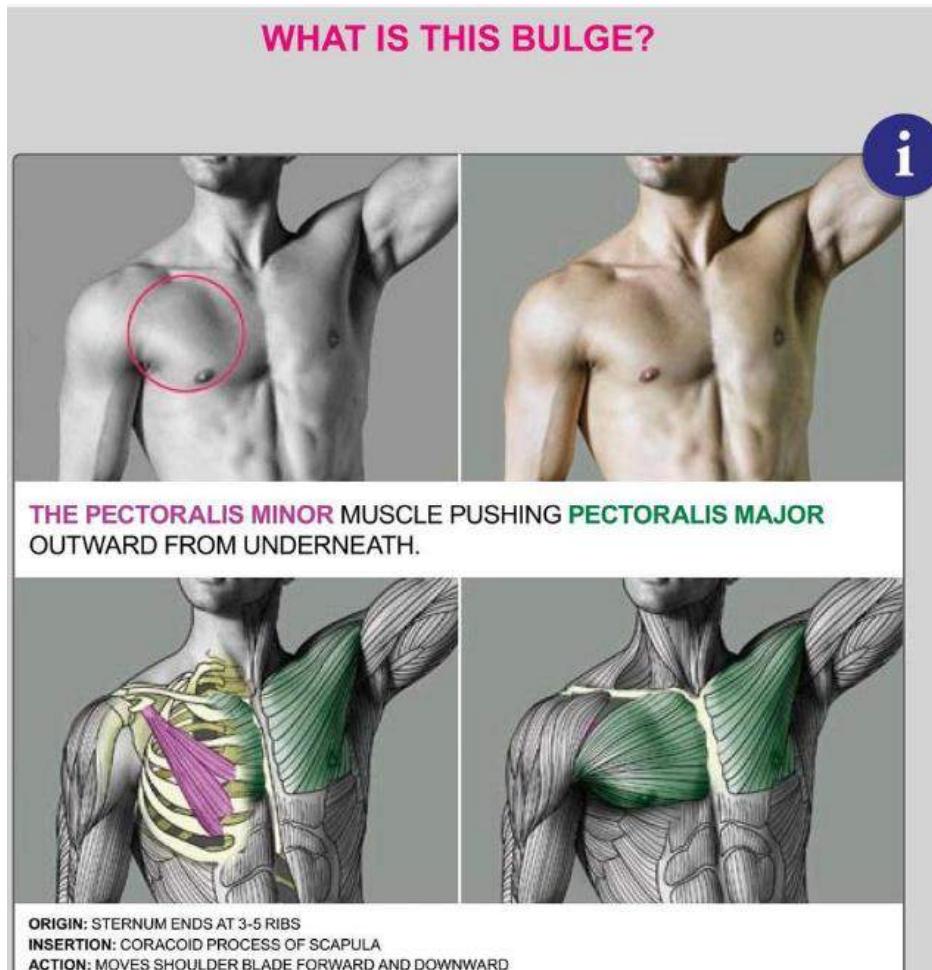
A: THIS PORTION IS OFTEN VISIBLE AS SEPARATE PART OF PM.

HOLLOW AREA BETWEEN PM AND DELTOID IS ALWAYS VISIBLE!

PM IS PARTIALLY COVERED BY DELTOID MUSCLE.

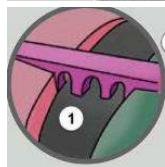
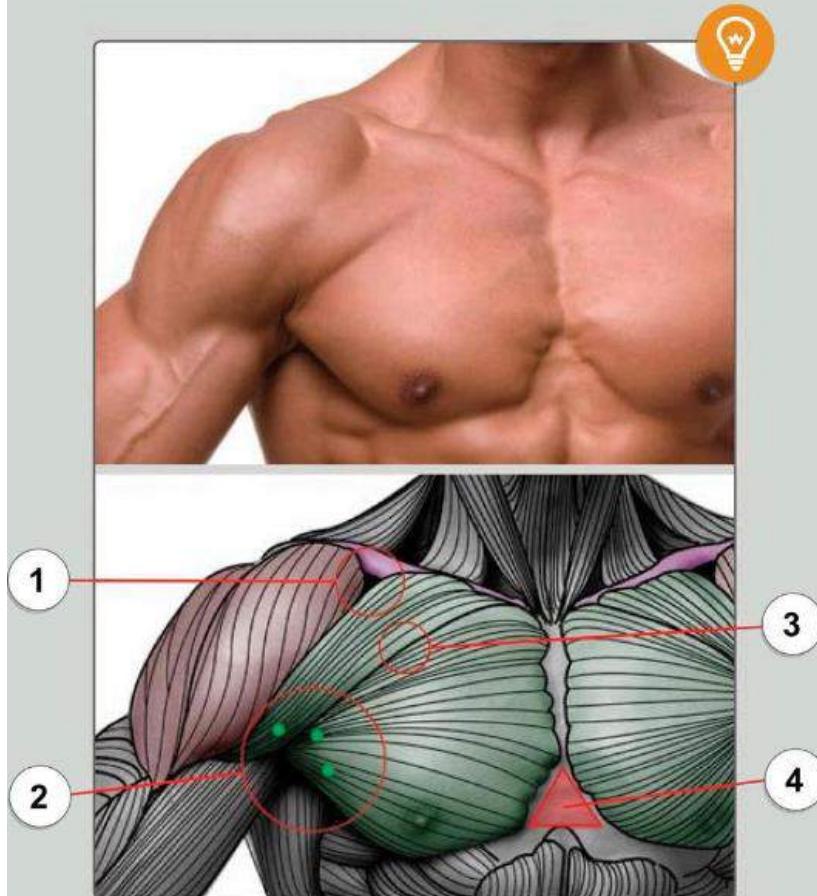
The page contains three rows of images. The first row shows a front view of a torso, a medial view of the chest, and a posterior/side view of the shoulder and chest. The second row shows a front view of a torso, a medial view of the chest, and a posterior/side view of the shoulder and chest. The third row shows a front view of a torso, a medial view of the chest, and a posterior/side view of the shoulder and chest.

## Pectoralis Minor pushing Pectoralis major outward from underneath :



## Chest and Shoulder features :

### CHEST AND SHOULDER FEATURES



1 COLLARBONE (CLAVICLE) IS LIKE A BRIDGE OVER A VALLEY. UNDERNEATH THE COLLARBONE IS THE INFRACLAVICULAR TRIANGLE (INFRACLAVICULAR FOSSA), WHICH IS A PIT BETWEEN THE CHEST MUSCLE (PECTORALIS MAJOR) AND SHOULDER MUSCLE (DELTOID). THE COLLARBONE (CLAVICLE) IS ALWAYS VISIBLE.

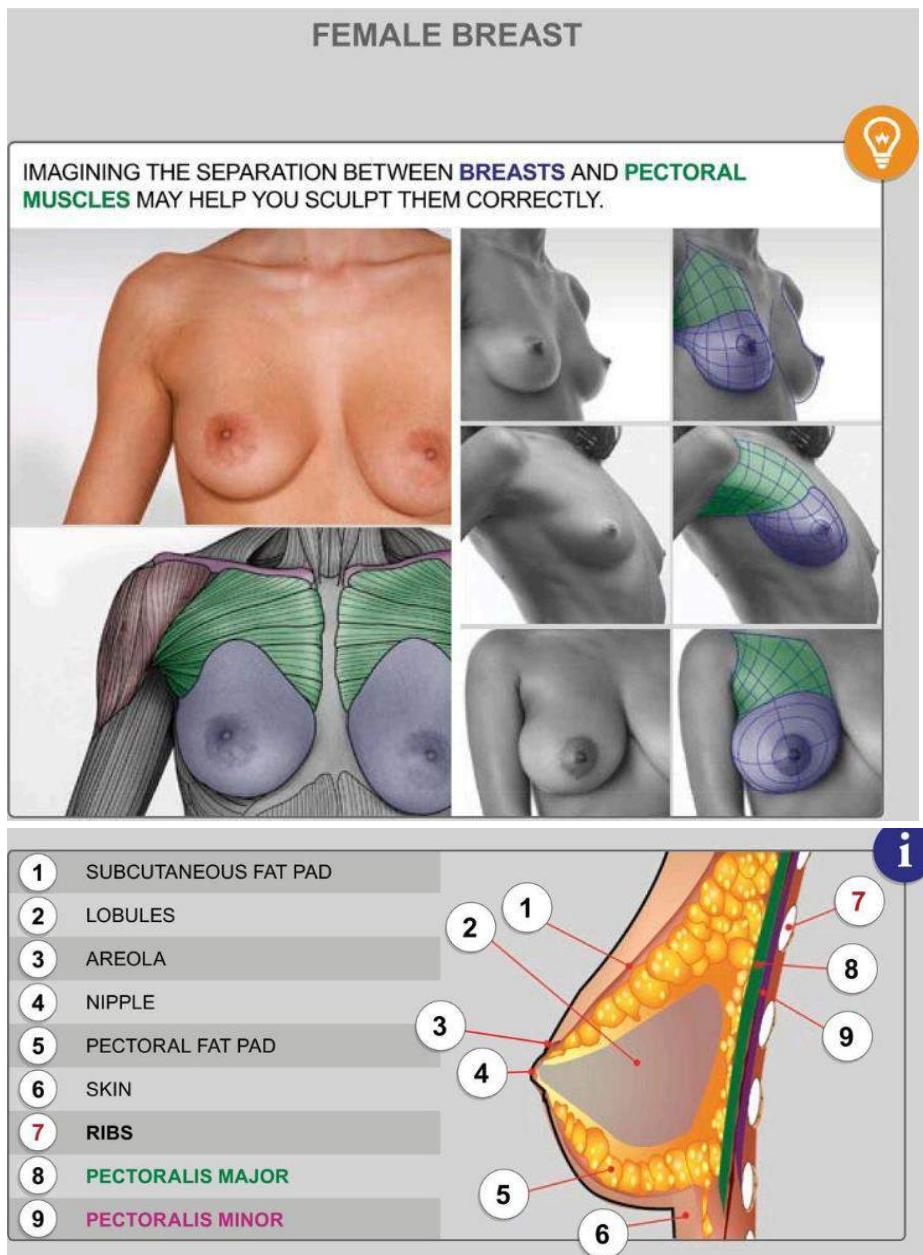


2 EACH BODY ●●● OF THE CHEST MUSCLE (PECTORALIS MAJOR) HAS DIFFERENT INSERTIONS ON THE HUMERUS. FIBERS CHANGE DIRECTIONS, CROSSING OVER EACH OTHER AND CREATING MULTIPLE MASSES ON THE EDGE OF THE ARMPIT.

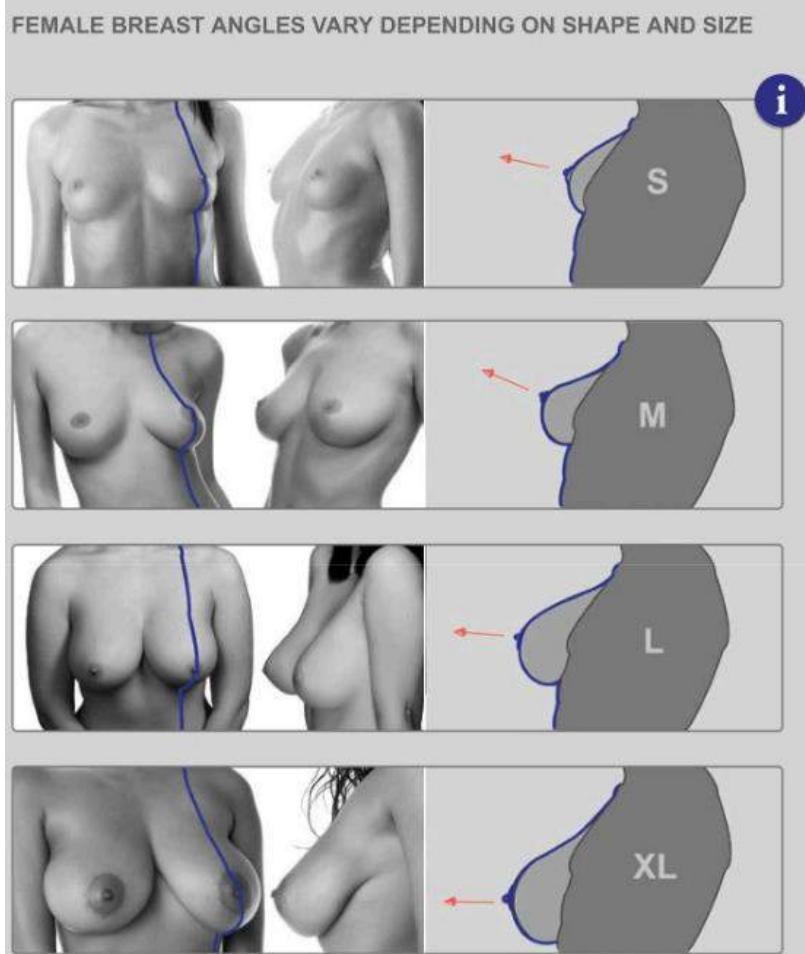
3 SOMETIMES IN VERY MUSCULAR INDIVIDUALS, YOU CAN SEE A SEPARATION BETWEEN THE CLAVICULAR SECTION AND STERNAL SECTION OF THE CHEST MUSCLE (PECTORALIS MAJOR).

4 BONY TRIANGLE BETWEEN CHEST MUSCLES AND ABDOMINAL SIX-PACK.

## Female Breast :



## Female Breast Angles vary depending on shape and size :



## Breast volume and positioning :

BREAST VOLUME AND POSITIONING

ALTHOUGH THE SHAPE CHANGES, VOLUME REMAINS CONSTANT.

THE LARGER THE BREASTS, THE MORE THEY ARE SHAPED BY GRAVITY WHEN A WOMAN IS LYING ON HER BACK.

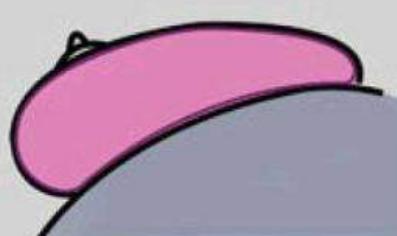
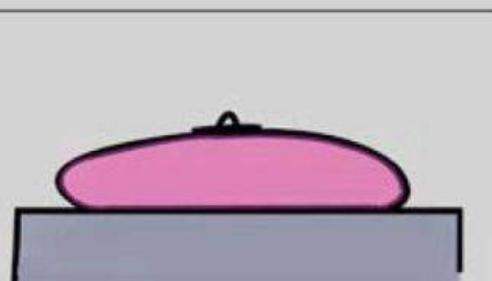
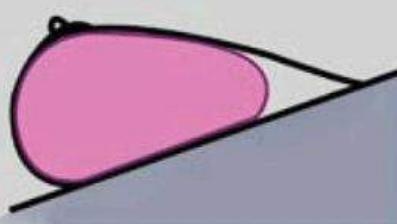
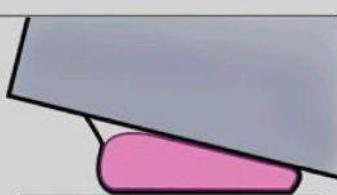
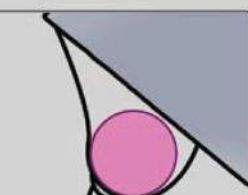
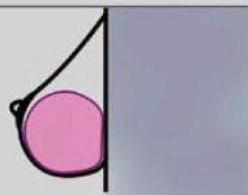
3 TIPS ON HOW TO MAKE FEMALE BREASTS LOOK YOUTHFUL.

- 1 TOP SIDE: STRAIGHT OR CONCAVE, BUT NEVER CONVEX
- 2 NIPPLE POINTS UPWARD
- 3 LIFT LOWER BORDER WHERE BREAST CONNECTS TO CHEST WALL

## Weight and Mass distribution of female breast :

WEIGHT AND MASS DISTRIBUTION OF FEMALE BREAST

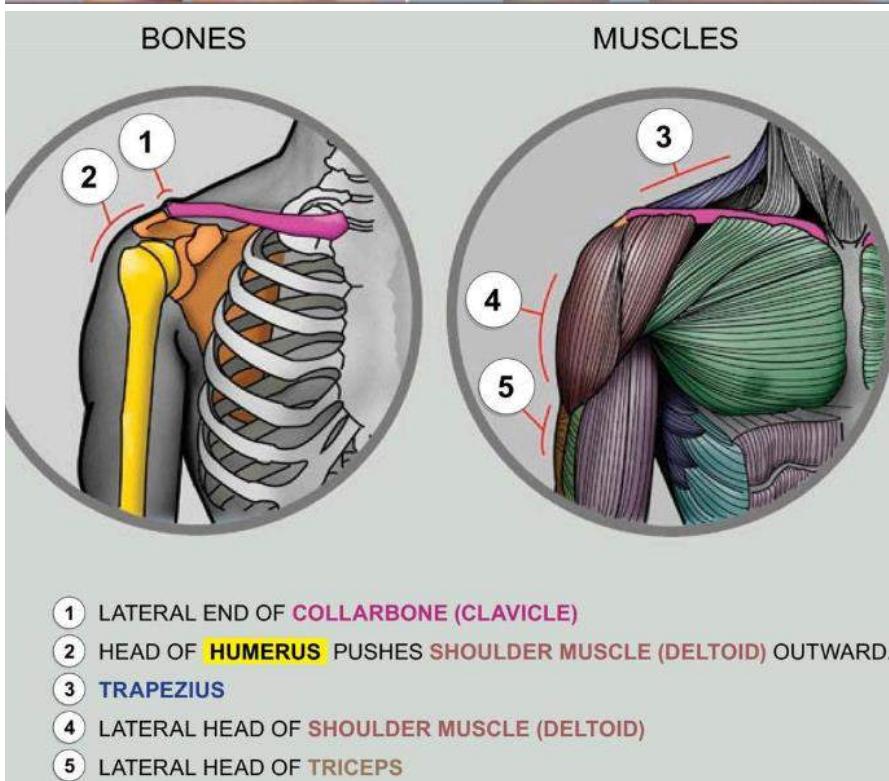
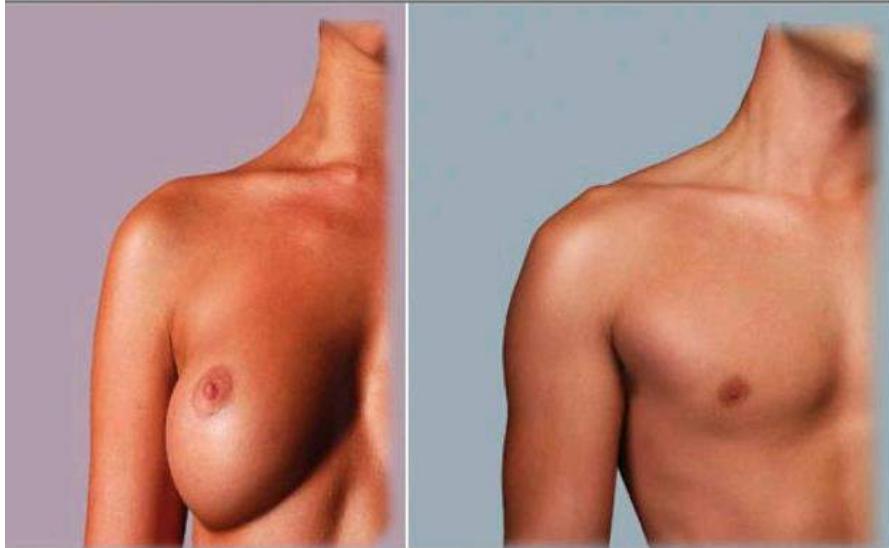
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## What Creates a Shoulders Silhouette :

WHAT CREATES A SHOULDER'S SILHOUETTE?

i

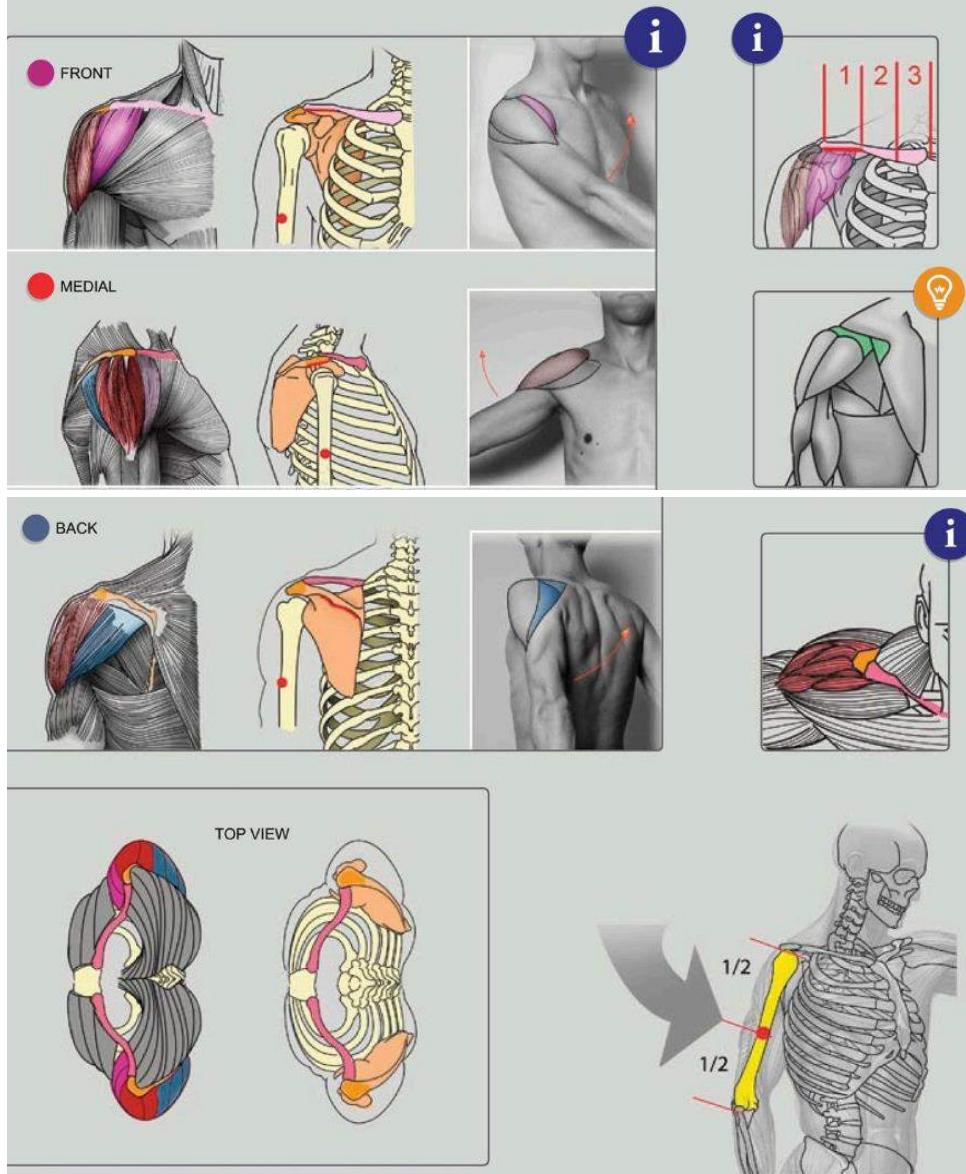


## Shoulder Muscle - Deltoid :



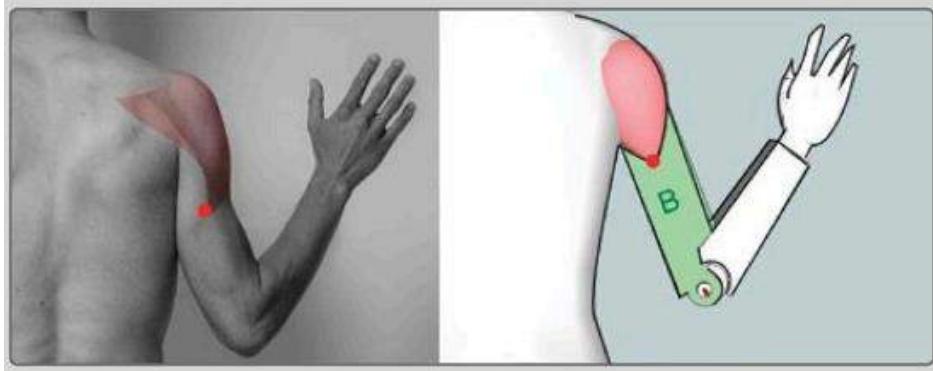
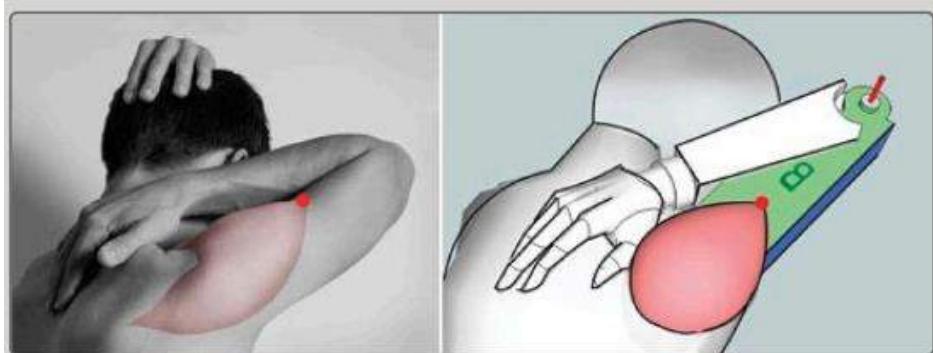
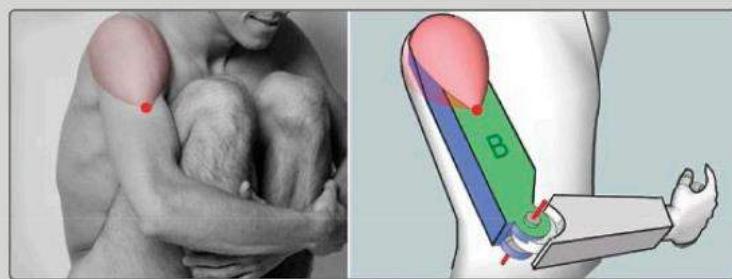
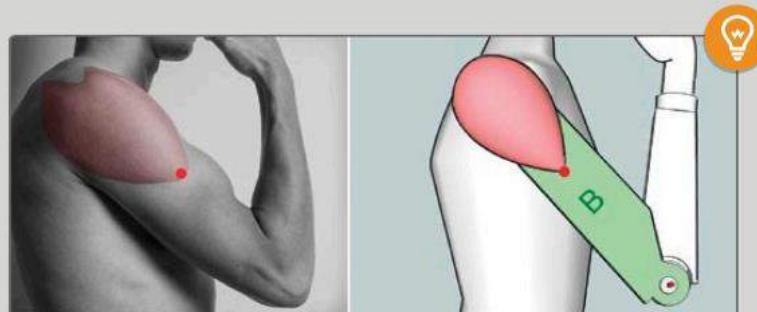
## Shoulder Muscle(Deltoid) has 3 muscles :

SHOULDER MUSCLE (DELTOID) HAS 3 SECTIONS:  
FRONT (ANTERIOR PART), MEDIAL (LATERAL PART) AND BACK (POSTERIOR PART)



## Whichever way you turn your arm , the Deltoids lower tapered end is always on the “B” Surface :

WHICHEVER WAY YOU TURN YOUR ARM, THE DELTOID'S LOWER,  
TAPERED END IS ALWAYS ON THE “B” SURFACE!



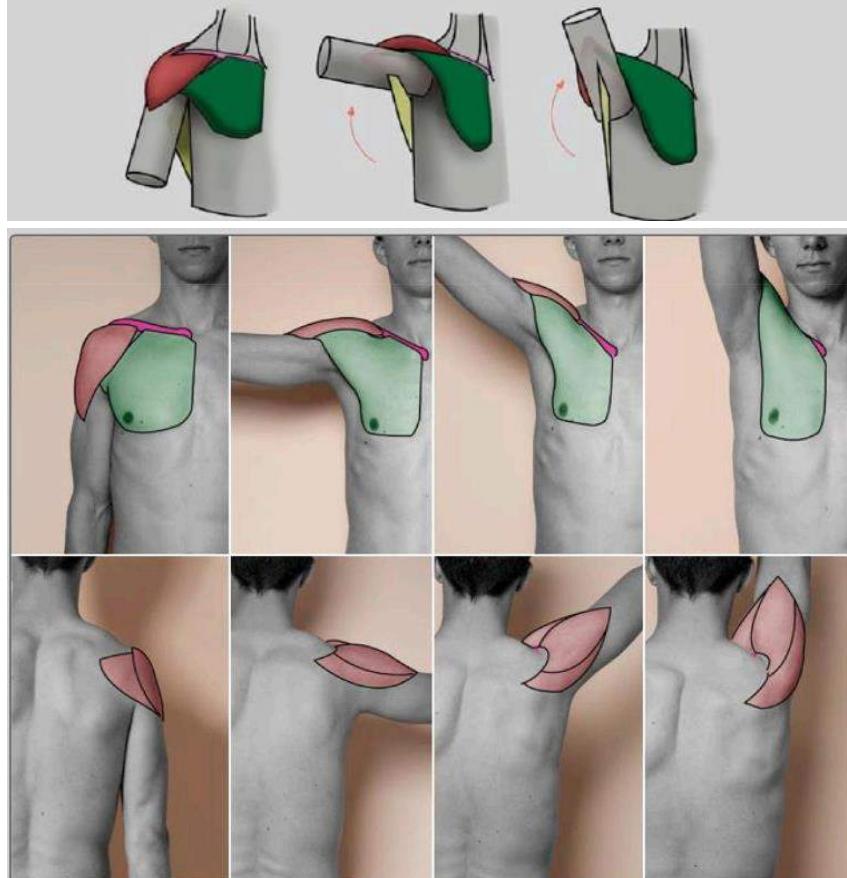
## Deltoid and Clavicle :

WHERE DOES IT GO?

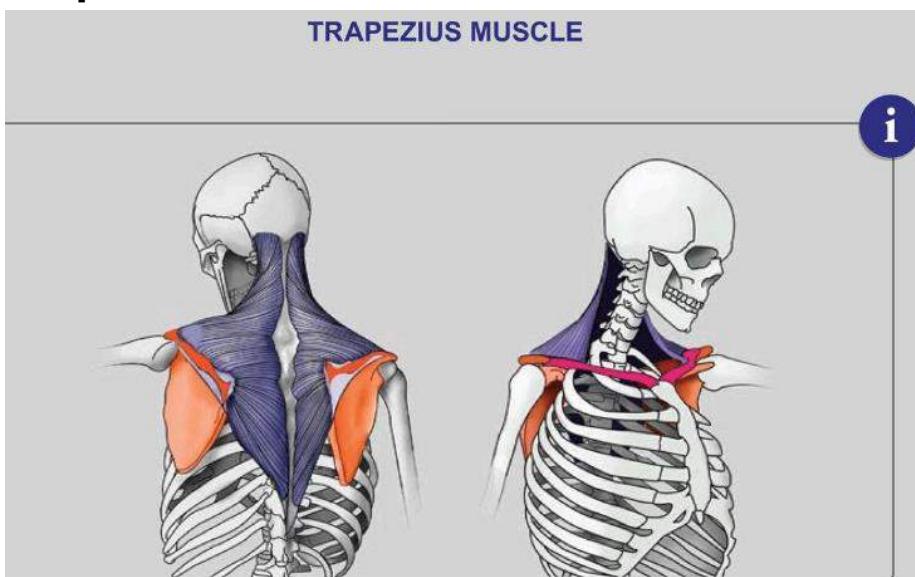


WHERE DOES THE SHOULDER MUSCLE (DELTOID) DISAPPEAR TO WHEN THE ARM IS LIFTED UP? IT JUST TURNS TOWARD THE BACK AND YOU WILL SEE IT IF YOU LOOK FROM THE OTHER SIDE.

THE CLAVICLE IS ONLY COVERED BY SKIN. IT IS ALWAYS VISIBLE EXCEPT WHEN ARMS ARE LIFTED. THEN, THE CLAVICLE IS HIDDEN BEHIND THE GREAT CHEST MUSCLE (PECTORALIS MAJOR).



## Trapezius Muscle :



ORIGIN: MEDIAL SUPERIOR NUCHAL LINE & EXTERNAL PROTUBERANCE  
OF THE SKULL

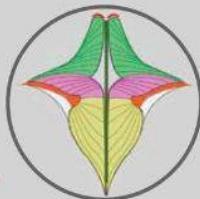
INSERTION: LATERAL CLAVICLE, ACROMION AND SPINE OF SCAPULA

ACTIONS:

UPPER FIBERS: ELEVATE AND UPWARDLY ROTATE SCAPULA; EXTEND NECK

MIDDLE FIBERS: ADDUCT (RETRACT) SCAPULA

LOWER FIBERS: DEPRESS AND HELP UPPER FIBERS UPWARDLY ROTATE SCAPULA

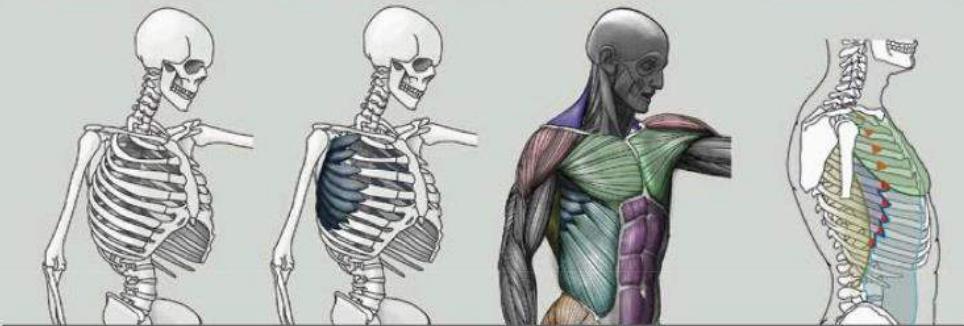
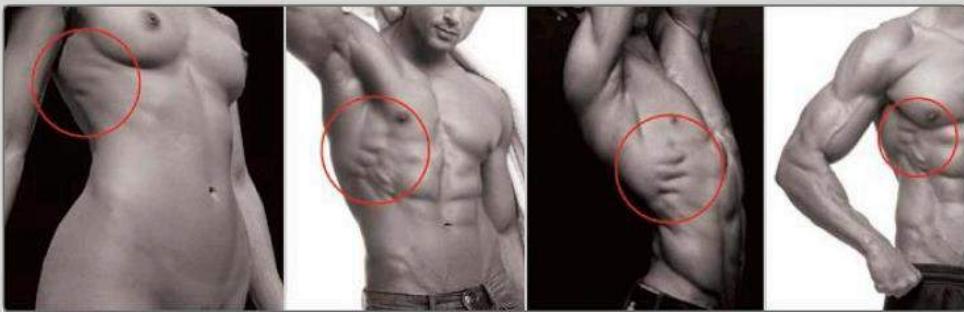


## Trapezius Muscle :

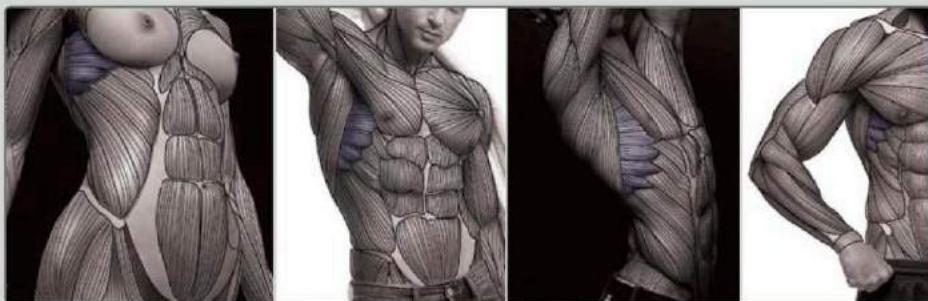


## Ribs - Serratus Anterior :

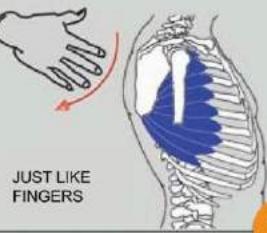
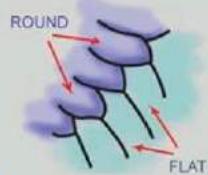
ARE THESE RIBS?



THIS IS A MUSCLE, CALLED SERRATUS ANTERIOR



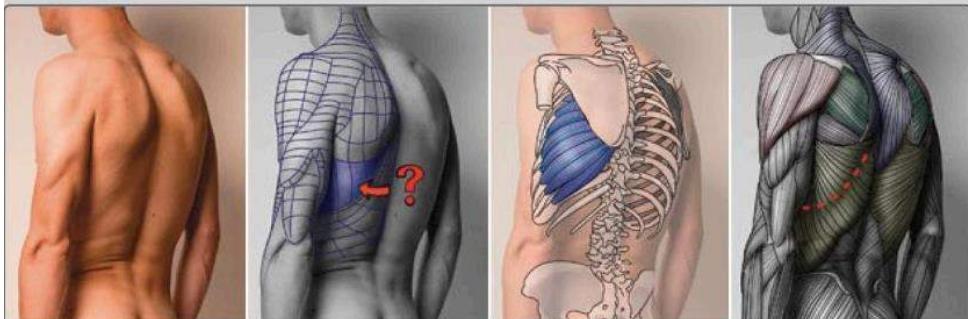
IF PERSON IS SKINNY,  
THEN SERRATUS IS TOO  
FLAT TO BE VISIBLE.



NON-PERSONAL USE ONLY OF GOMESH KARNCHANAPAYAP 10/56 TOWNPLUS RAMA 9 KRUNGTHEP KREETHA, BANGKOK 1024

## Ribs - Serratus Anterior :

WHAT IS THIS BULGE UNDER THE SHOULDER BLADE?

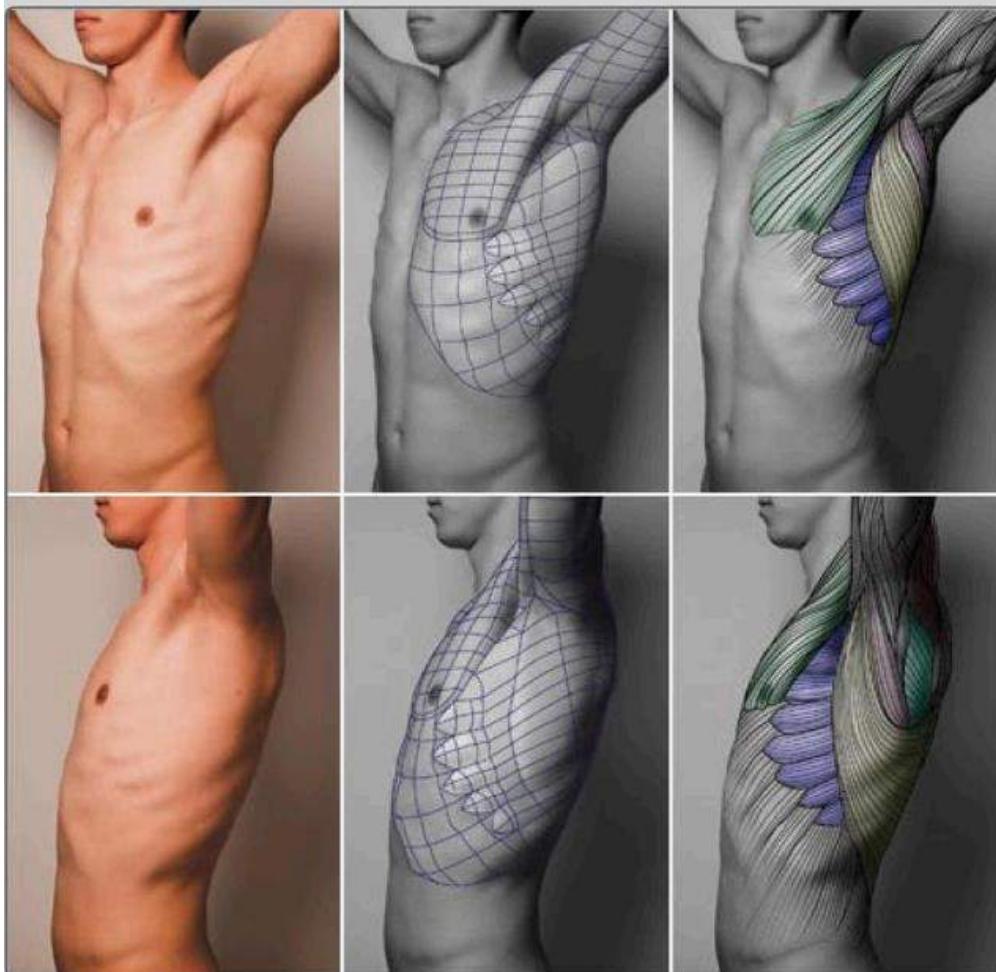


IT IS THE SERRATUS ANTERIOR MUSCLE, PUSHING THE LATISSIMUS DORSI OUTWARD FROM BENEATH.

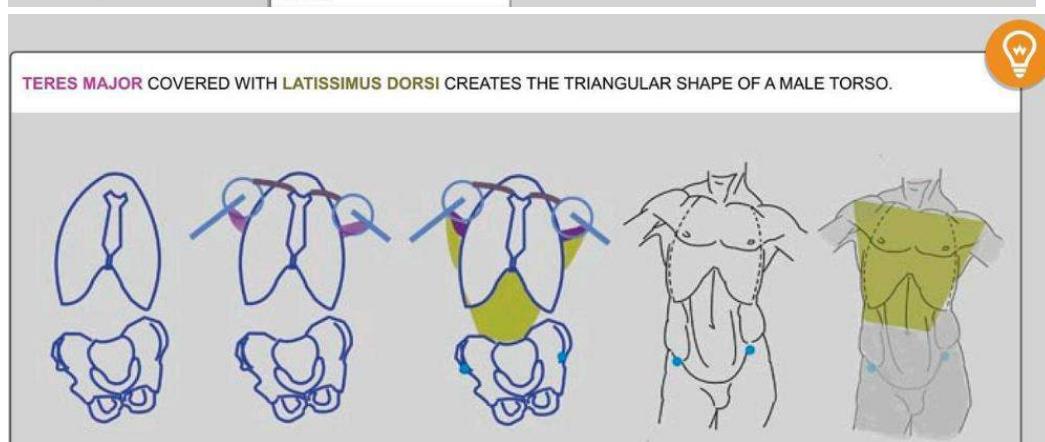
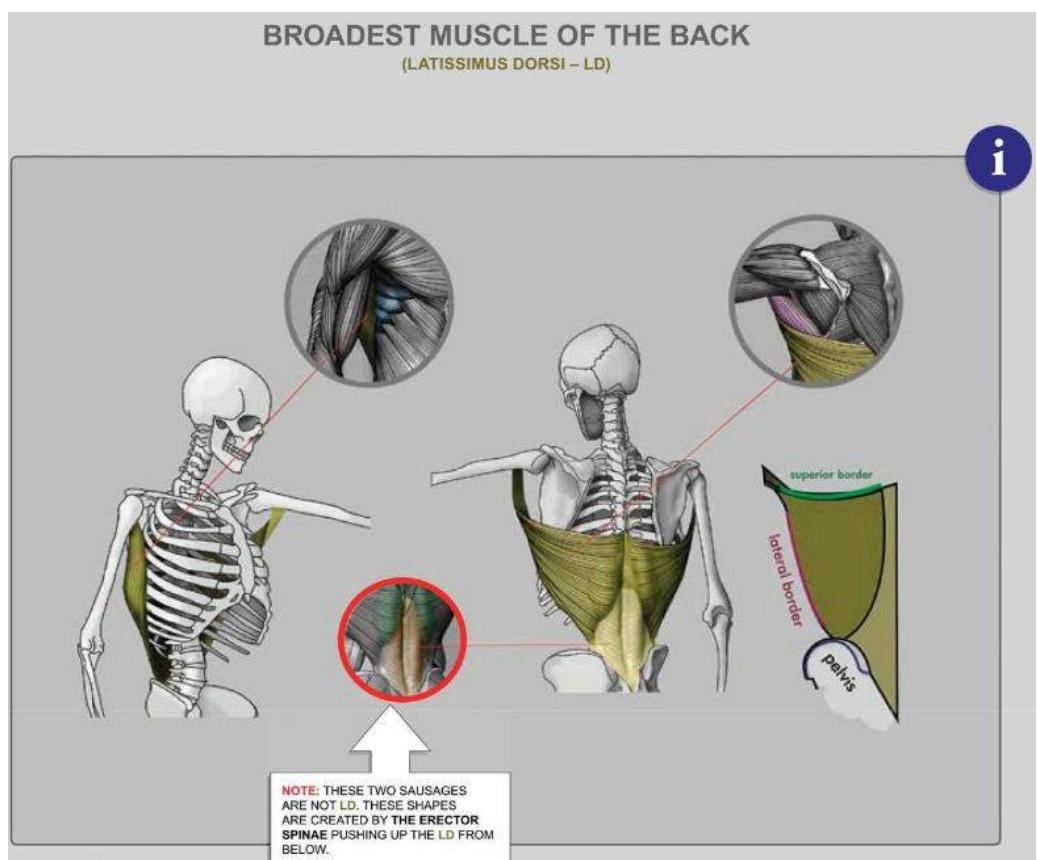
i

SERRATUS ANTERIOR IS A MUSCLE THAT ORIGINATES ON THE SURFACES OF THE 1ST TO 8TH RIBS ON THE LATERAL CHEST AND INSERTS ALONG THE ENTIRE ANTERIOR LENGTH OF THE MEDIAL BORDER OF THE SCAPULA.

1/4 AND SIDE VIEW

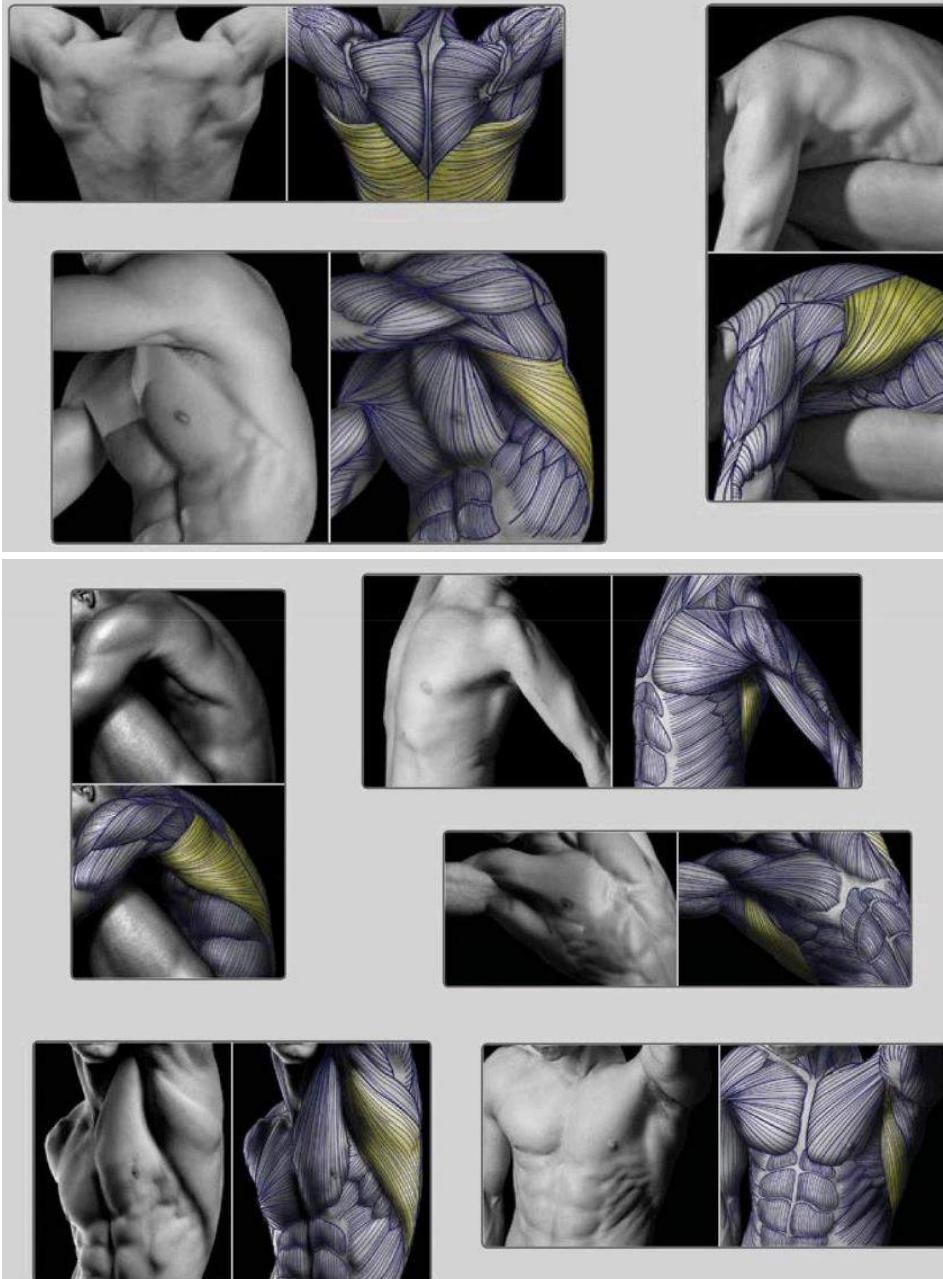


## Latissimus Dorsi - broadest Muscle of the back :



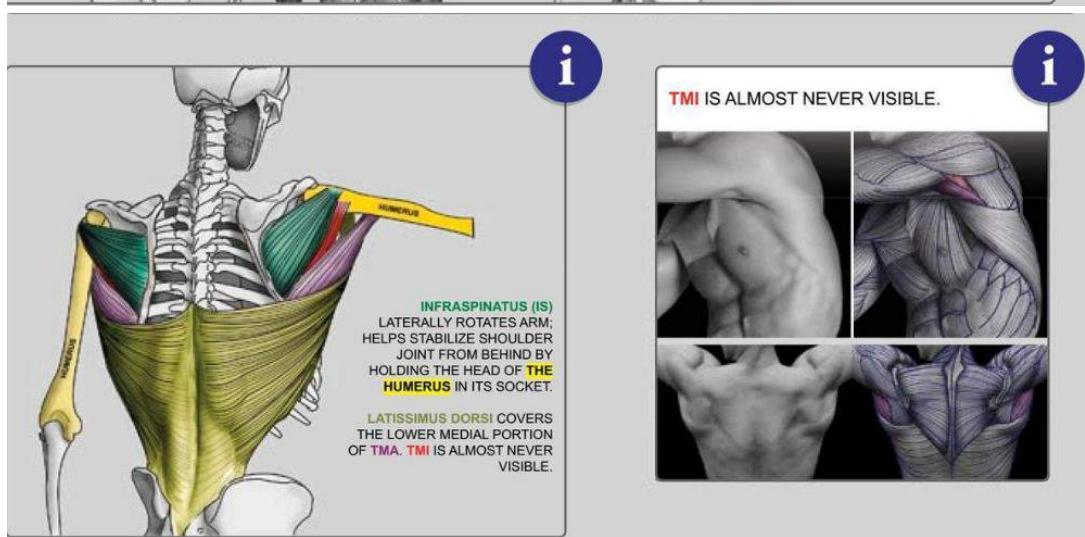
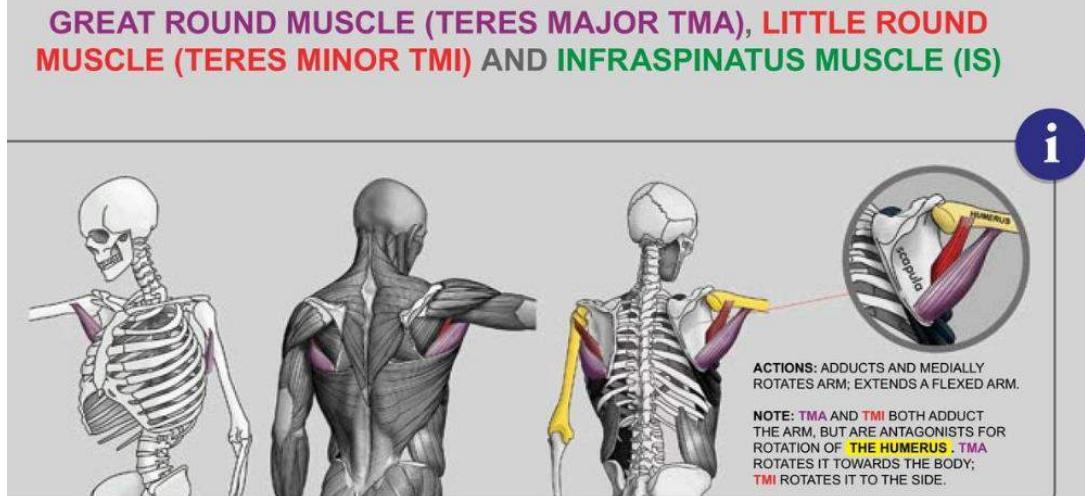
## **Latissimus Dorsi :**

**IDENTIFY THE BROADEST MUSCLE OF THE BACK!**  
**(LATISSIMUS DORSI)**



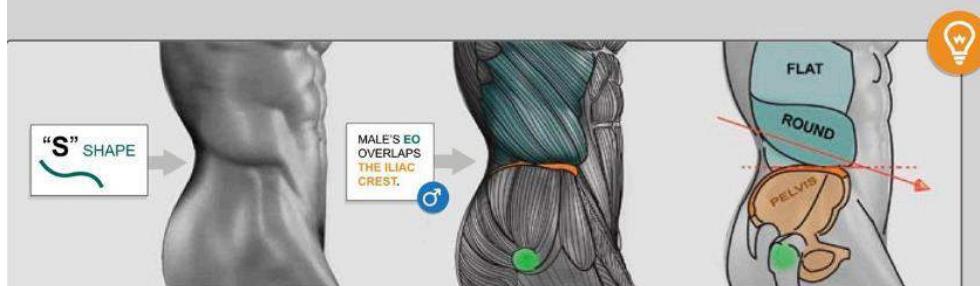
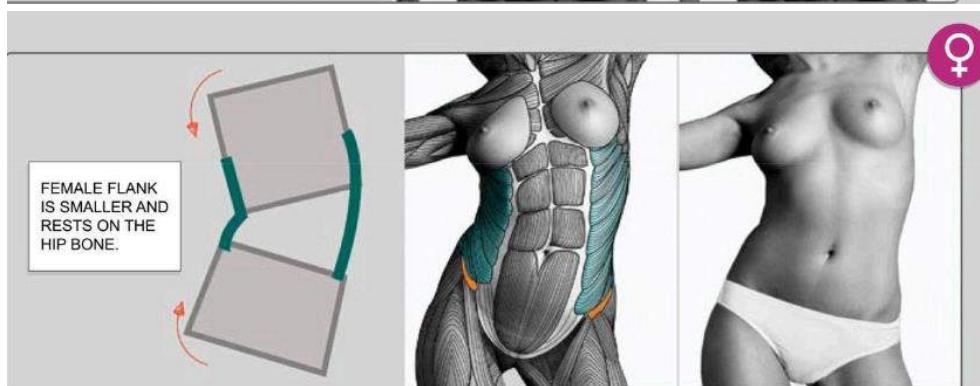
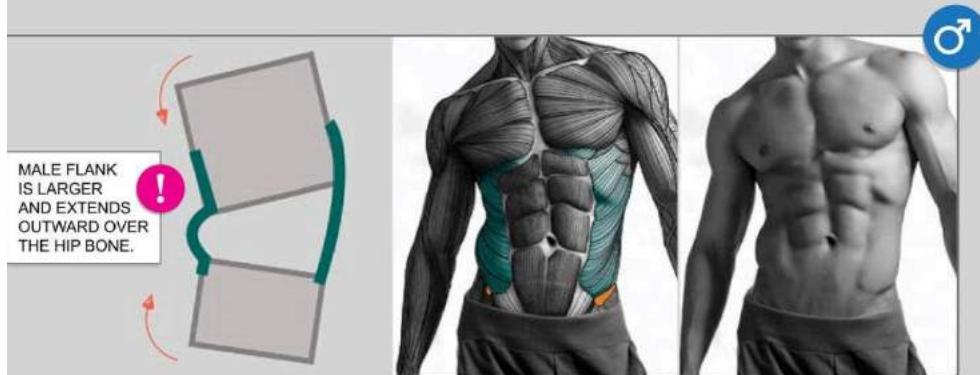
# Great Round Muscle(Teres Major TMA , LITTLE ROUND Muscle(Teres Minor TMI) and Infraspinatus Muscle(IS):

GREAT ROUND MUSCLE (TERES MAJOR TMA), LITTLE ROUND MUSCLE (TERES MINOR TMI) AND INFRASPINATUS MUSCLE (IS)



## Abdominal External Oblique Muscle (EO) :

### ABDOMINAL EXTERNAL OBLIQUE MUSCLE (EO)



## Male and Female Hips :

### MALE AND FEMALE HIPS



BONES

MUSCLES

BLOCK-OUT

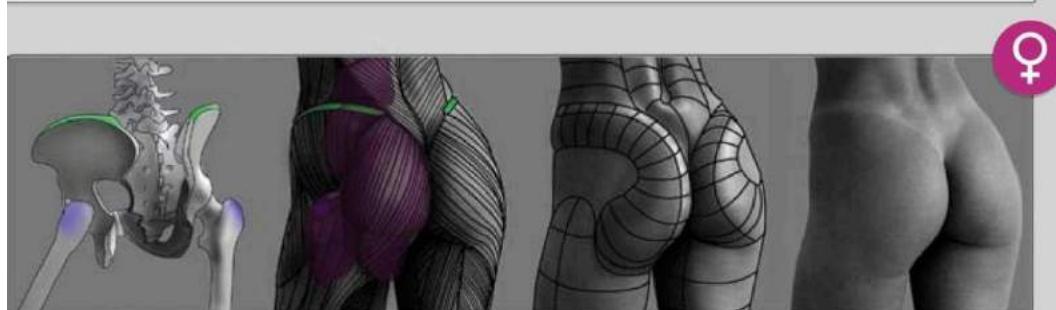
REAL



● GREATER TROCHANTER

● ILIAC CREST

● PUBIC SYMPHYSIS

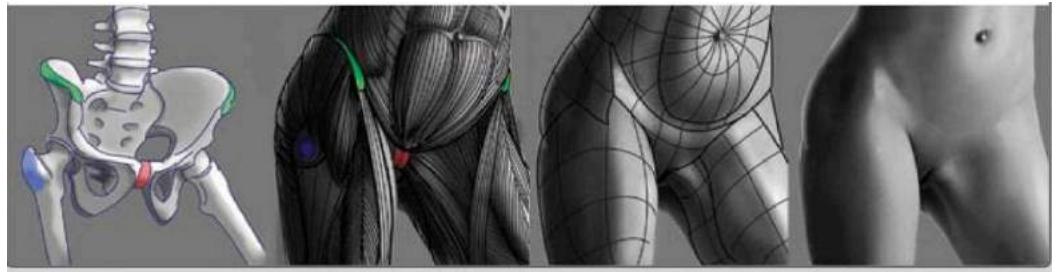


BONES

MUSCLES

BLOCK-OUT

REAL



SUBCUTANEOUS FAT PADS UNDER THE SKIN GIVE FEMALE HIPS THEIR CURVY SHAPE.

## All About Backsides :

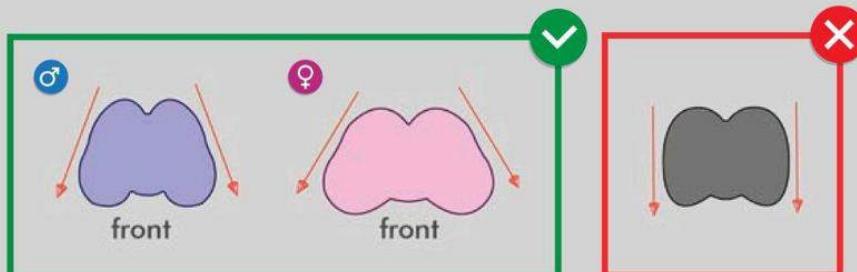
### ALL ABOUT “BACKSIDES”



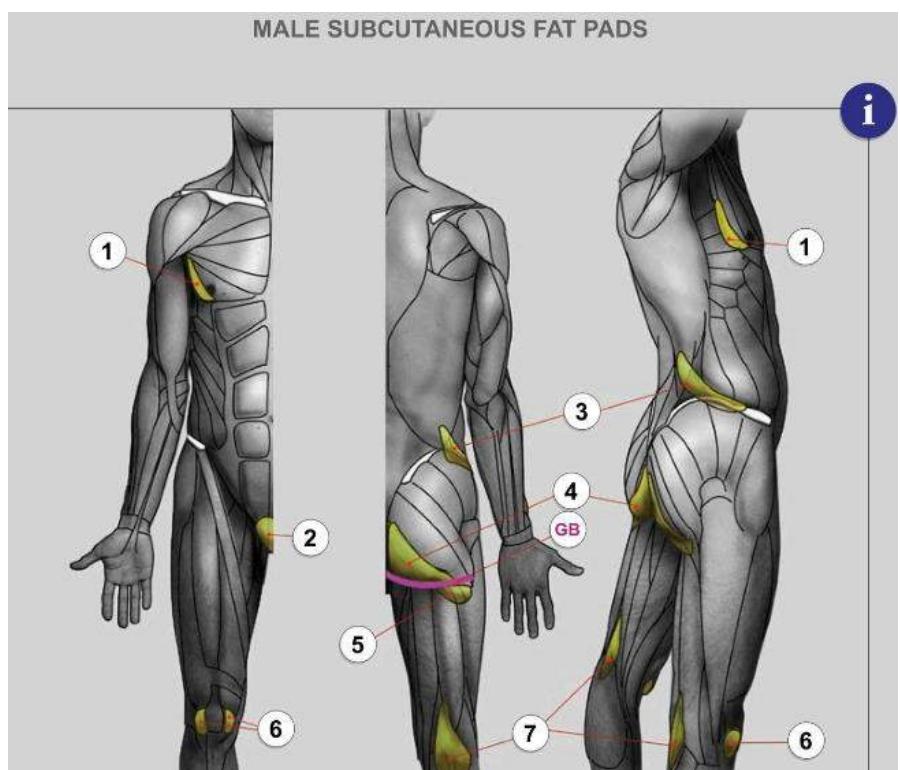
THE “RHOMBUS OF MICHAELIS” IS A FAT PAD THAT IS SOMETIMES VISIBLE ON THE LOWER BACK OF FEMALES.



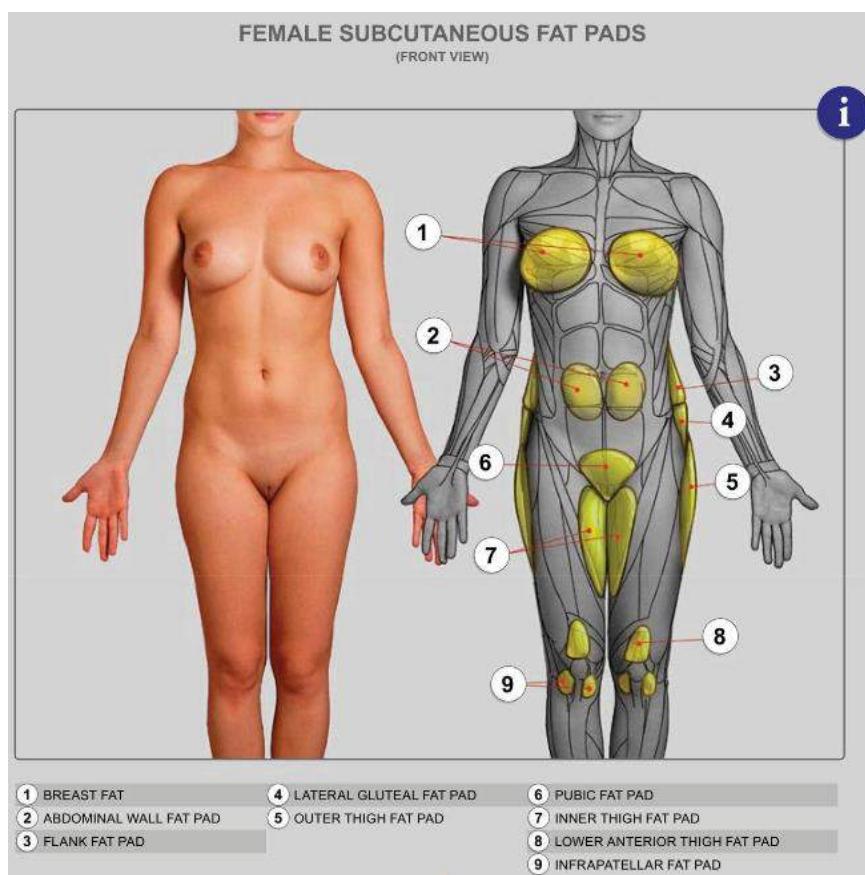
HORIZONTAL CROSS SECTIONS OF MALE AND FEMALE PELVIS.



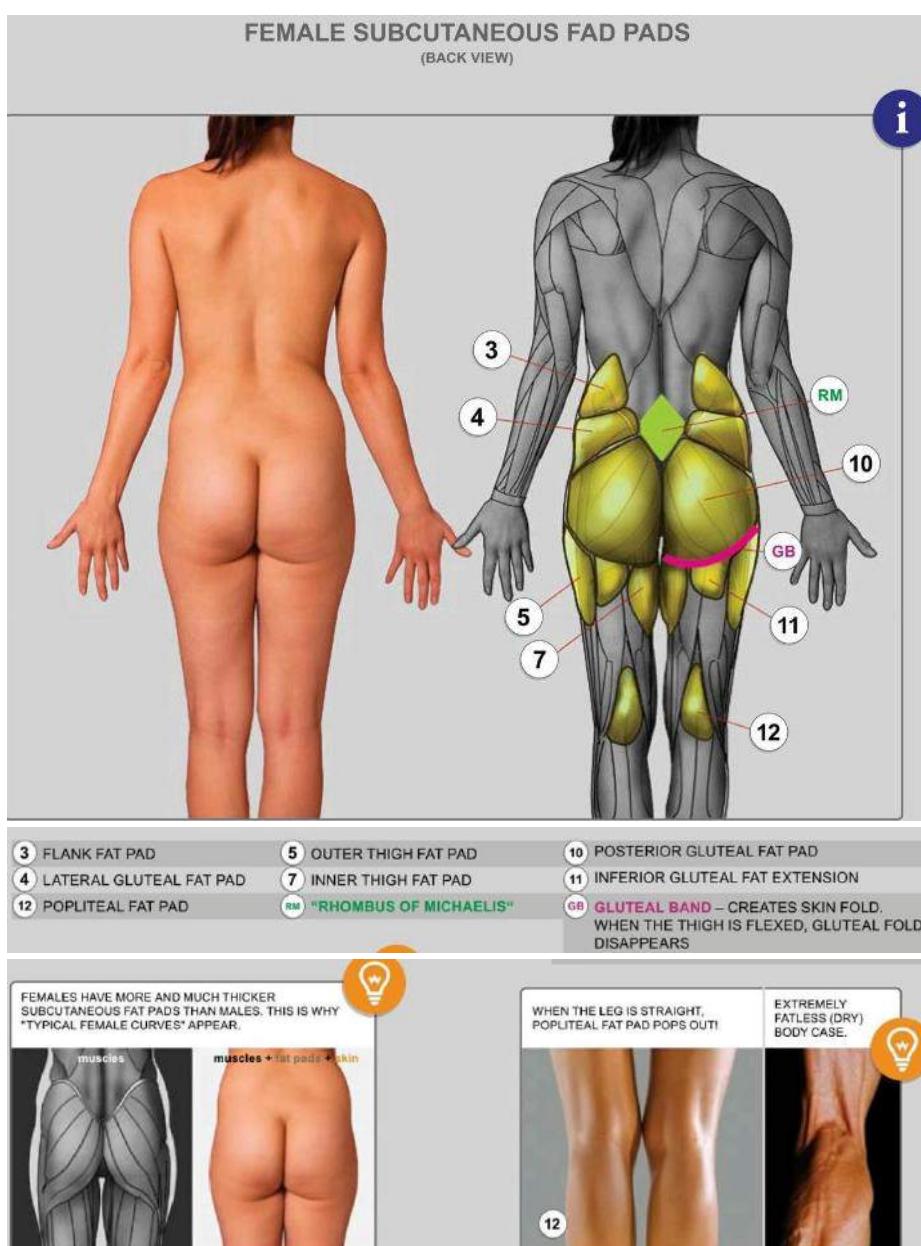
## Male Subcutaneous Fat Pads:



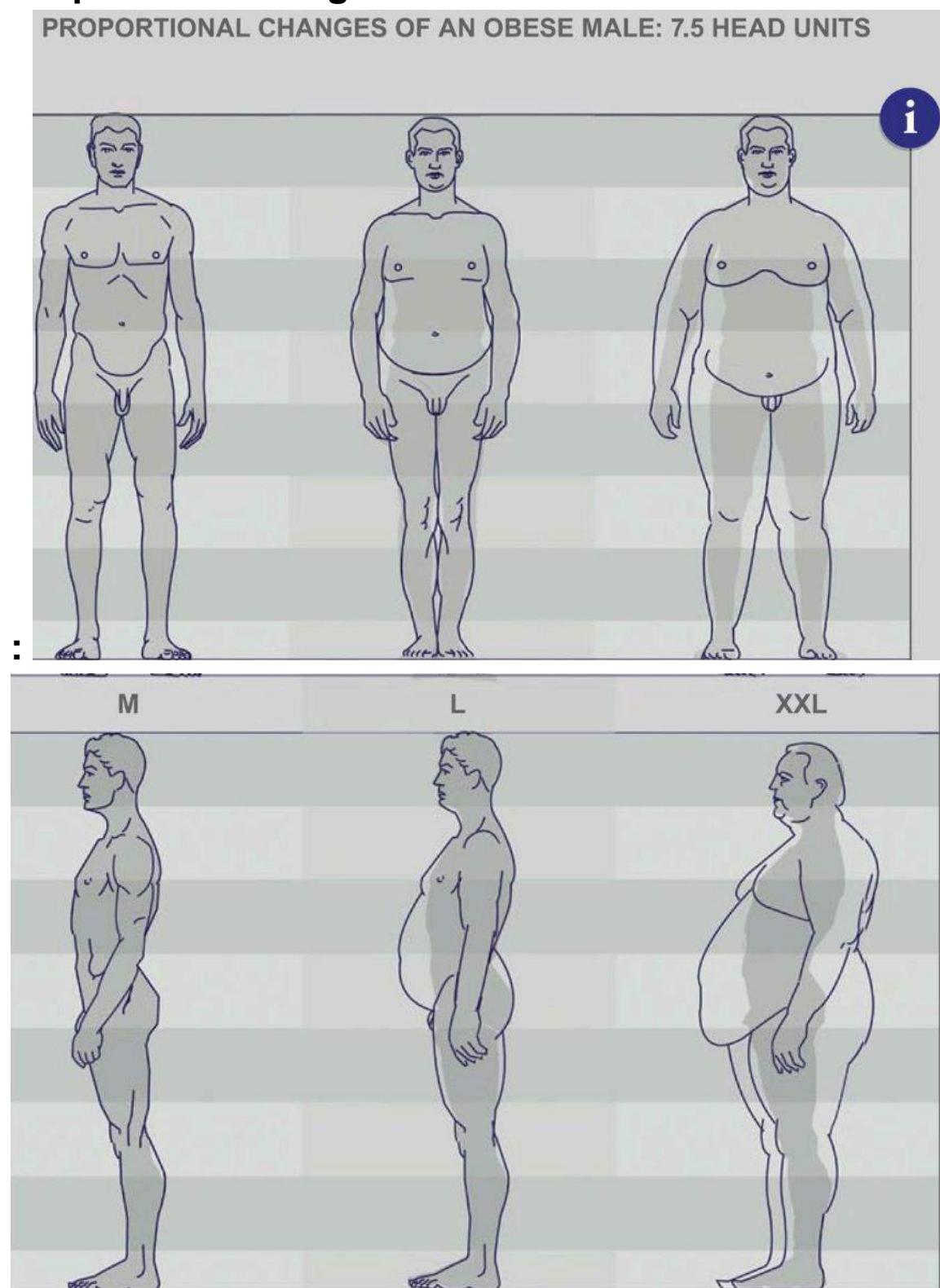
## Female Subcutaneous Fat Pads - Side View :



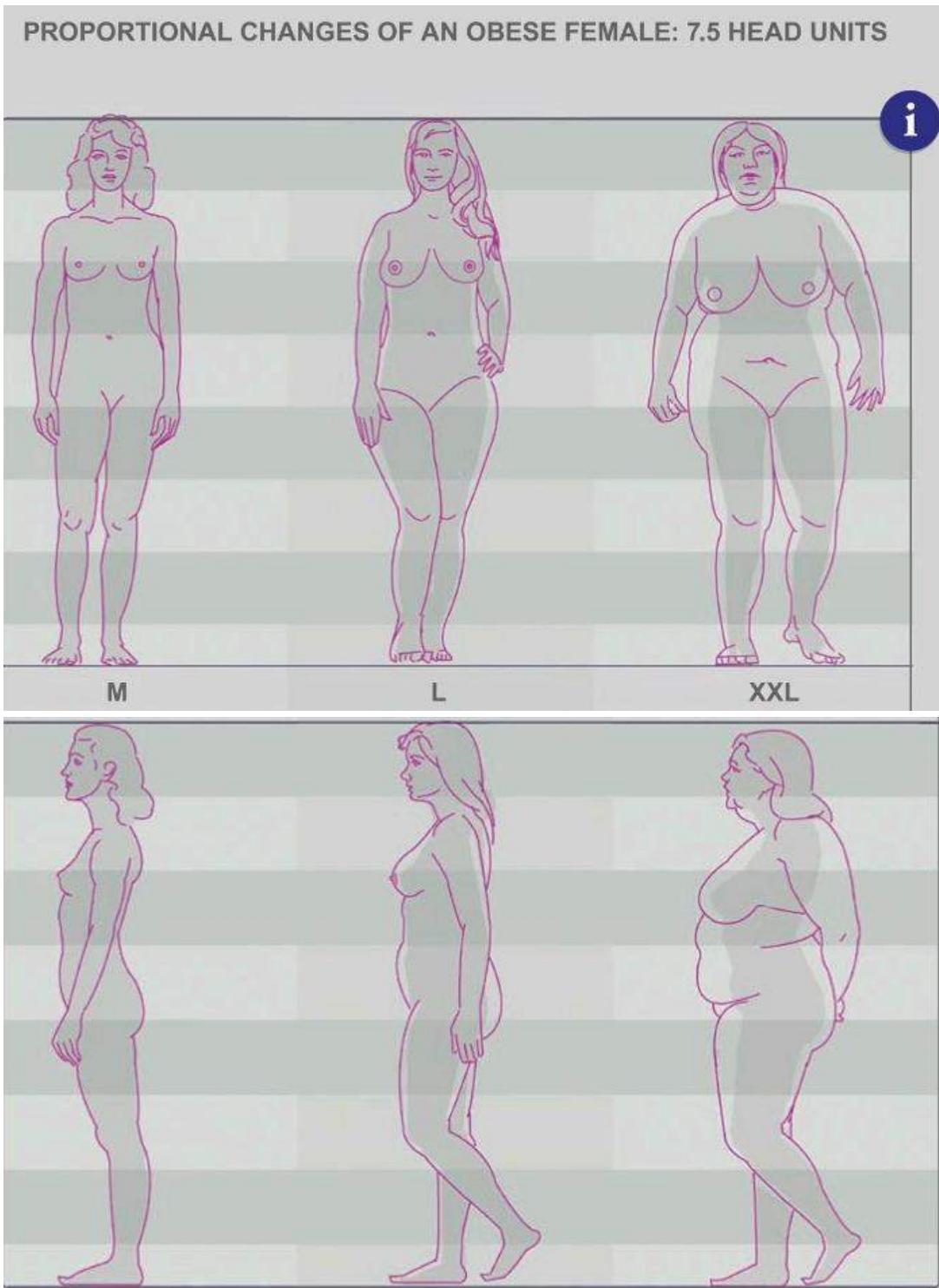
## Female Subcutaneous Fat Pads - Back View :



## Proportional changes of an obese Male : 7.5 head units

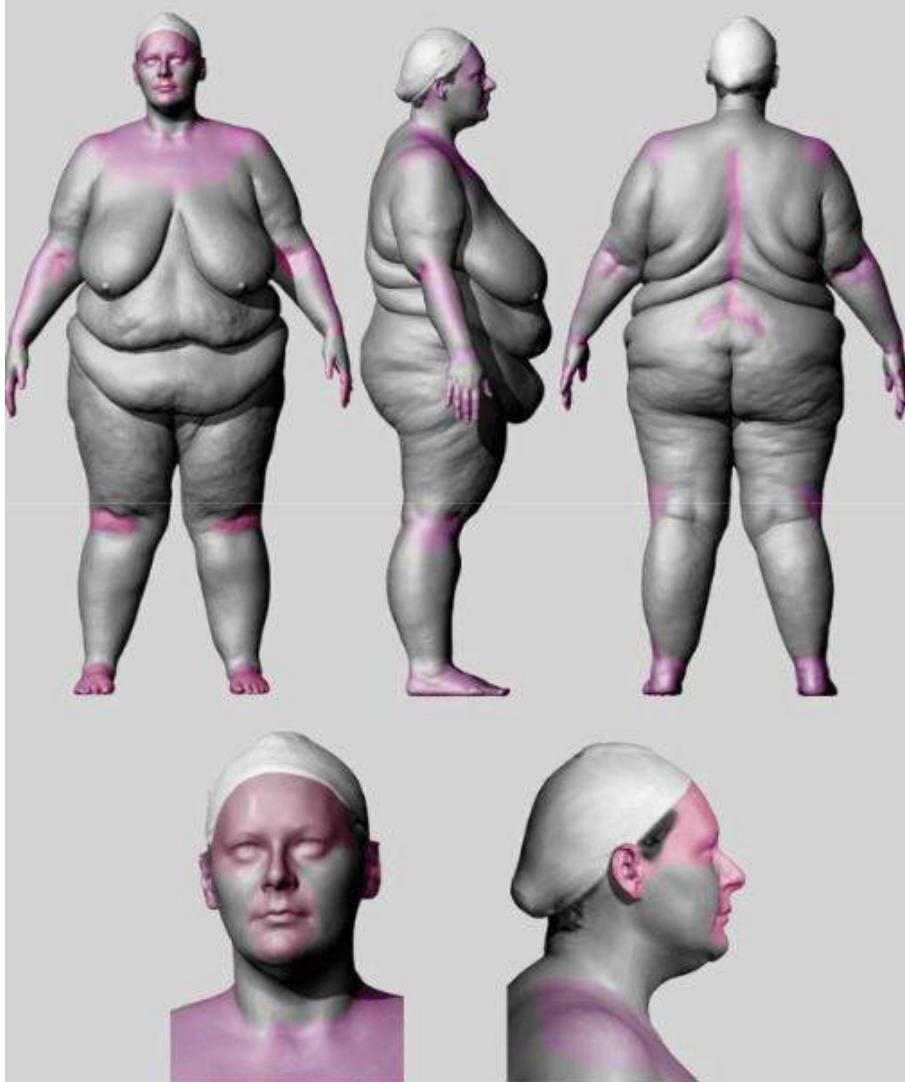


## Proportional changes of an obese Female : 7.5 head units :

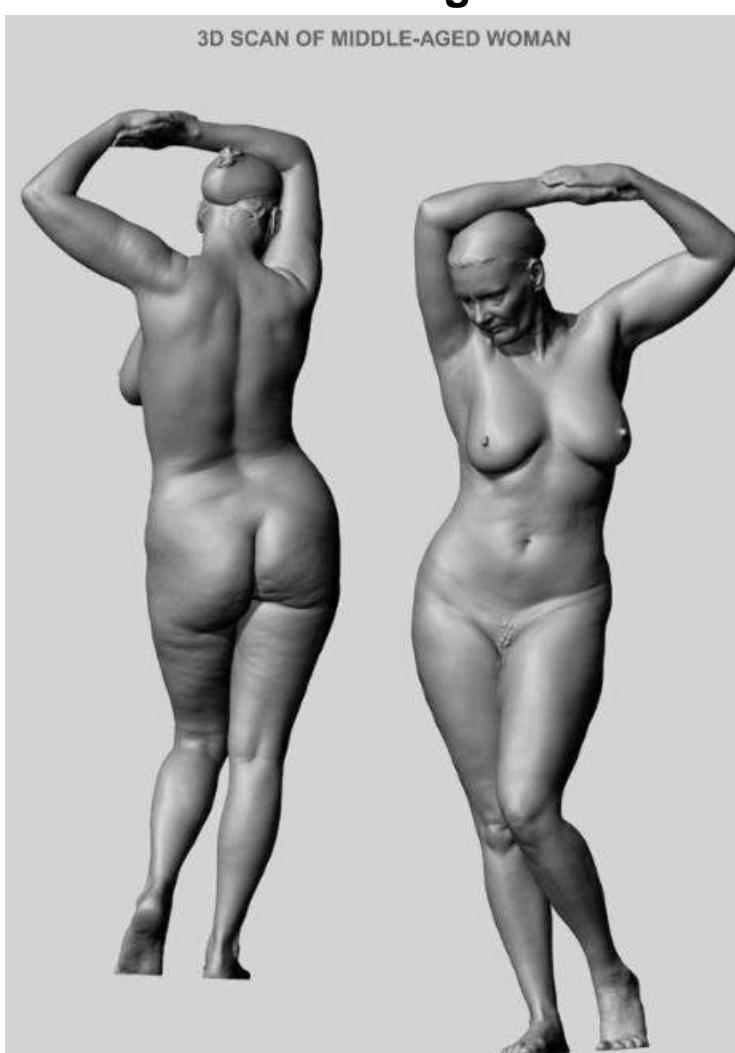


## **Areas of the body that are less affected by fat accumulation :**

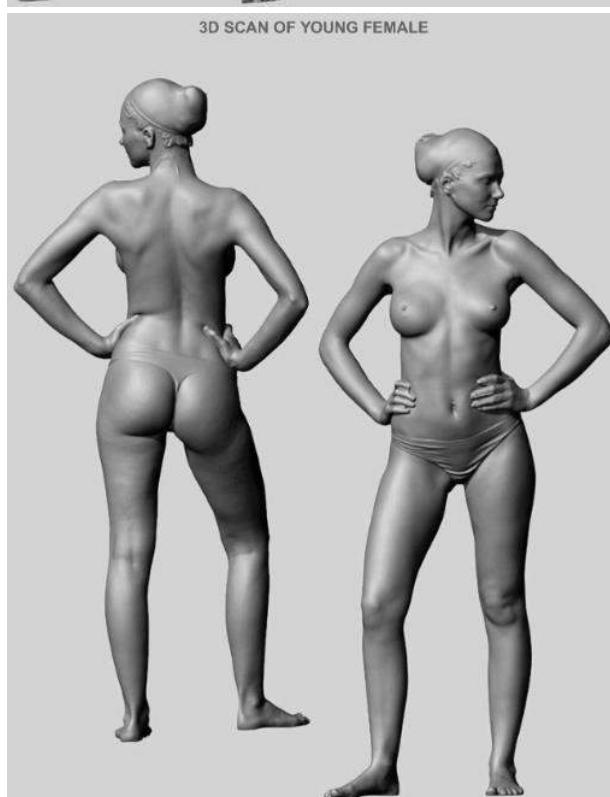
AREAS OF THE BODY THAT ARE LESS AFFECTED BY FAT ACCUMULATION



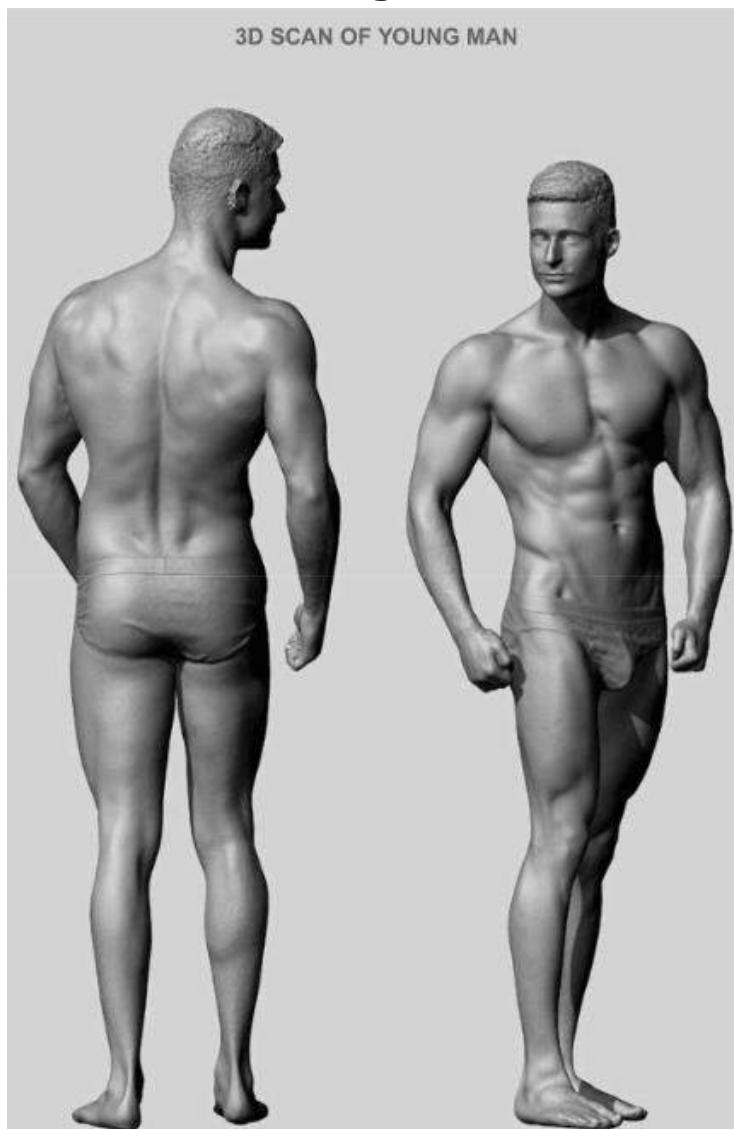
## 3D Scan of Middle-Aged Woman :



## 3D Scan of Young Female :



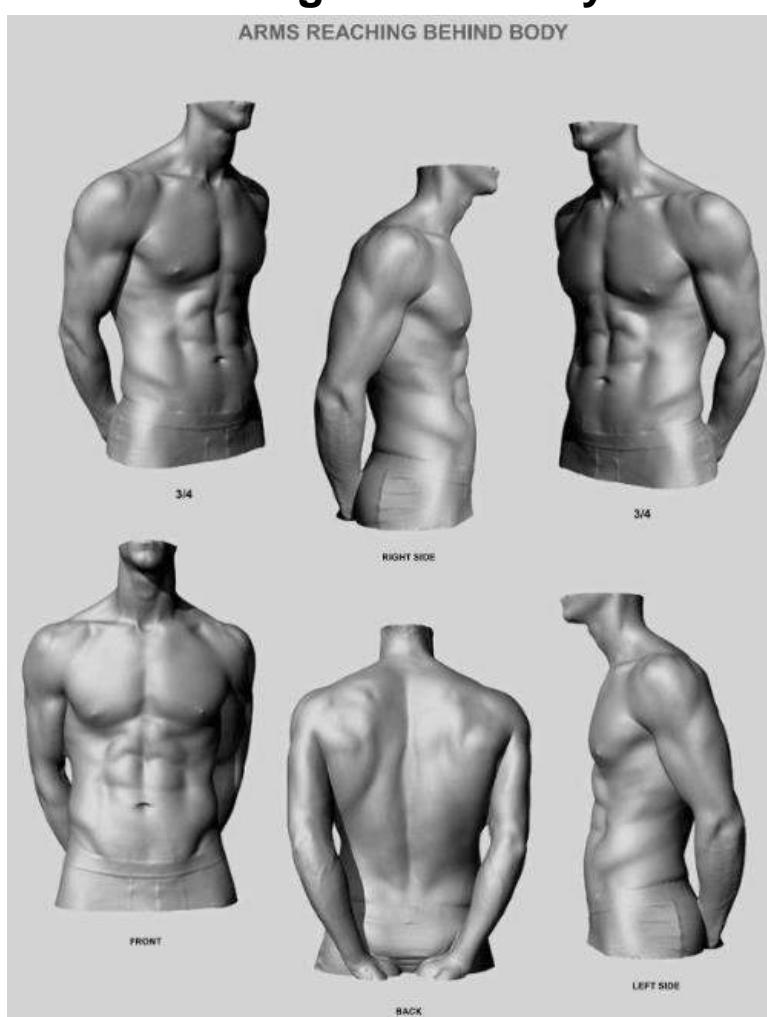
## **3D Scan of Young Man :**



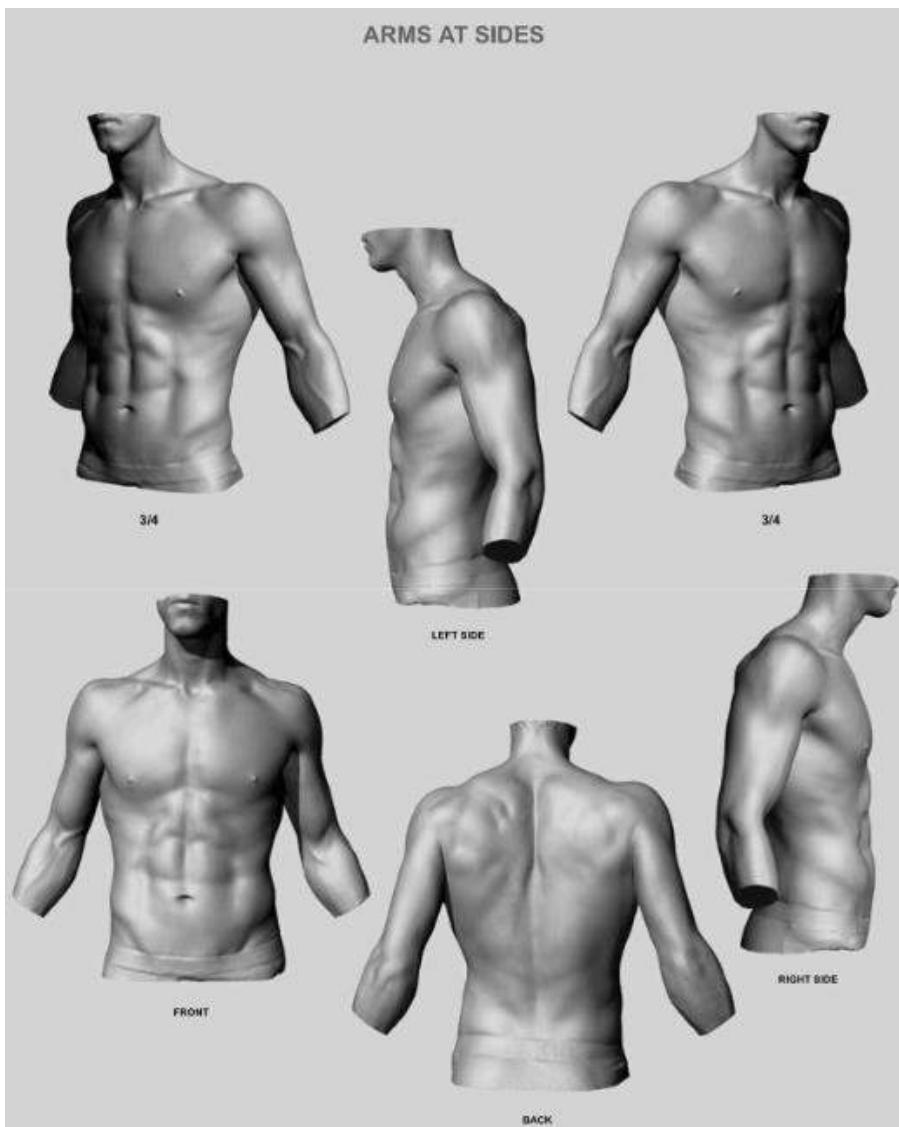


**3D Scan of Middle-Aged Man :**

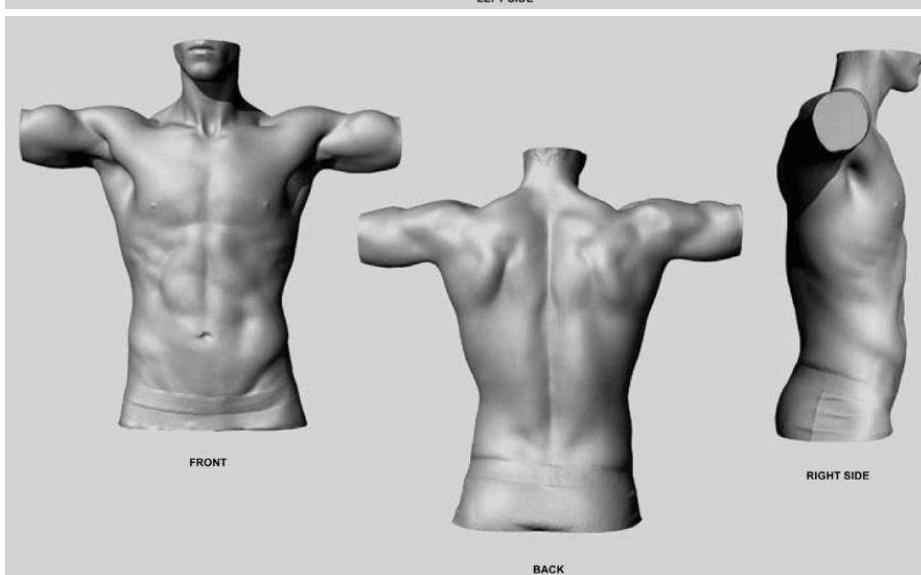
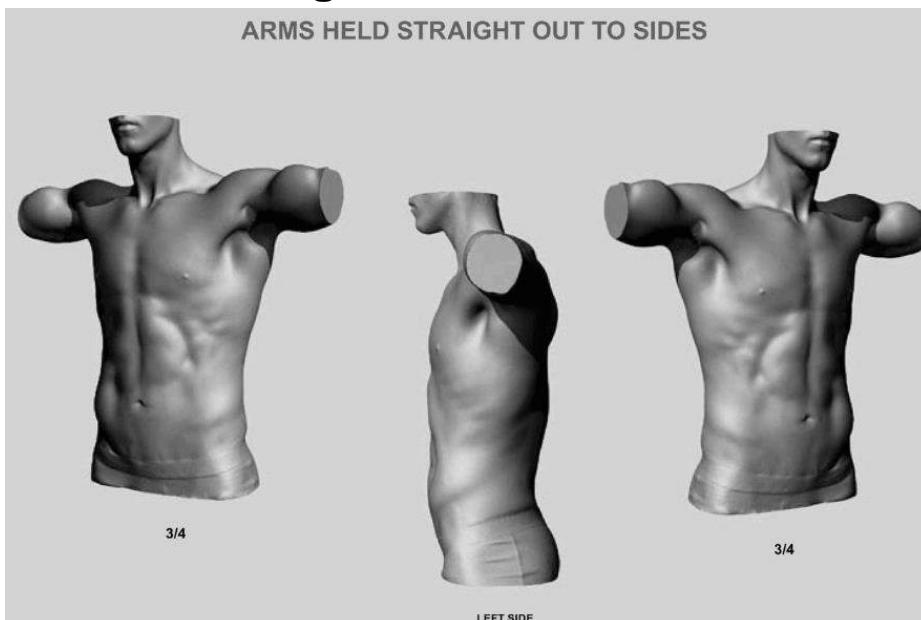
## Arms reaching behind body :



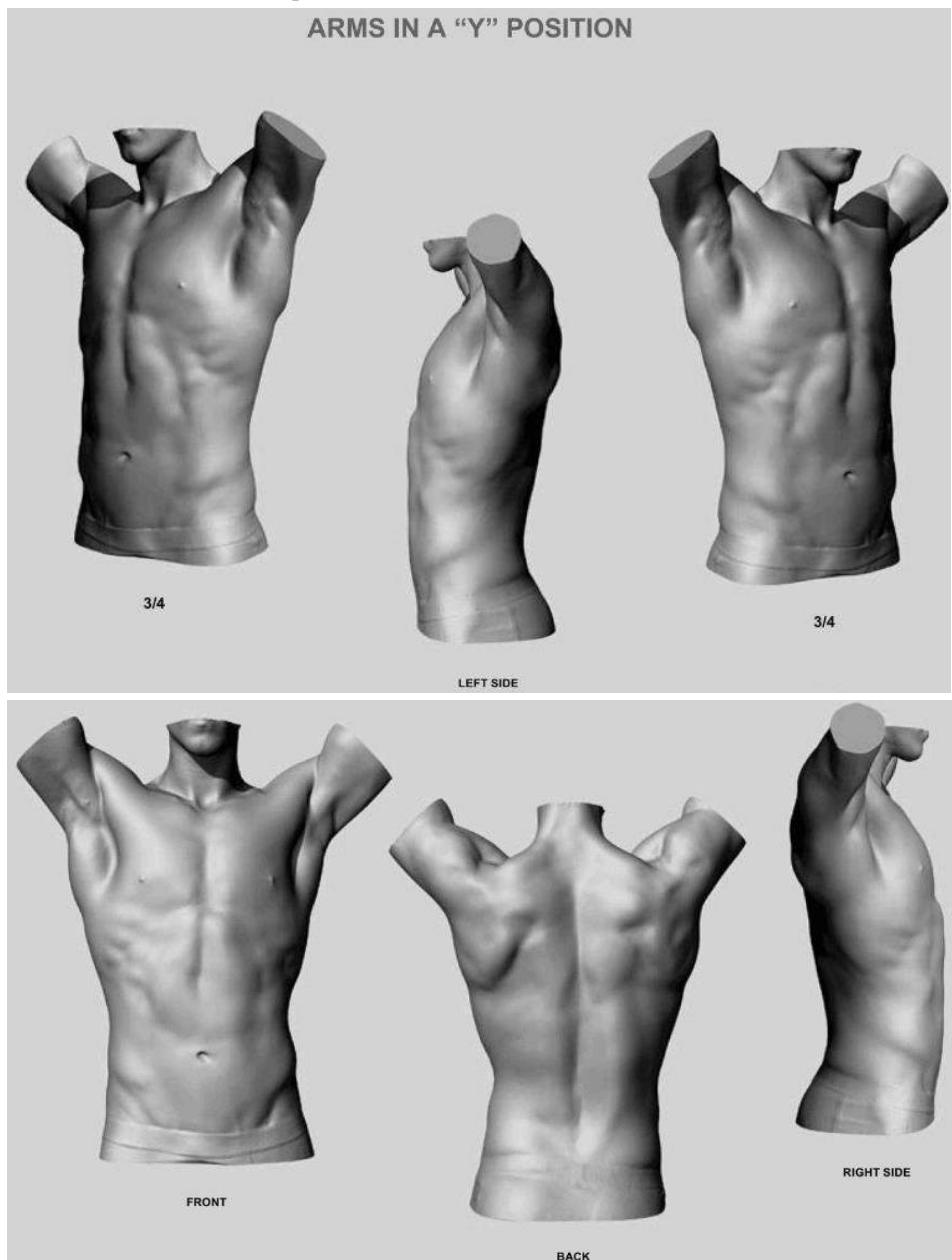
## Arms at Sides :



## Arm held straight out to sides :

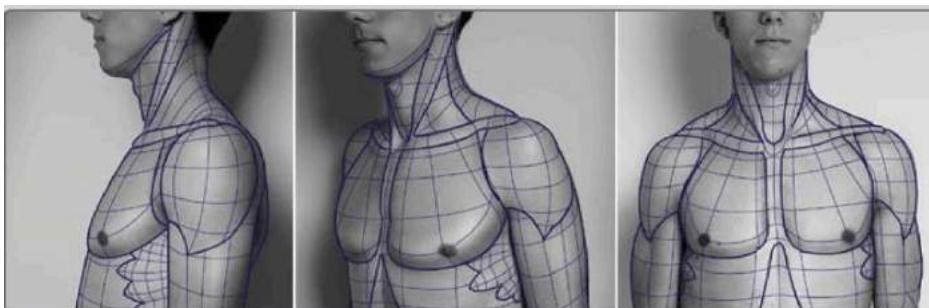
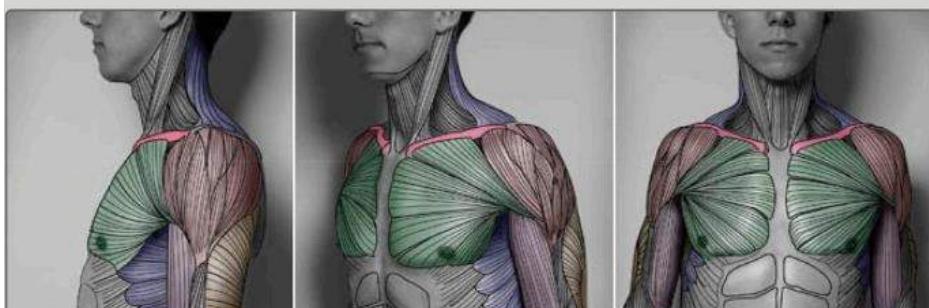


## Arm in a “Y” position :



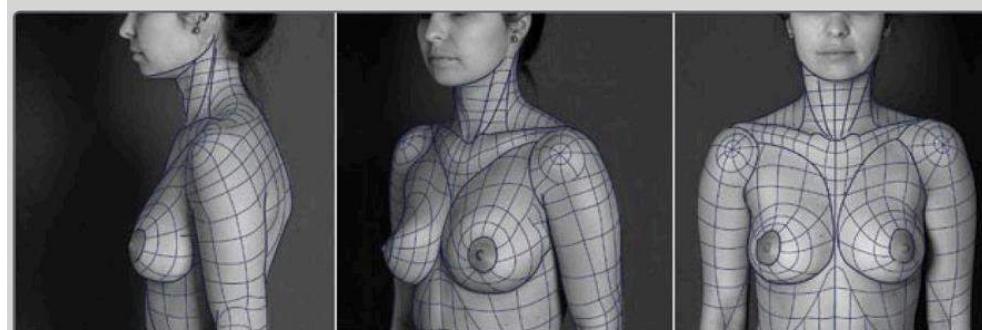
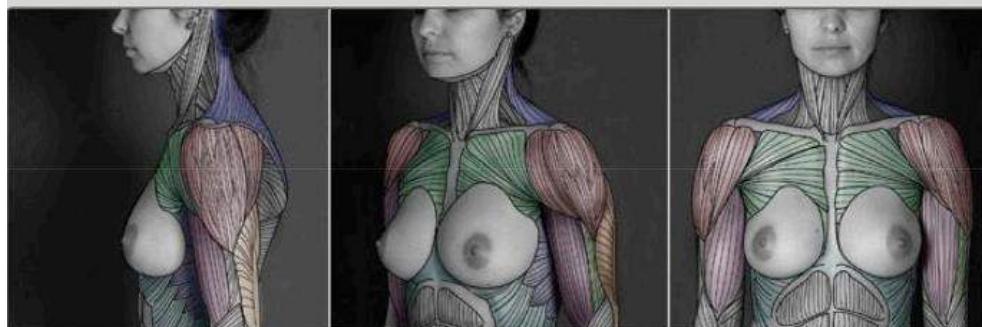
## Arms Hanging Naturally - Male :

ARMS HANGING NATURALLY – MALE



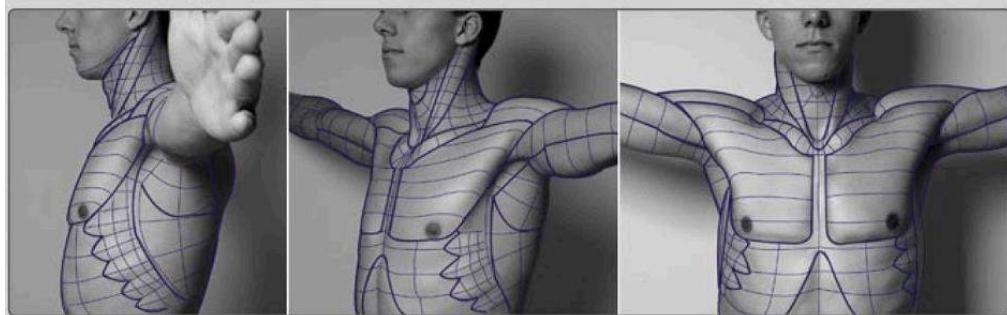
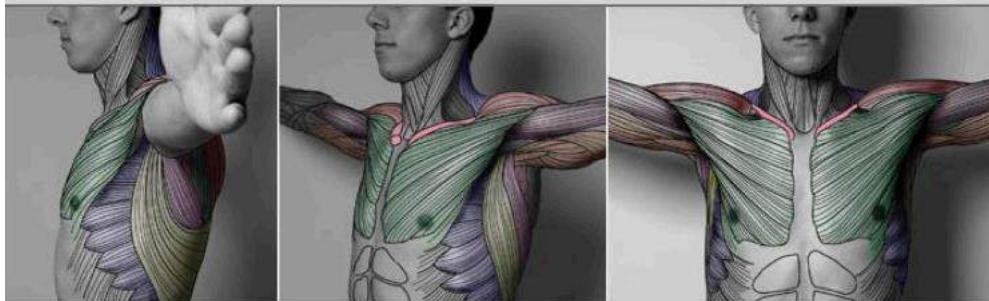
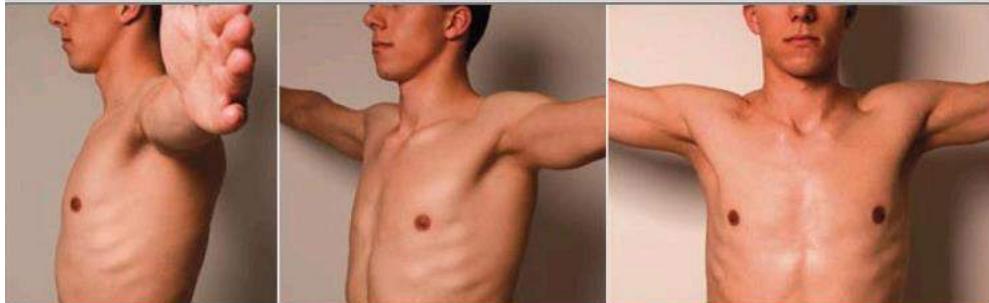
## Arms Hanging Naturally - Female :

ARMS HANGING NATURALLY – FEMALE



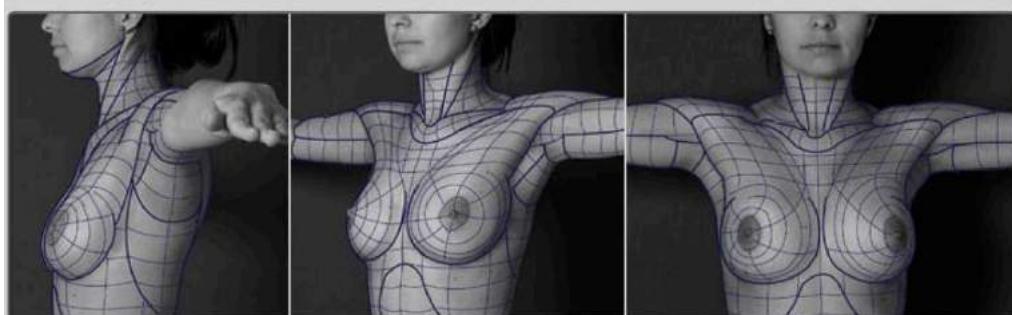
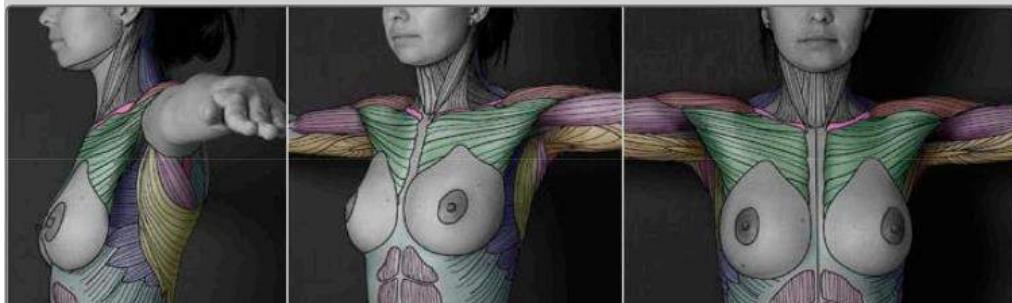
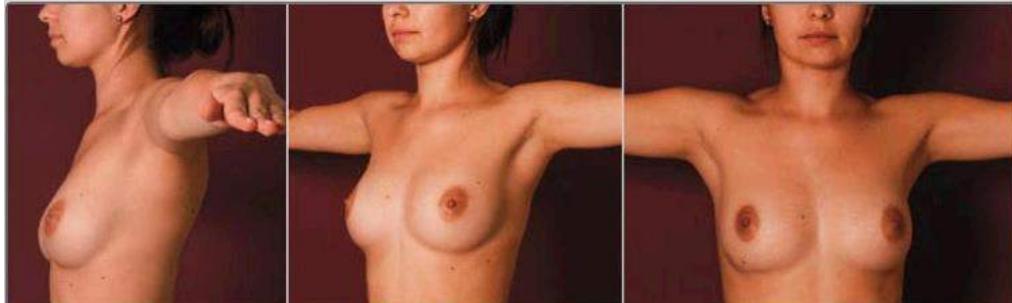
## Arms Held straight out to sides - Male :

ARMS HELD STRAIGHT OUT TO SIDES – MALE



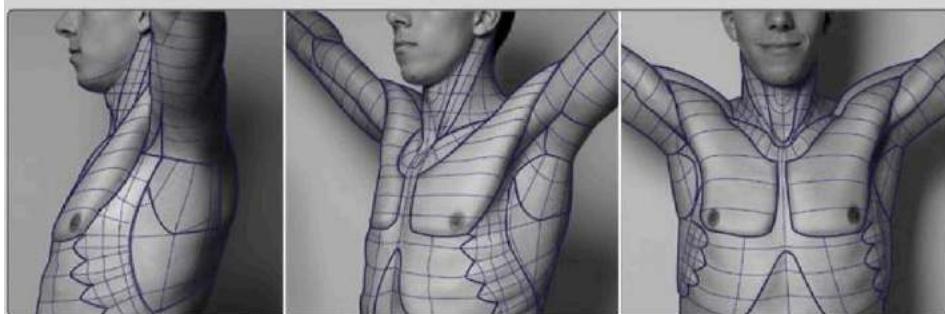
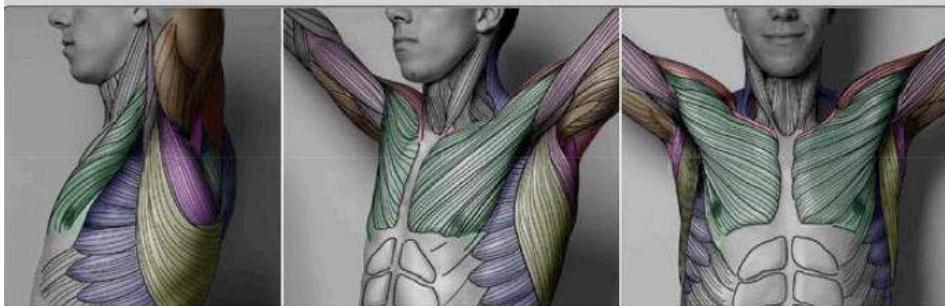
## Arms Held straight out to sides - Female :

ARMS HELD STRAIGHT OUT TO SIDES – FEMALE



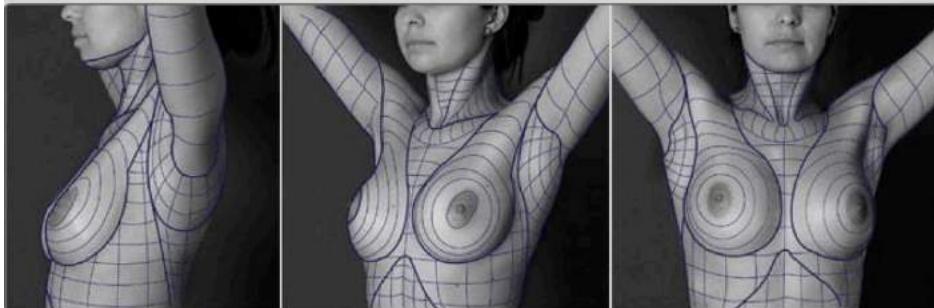
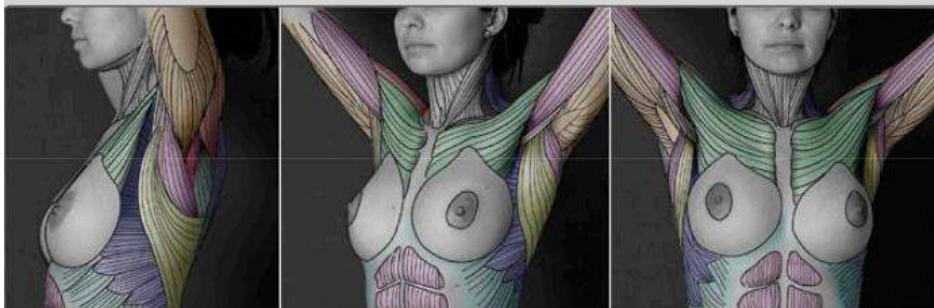
## Arms in a “Y” position Male :

ARMS IN A “Y” POSITION – MALE



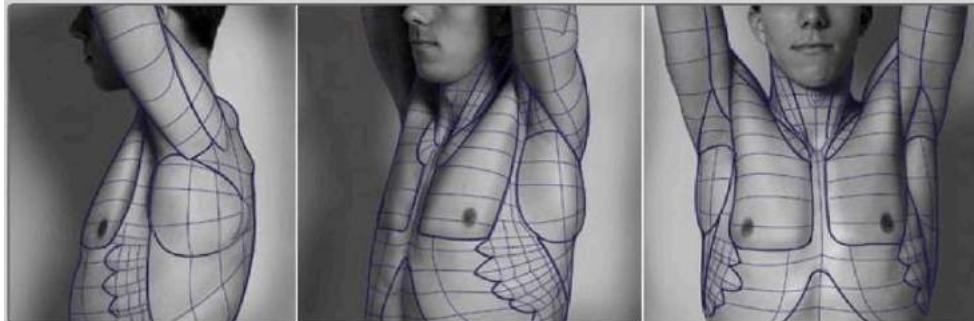
## Arms in a “Y” position Female :

ARMS IN A “Y” POSITION – FEMALE



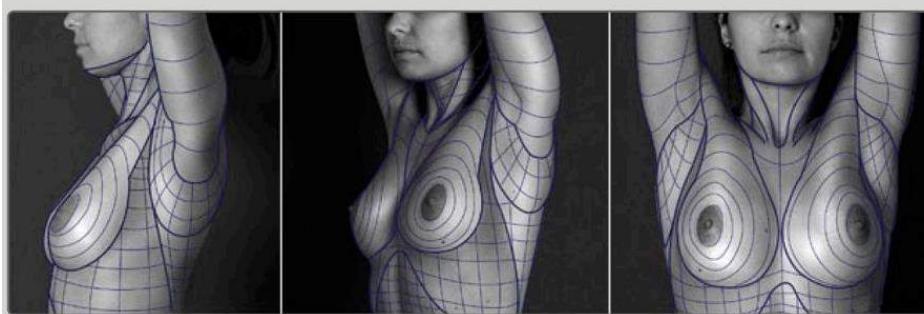
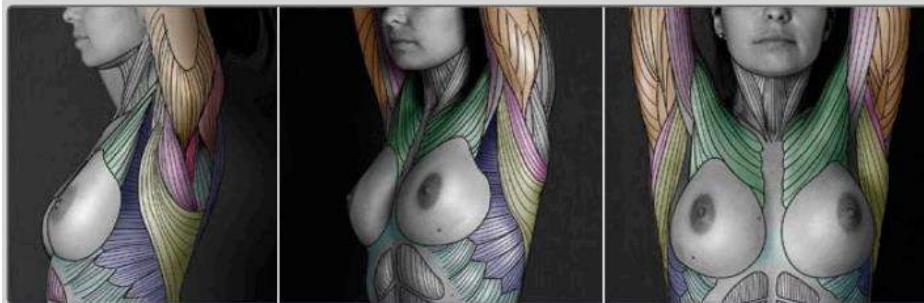
## Arms Straight up - Male :

ARMS STRAIGHT UP – MALE



## Arms Straight up - Female :

ARMS STRAIGHT UP – FEMALE

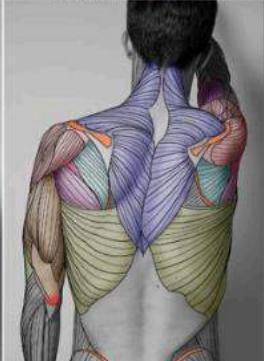
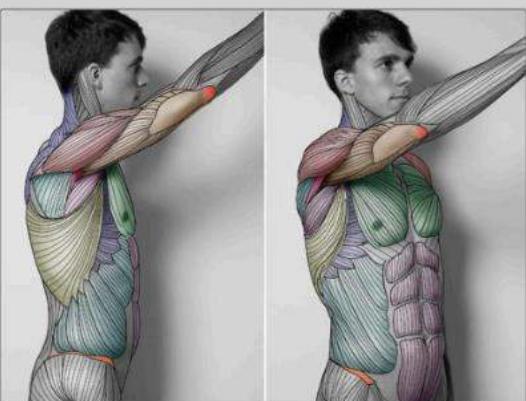


## Arms Reaching up and forward :

ARM REACHING UP AND FORWARD

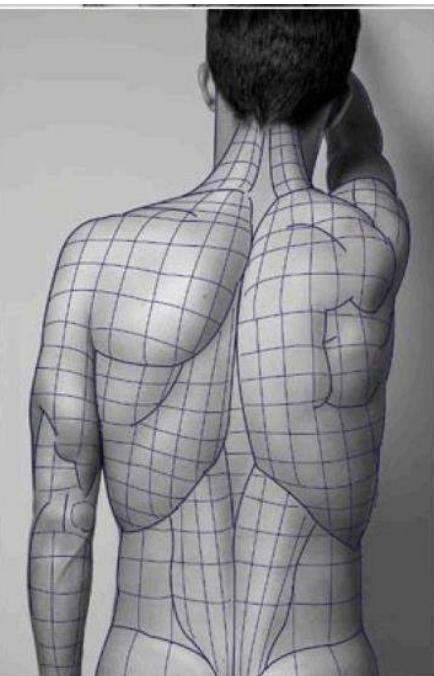
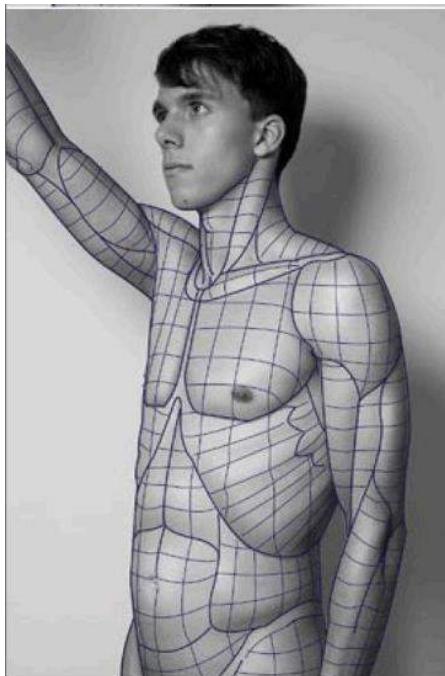
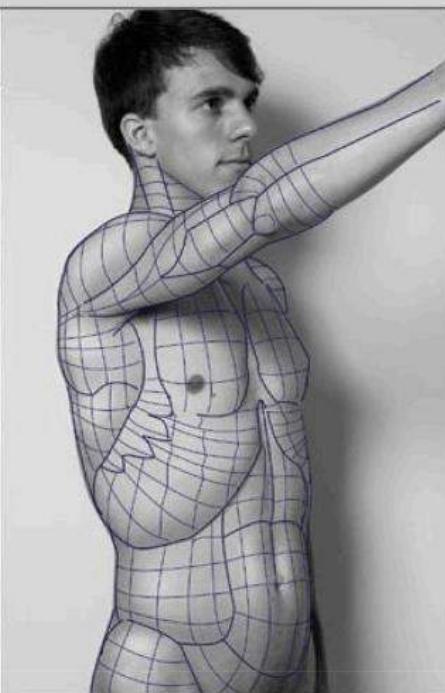
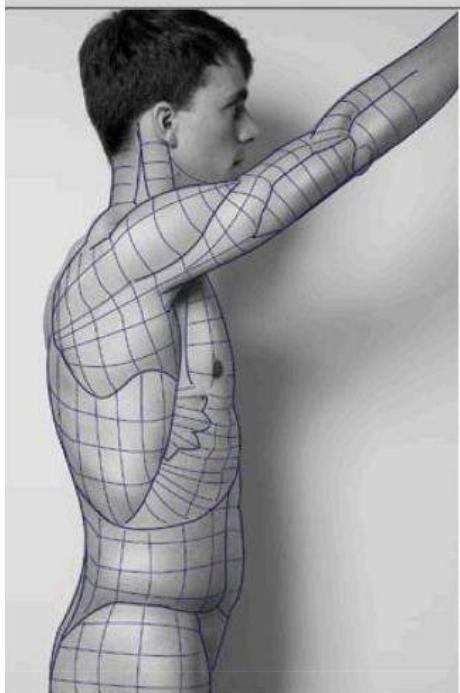


ARM REACHING UP AND FORWARD



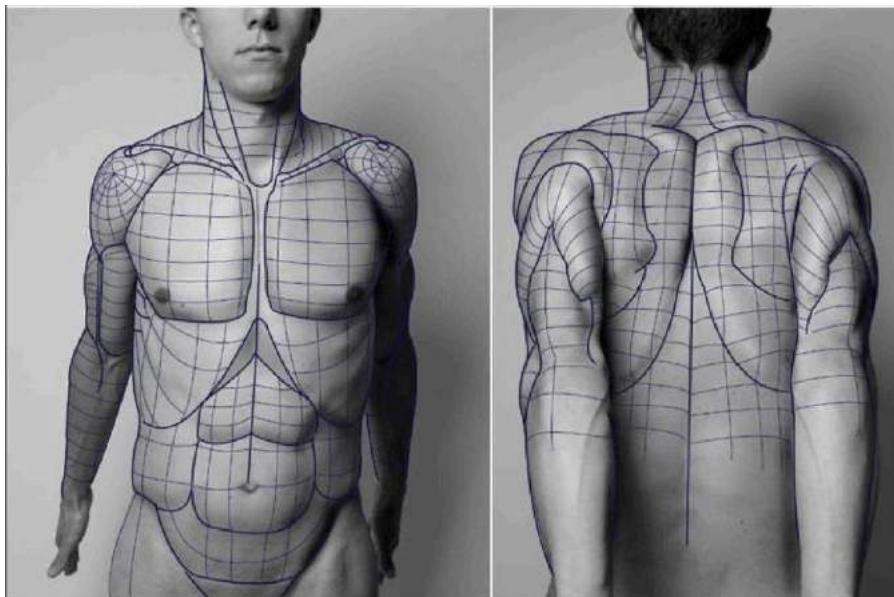
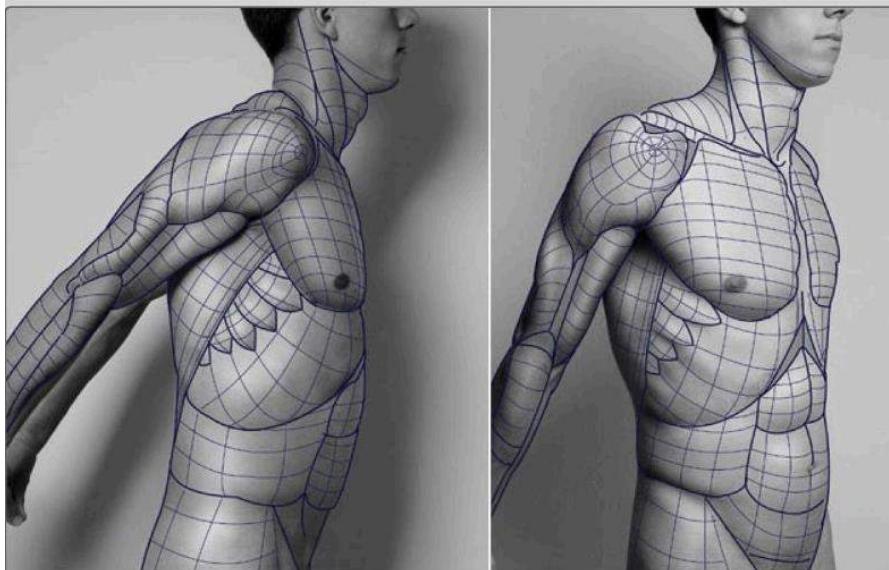
## Arms Reaching up and forward :

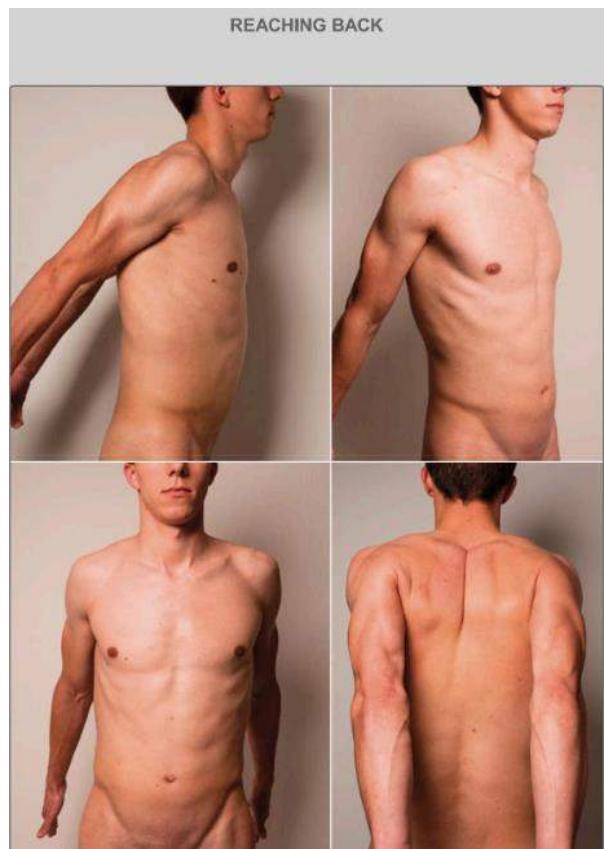
ARM REACHING UP AND FORWARD



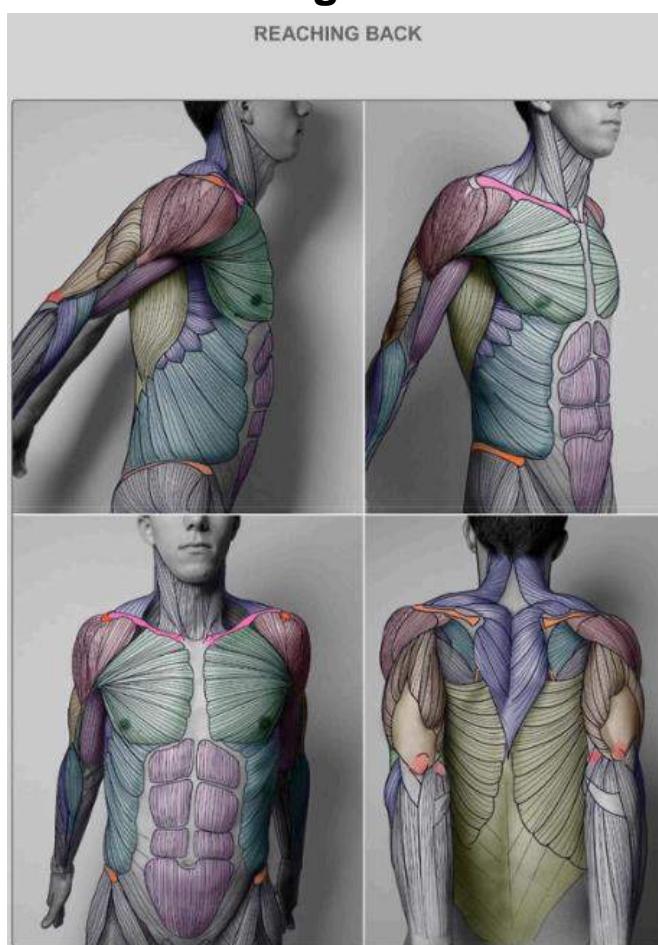
## Arms Reaching Back :

REACHING BACK



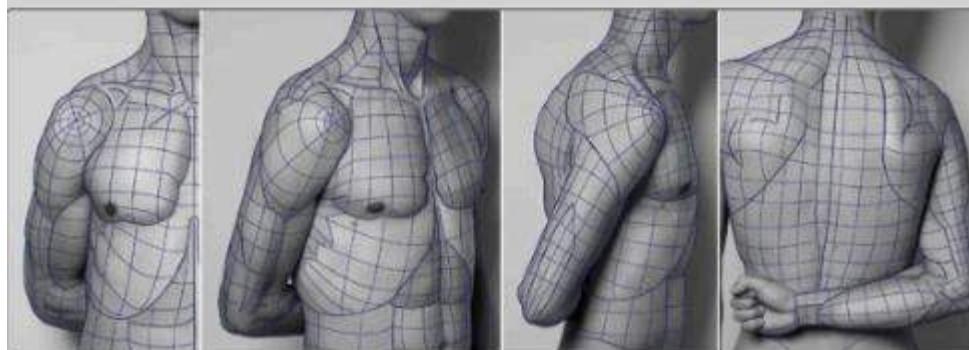
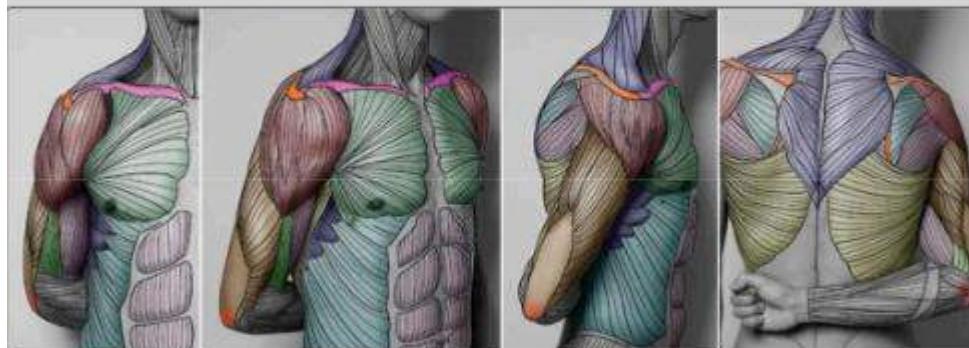


## Arms Reaching Back :



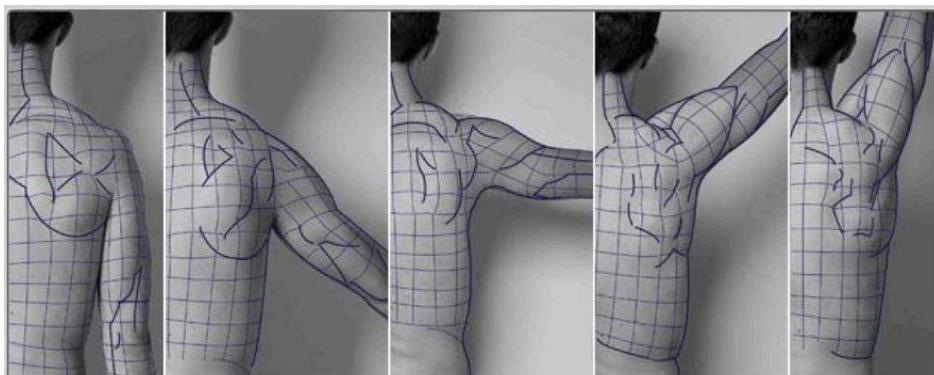
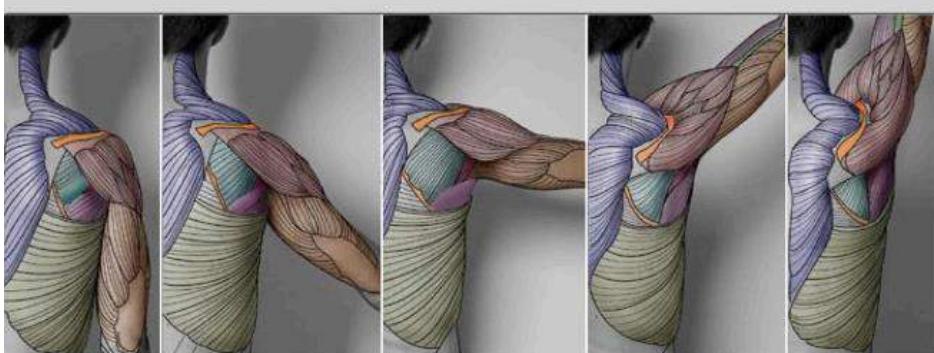
## One Arm Behind Back :

ONE ARM BEHIND BACK



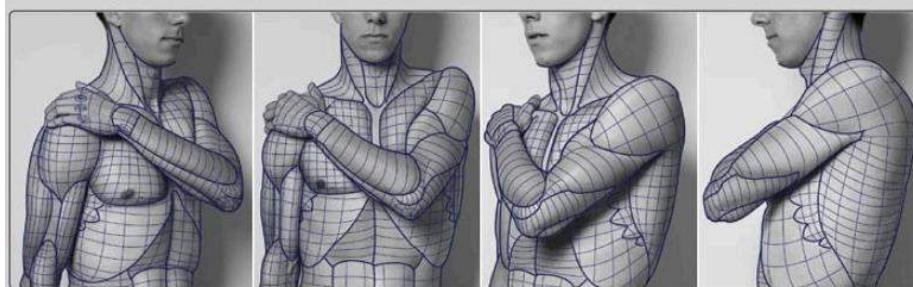
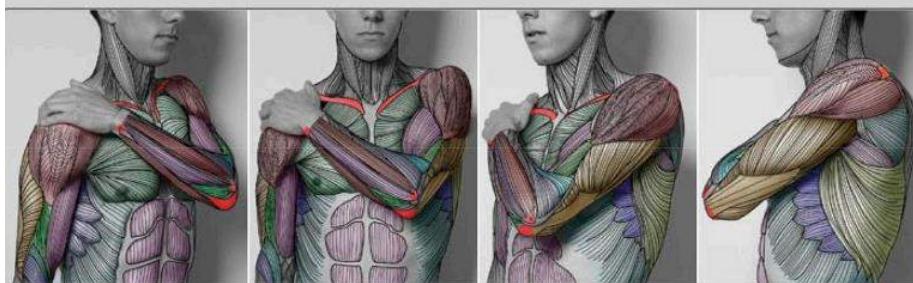
## Lifting Arm Higher and Higher :

LIFTING ARM HIGHER AND HIGHER



## Hand Holding Opposite Shoulder :

HAND HOLDING OPPOSITE SHOULDER

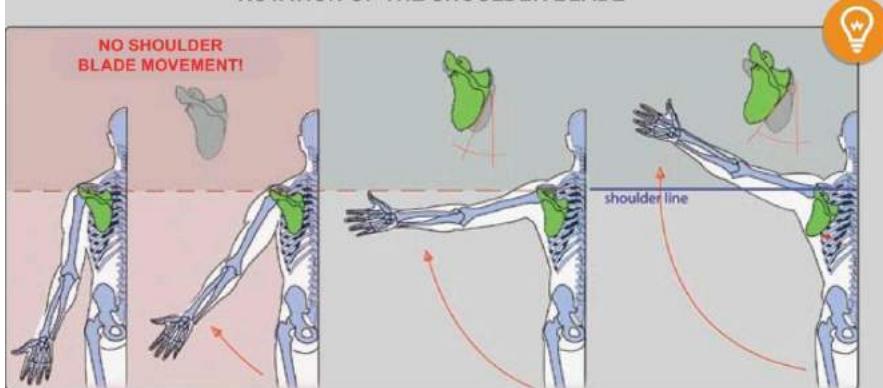


## Shoulder Blades(Scapula) :

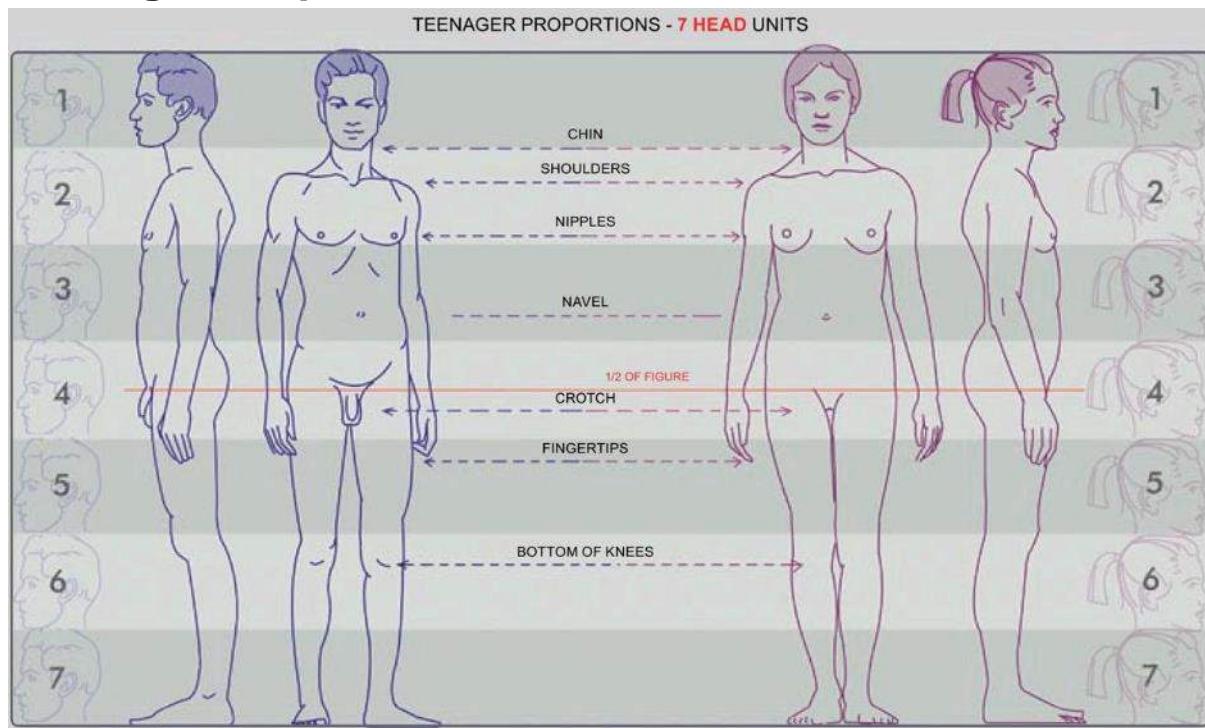
LET'S FIND **SHOULDER BLADES (SCAPULA)**!



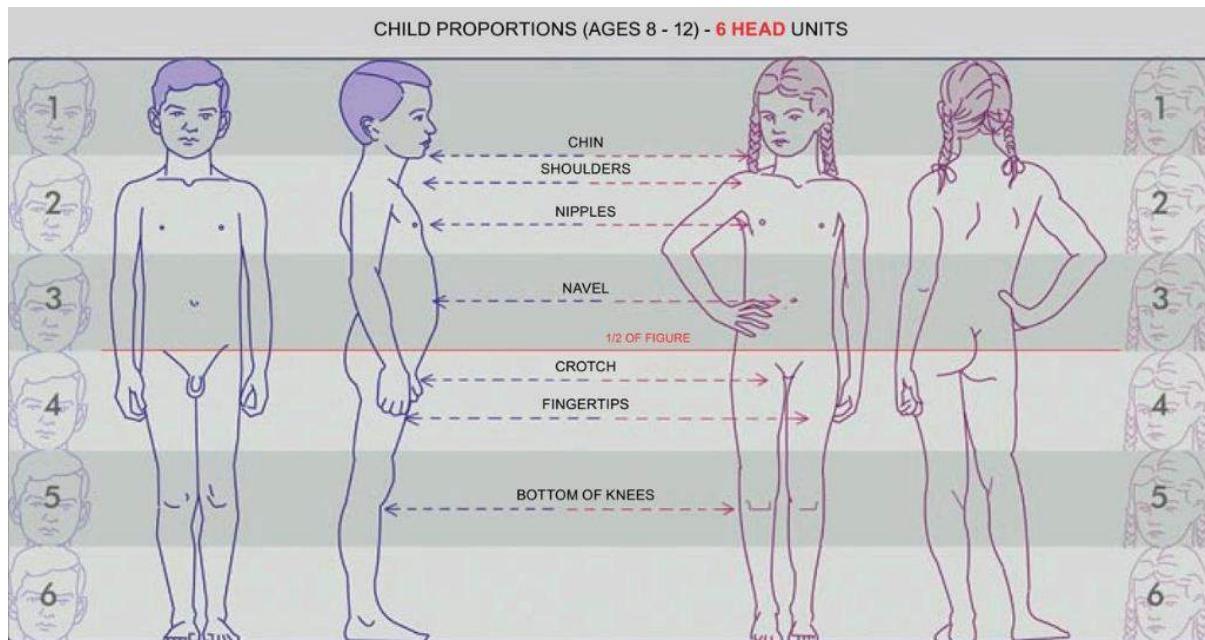
ROTATION OF THE SHOULDER BLADE



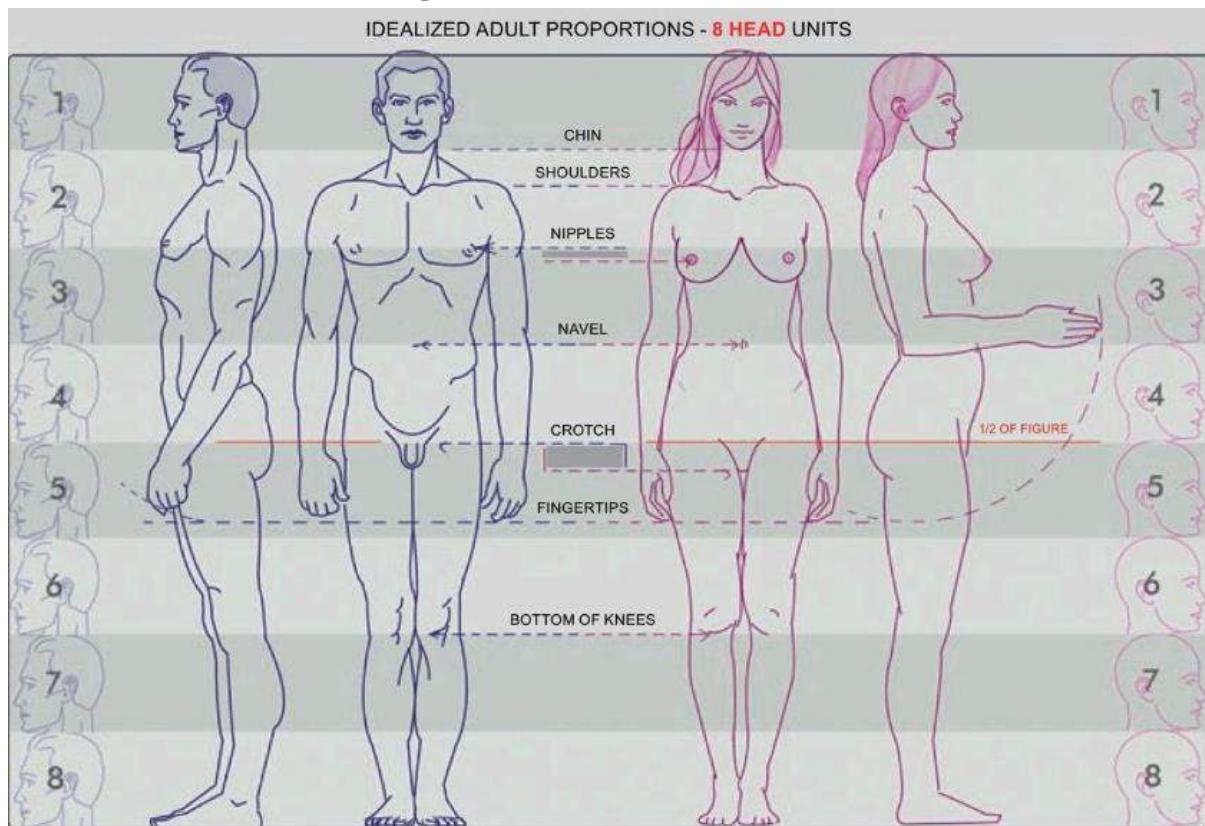
## Teenager Proportions - 7 Head Units :



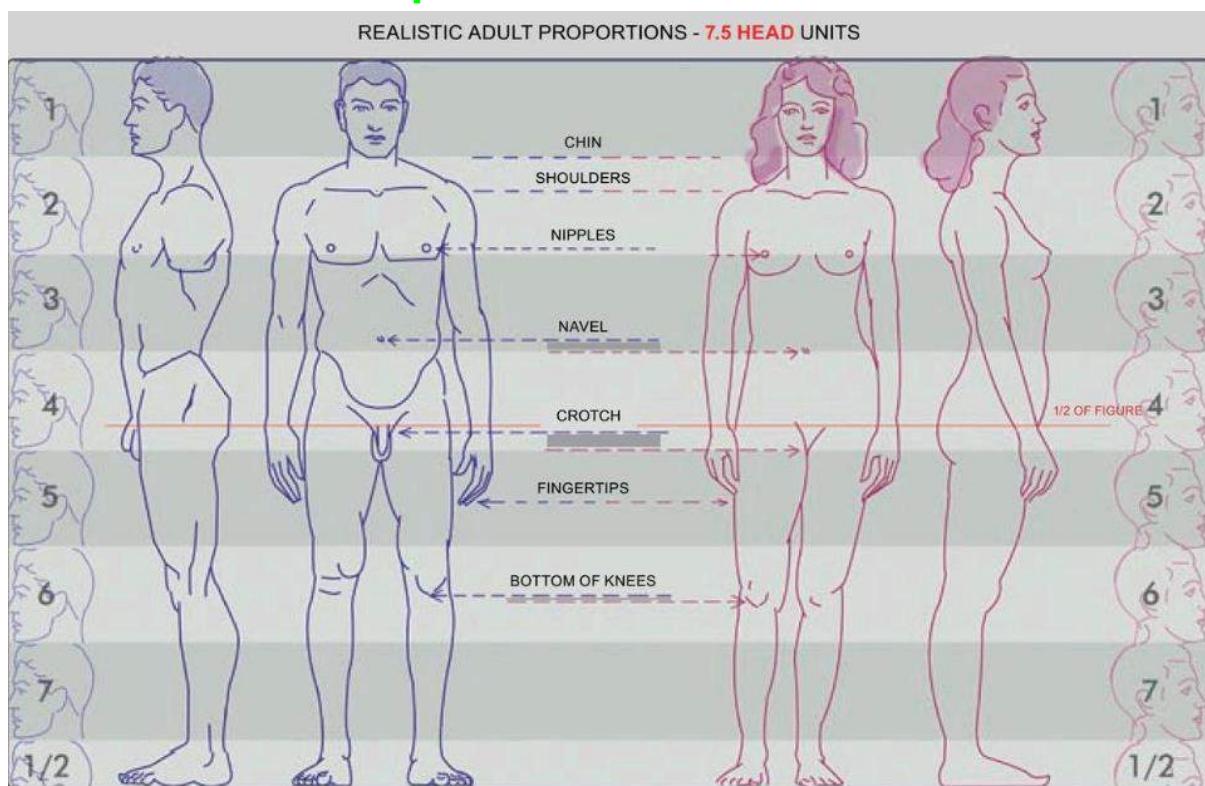
## Child Proportions(Age 8-12) - 6 Head Units :



## Idealised Adult Proportions - 8 Head Units :



## Realistic Adult Proportions - 7.5 Head Units :

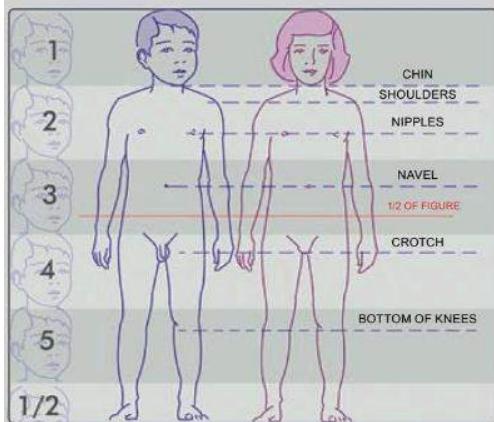




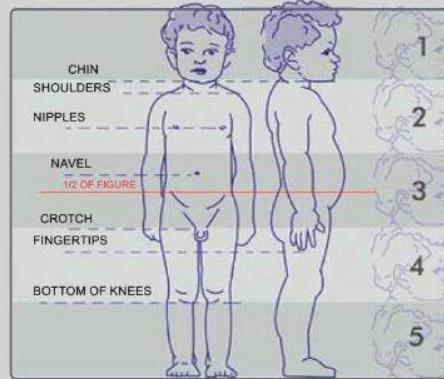
# Proportions of Child, Toddler, Newborn and Senior :

## PROPORTIONS OF CHILD, TODDLER, NEWBORN AND SENIOR

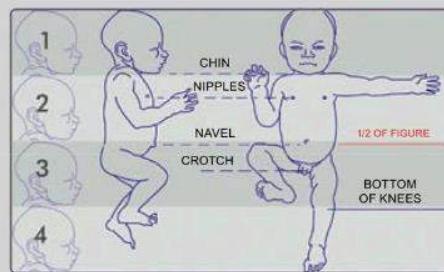
CHILD: 5.5 HEAD UNITS



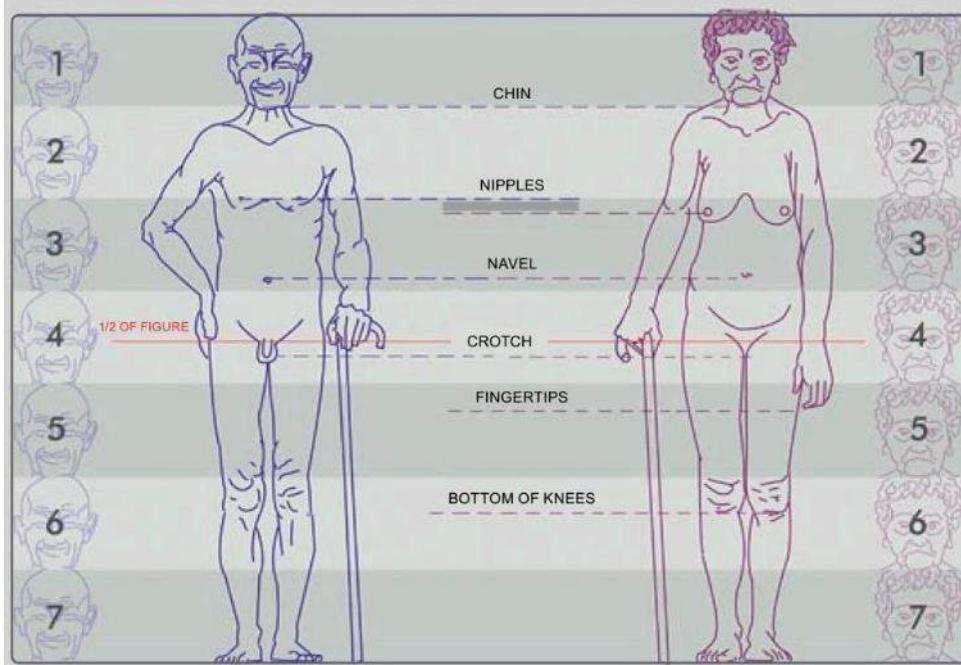
TODDLER: 5 HEAD UNITS



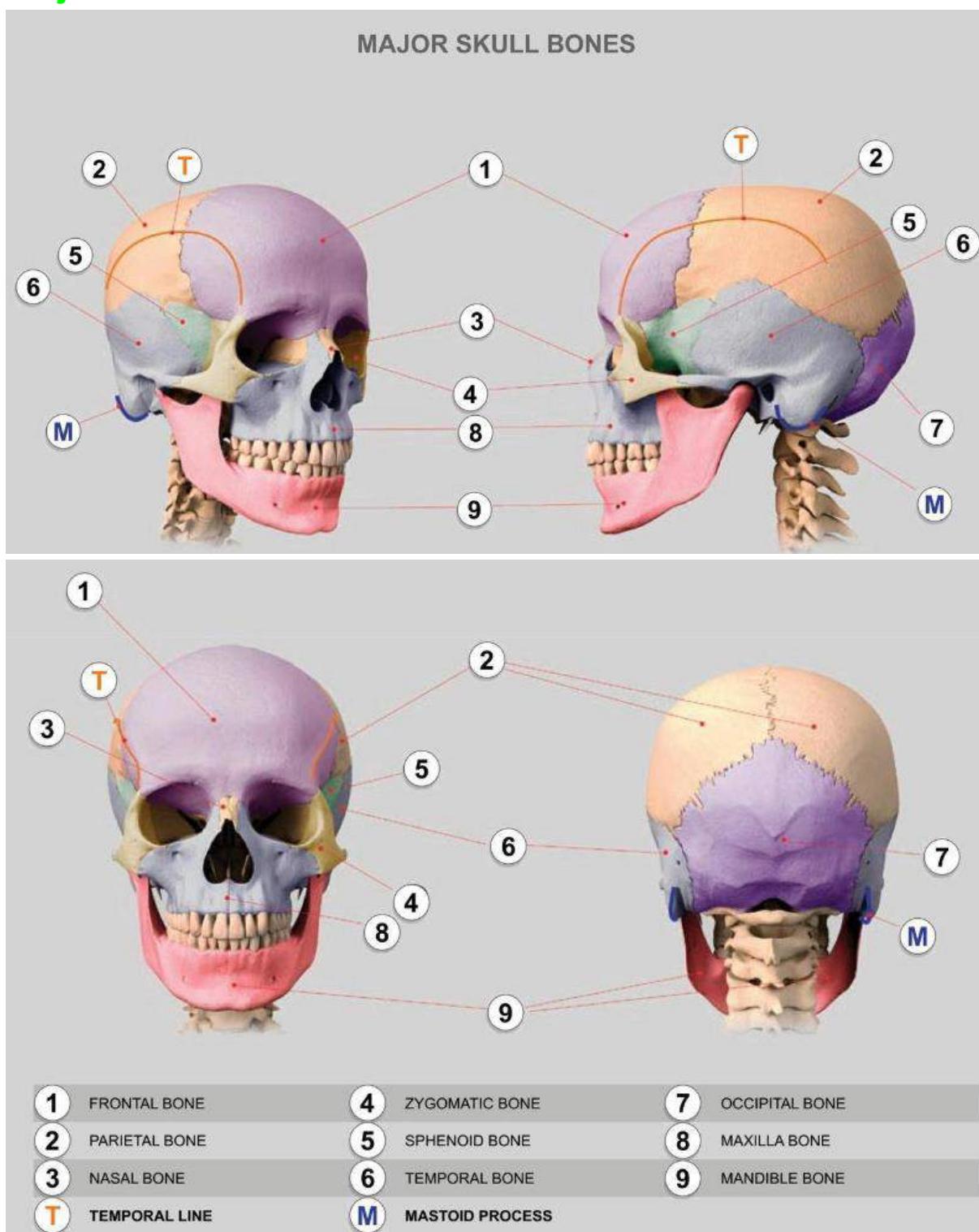
NEWBORN: 4 HEAD UNITS



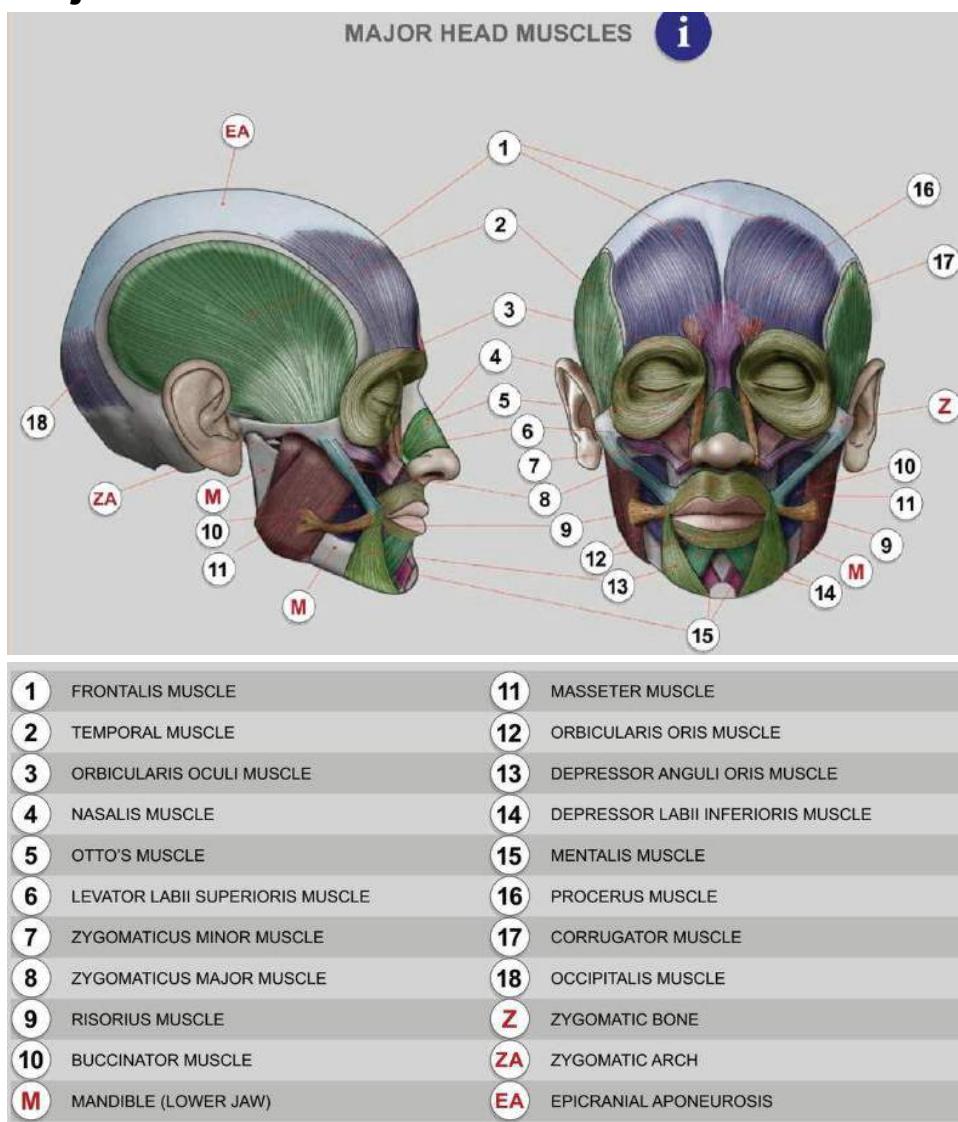
SENIOR: 7 HEAD UNITS



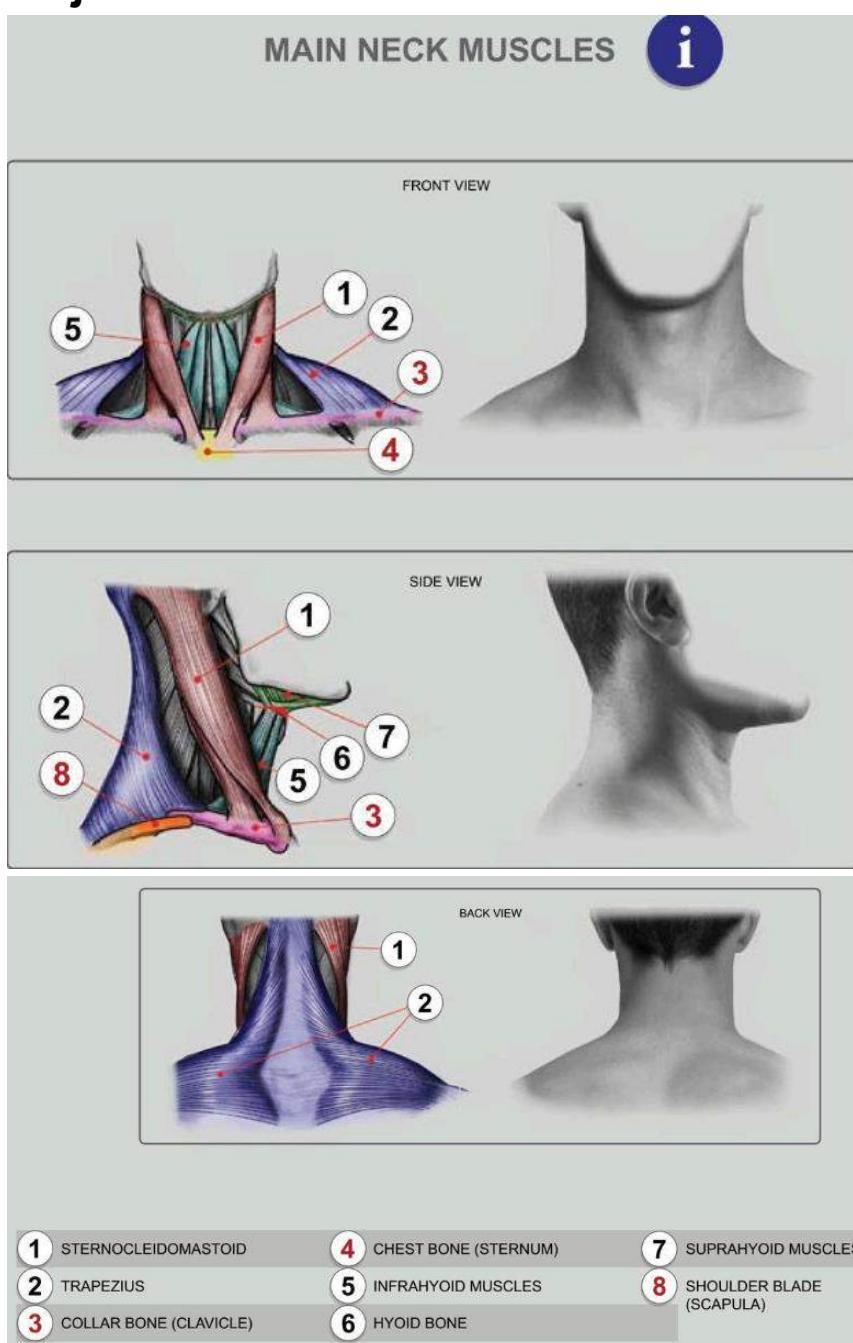
## Major Skull Bones :



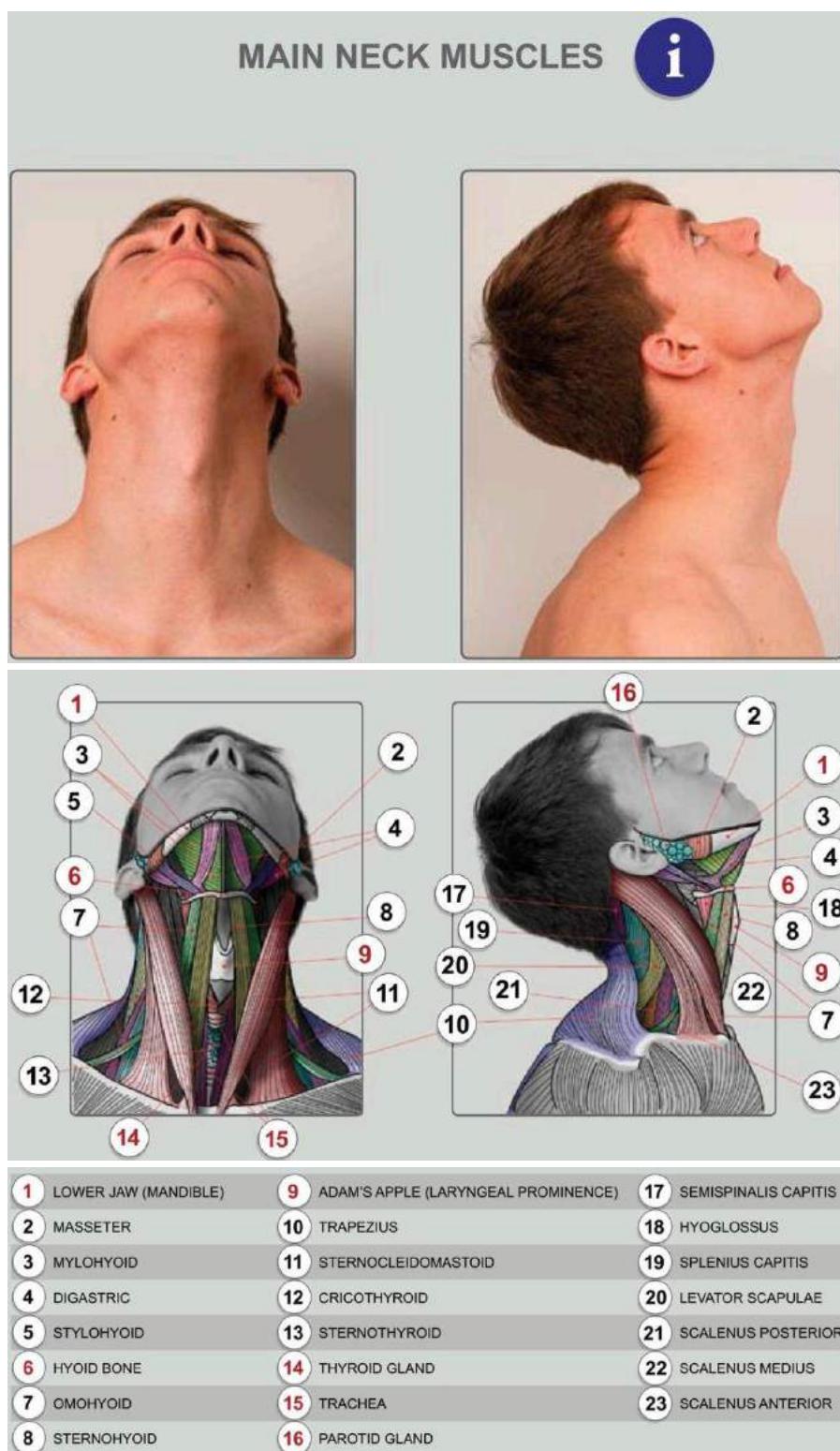
## Major Head Muscles :



## Major Neck Muscles :

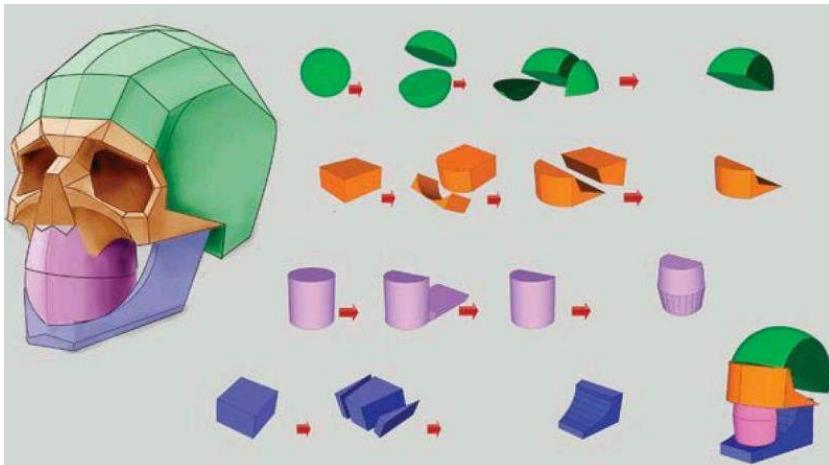
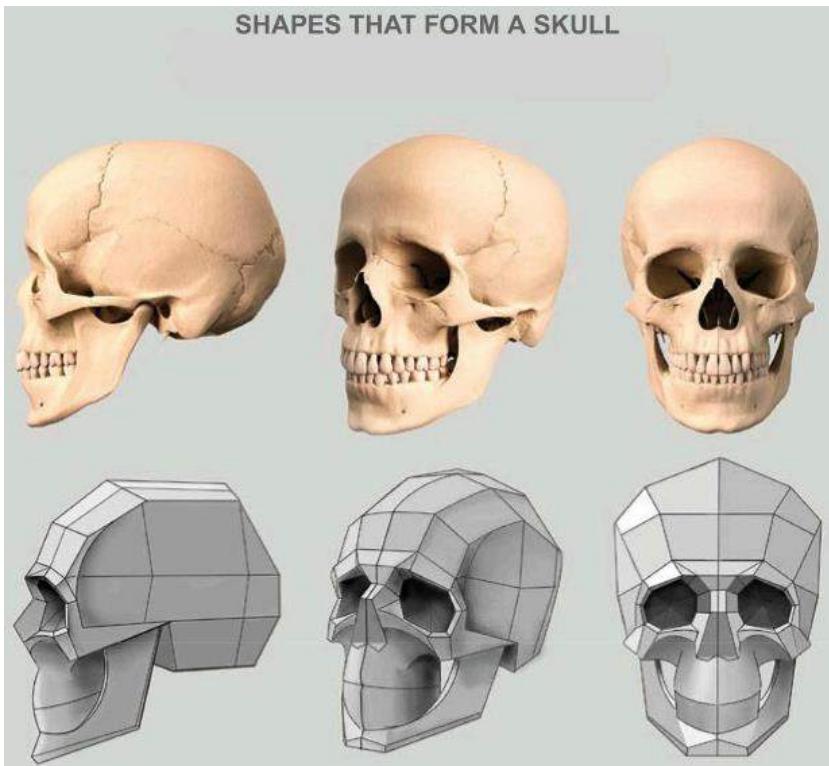


## Main Neck Muscles :

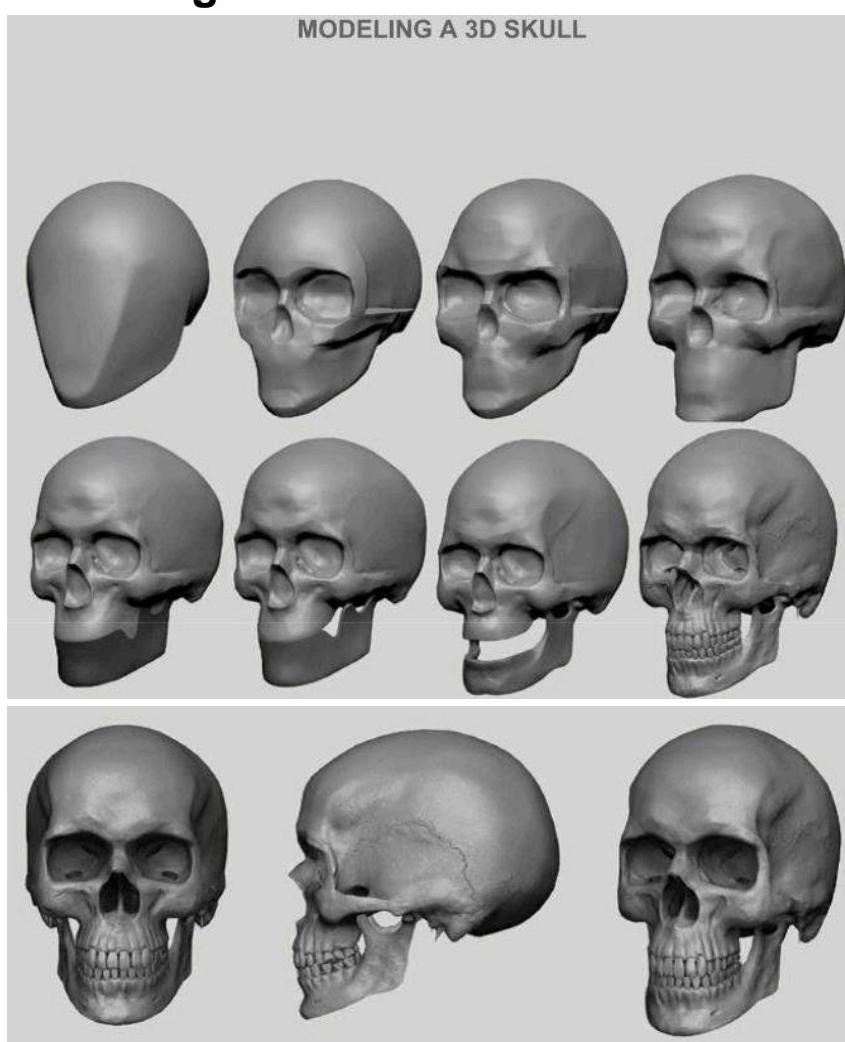


## Shapes that form a Skull :

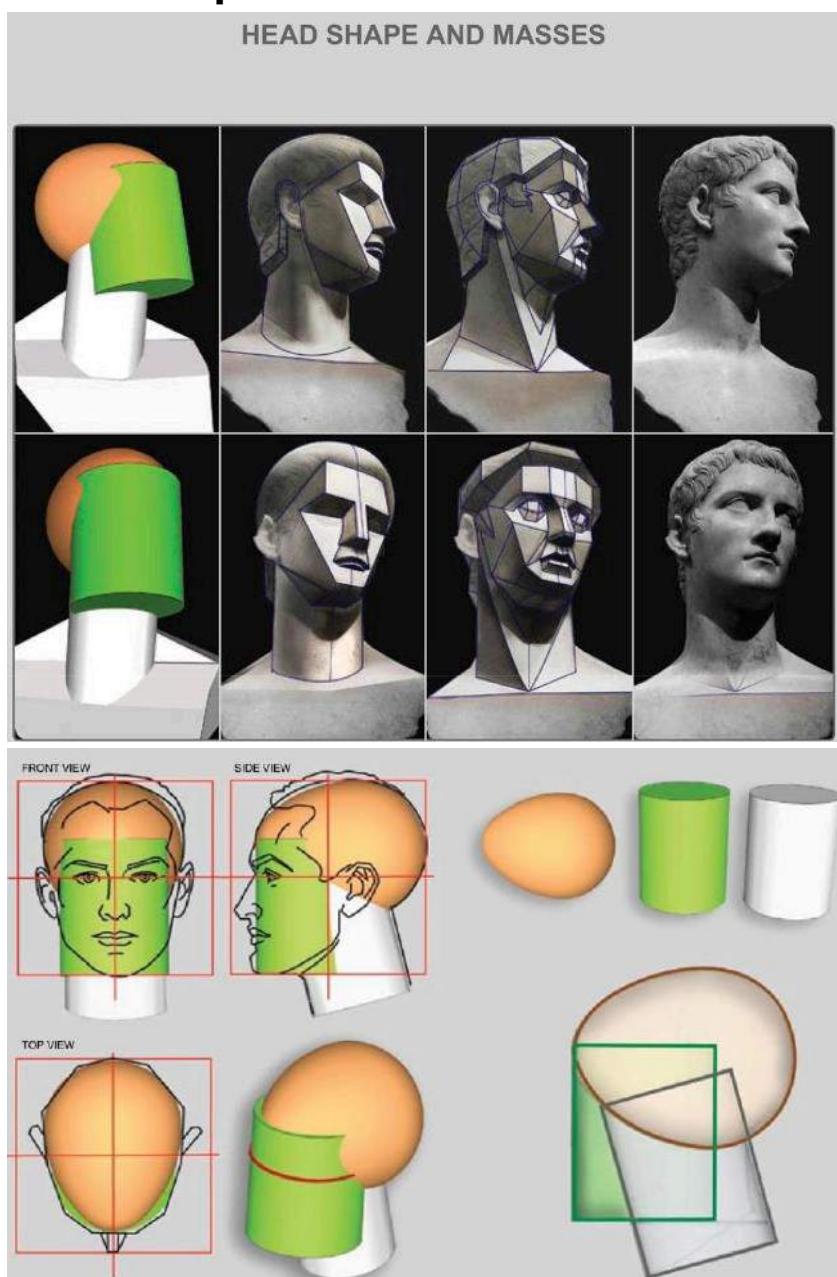
SHAPES THAT FORM A SKULL



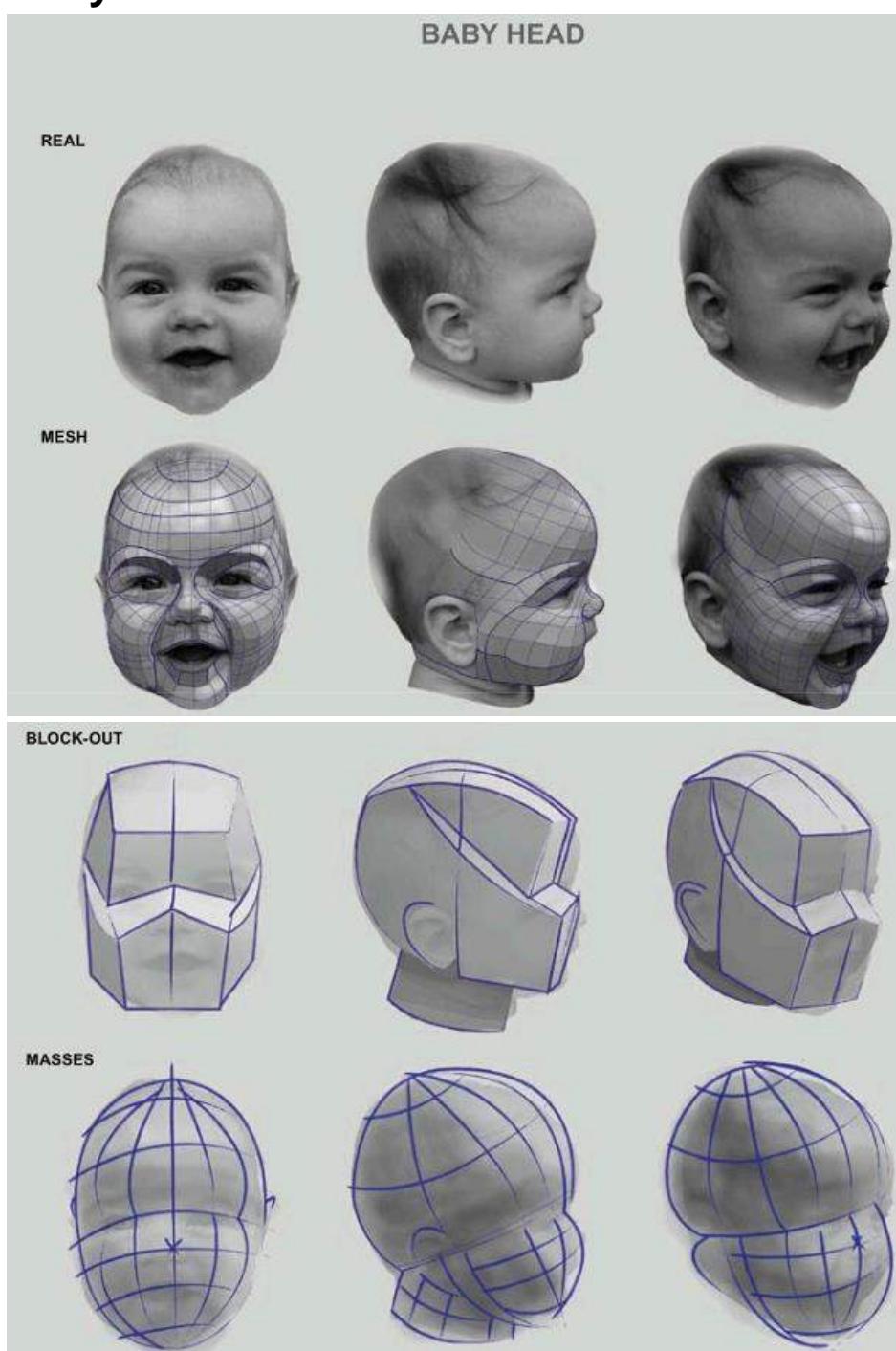
## Modelling a 3D Skull :



## Head Shape and Masses :

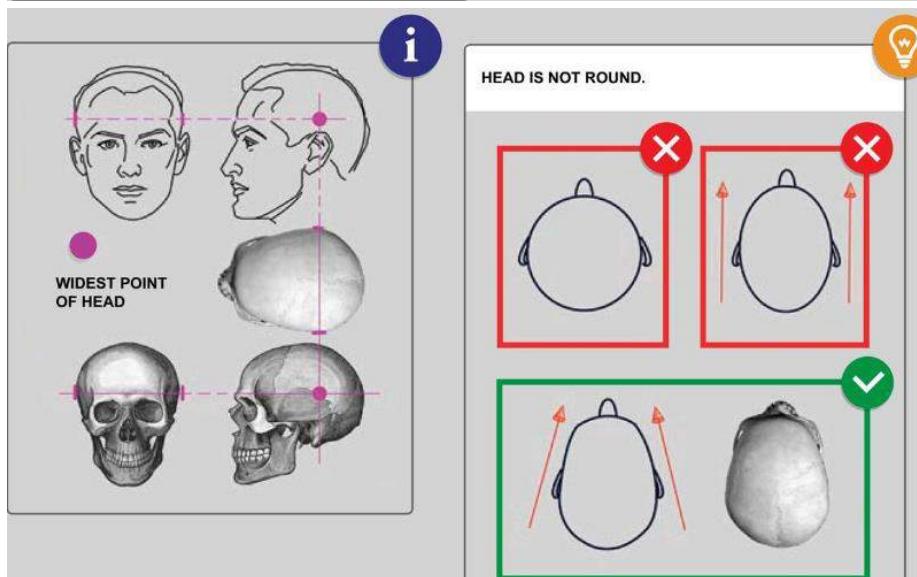
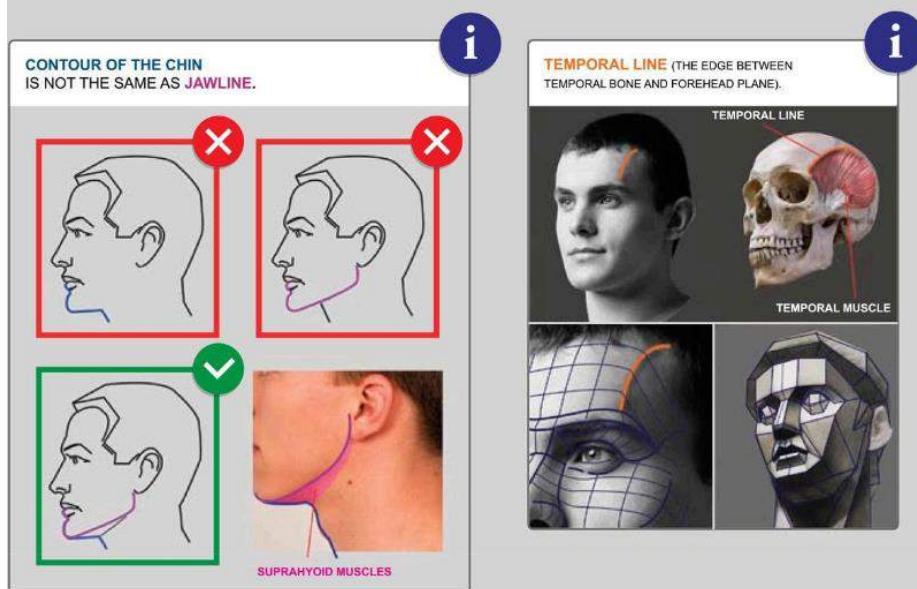


## Baby Head :



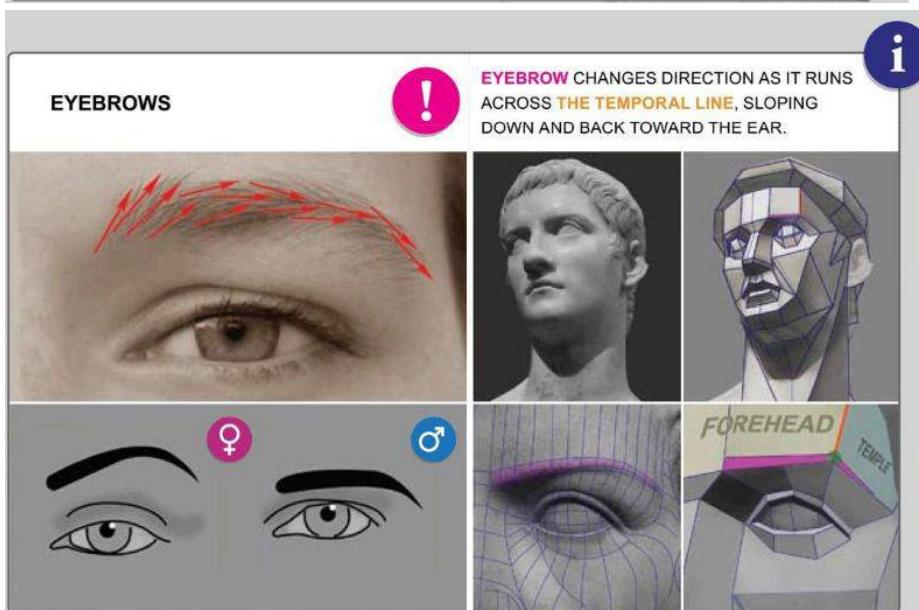
# The Head Shape :

## THE HEAD SHAPE



## Framing The Eyes :

### FRAMING THE EYES



# All about Eyes :

## ALL ABOUT EYES

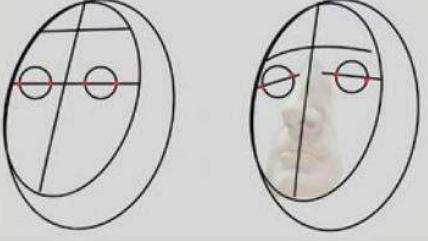
The infographic is divided into several sections:

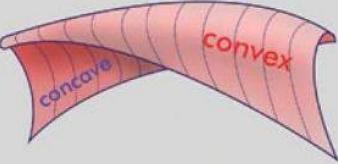
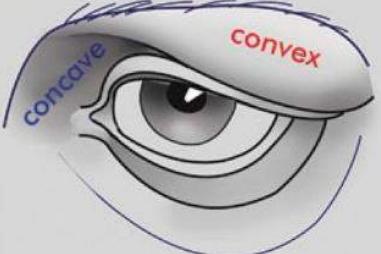
- Top Left:** A red-bordered box with a large eye icon and a red 'X'. Inside the box, text reads "EVERY EYE HAS ITS OWN CHARACTER!". To the right is a green-bordered box containing three rows of eye images. Each row has a real eye on the left and two stylized eye outlines on the right. A green checkmark is at the top right of the green box, and an orange lightbulb icon is at the top right of the entire section.
- Middle Left:** A section titled "CORNEA PUSHES OUTWARD AND CHANGES THE EYELID SHAPE." It shows a diagram of a cornea pushing outward from a globe, and two rows of eye drawings illustrating eyelid shapes. An orange lightbulb icon is at the top left of this section.
- Middle Right:** A section showing eye proportions. It includes a diagram of an eye with a 100% width measurement and a 50% height measurement, and a diagram of an eye with a wide upper eyelid. Orange lightbulb icons are at the top right of each diagram.
- Bottom Left:** A section showing pupil sizes. It displays four eye images with pupils of increasing size and labels: "2/5 COVERED", "1/4 COVERED", "OPEN PUPIL", and "EYE WIDE OPEN". An orange lightbulb icon is at the bottom center of this section.
- Bottom Right:** A section showing eye expressions. It displays a face with wide eyes and two small eye icons below it. Orange lightbulb icons are at the top right of the face image.

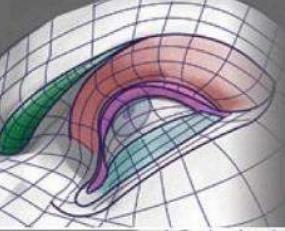
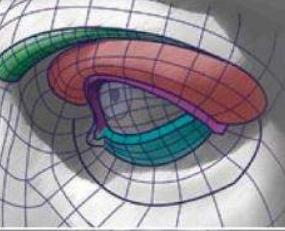
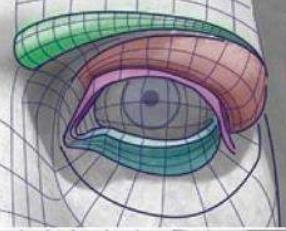
## Eyes :

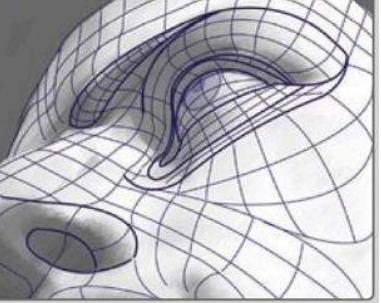
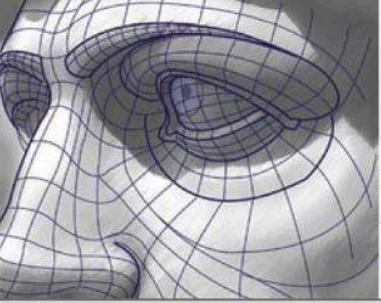
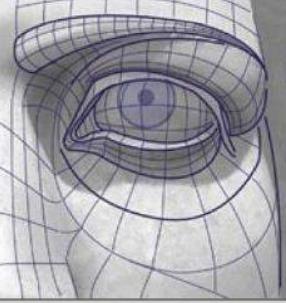
EYE

WHAT MAKES A FACE LOOK FLAT?



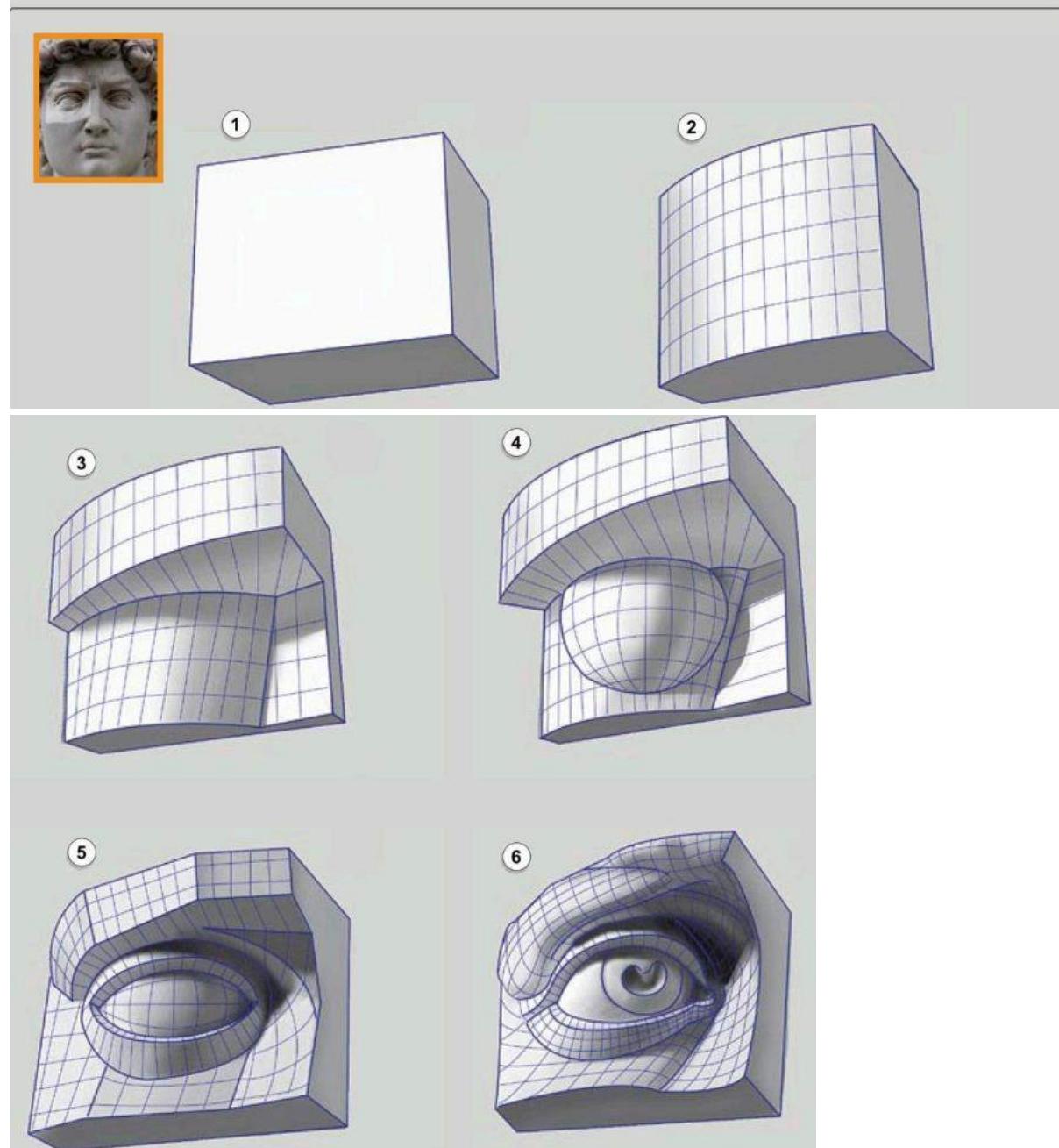






## Blocking-Out a Classical Eye :

### BLOCKING-OUT A CLASSICAL EYE (STEP-BY-STEP)



## Eyes Come in a Variety of Shapes :

EYES COME IN A VARIETY OF SHAPES

ADULT FEMALE



ADULT MALE



BABY



CHILD



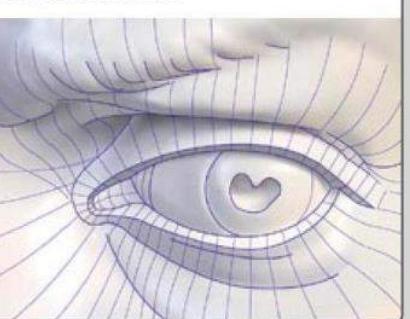
ASIAN



BLACK



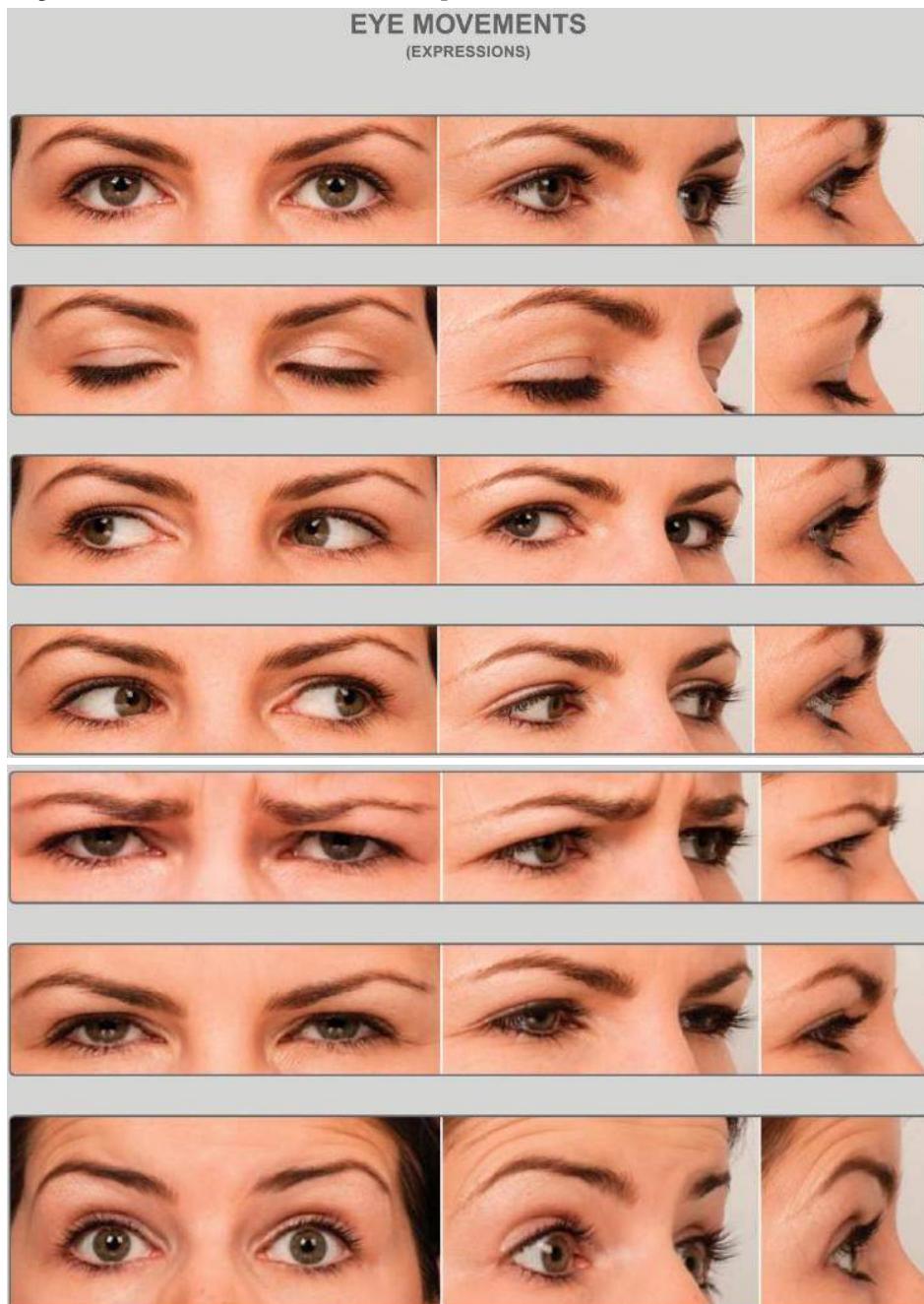
CLASSICAL SCULPTURE



SENIOR



## **Eye Movements - Expressions :**



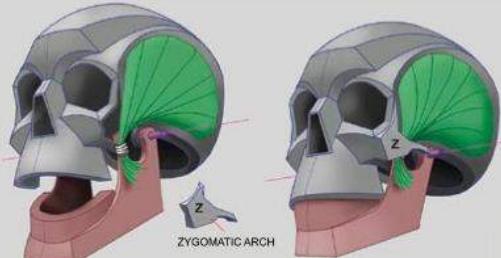
## **Eye Movements - Expressions :**

### **EYE MOVEMENTS (EXPRESSIONS)**



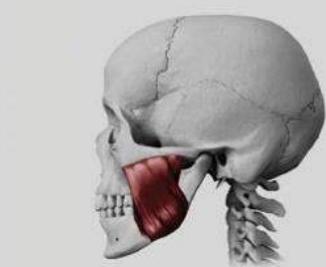
## WHAT STRONG JAWS YOU HAVE!

TEMPORALIS MUSCLE – HELPS TO CLOSE THE MOUTH AND KEEP IT SHUT!



i

THE CHEWING MUSCLE (MASSETER MUSCLE).

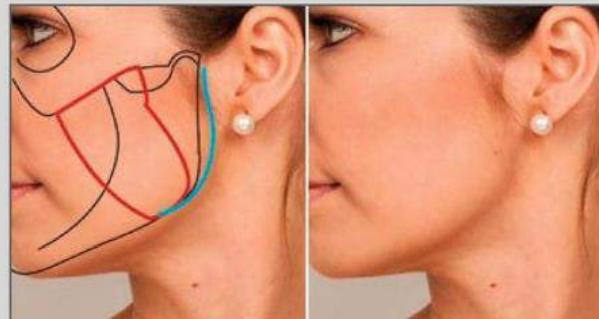
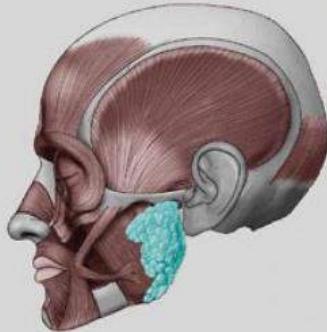


IT IS THE PRIMARY CHEWING MUSCLE AND PULLS THE JAWS CLOSED. ITS OUTER PORTION ORIGINATES FROM THE ZYGOMATIC ARCH AND INSERTS ON THE SURFACE OF THE RAMUS OF THE MANDIBLE.

i

## Jaws :

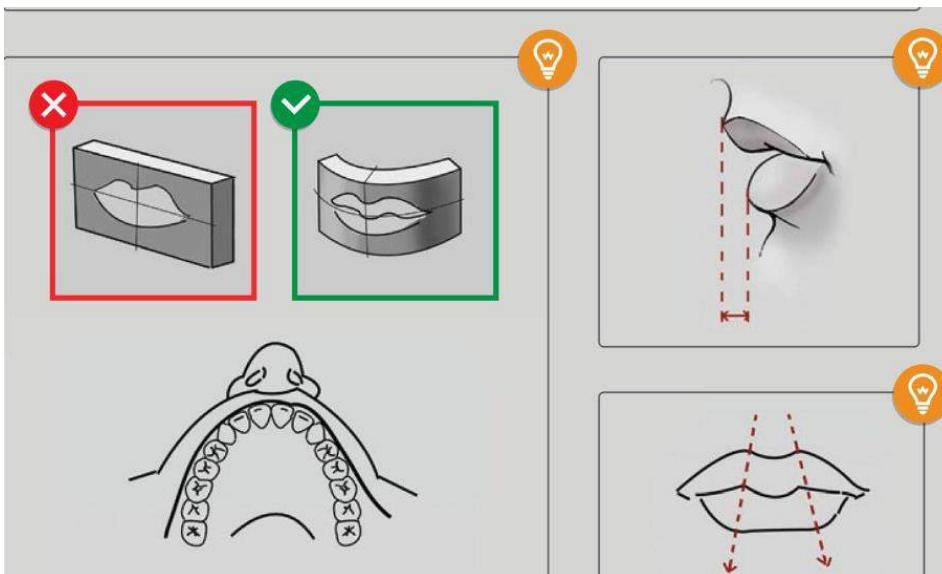
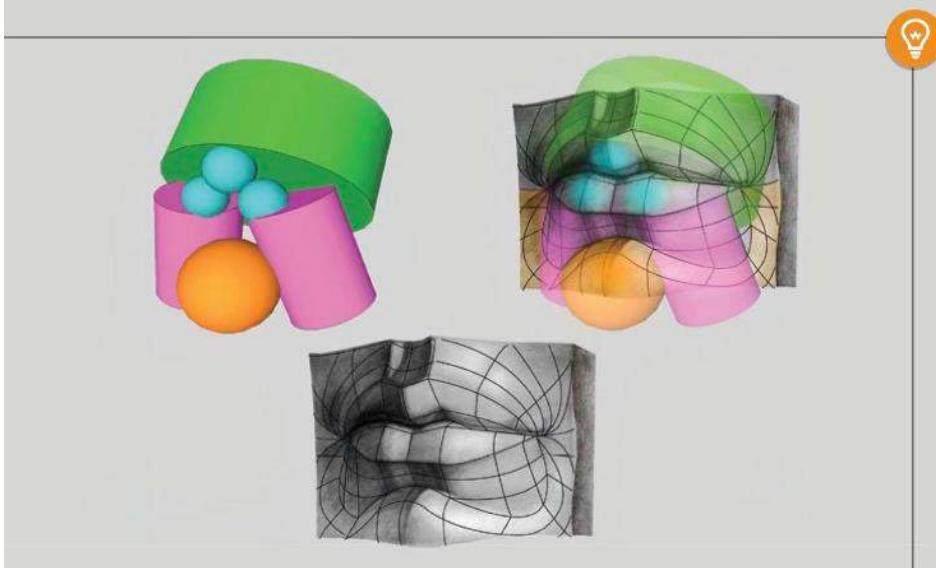
PAROTID GLAND (SALIVARY GLAND) ALSO PLAYS IMPORTANT ROLE IN SHAPING THE JAWLINE AND FACE.

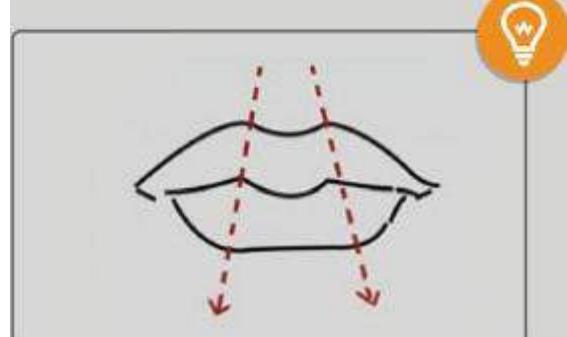
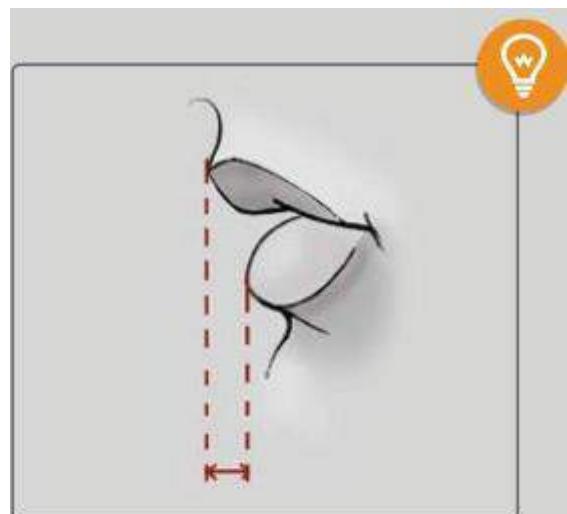


i

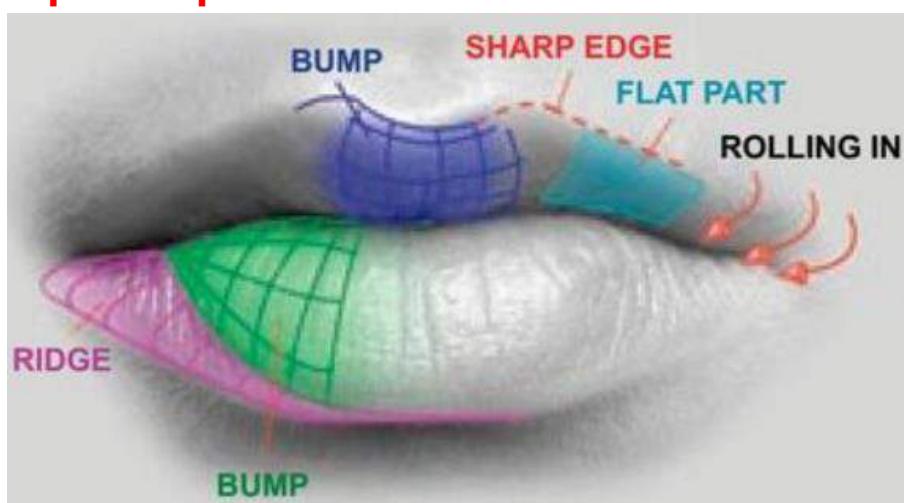
## Understanding Mouth Curvature :

### UNDERSTANDING MOUTH CURVATURE

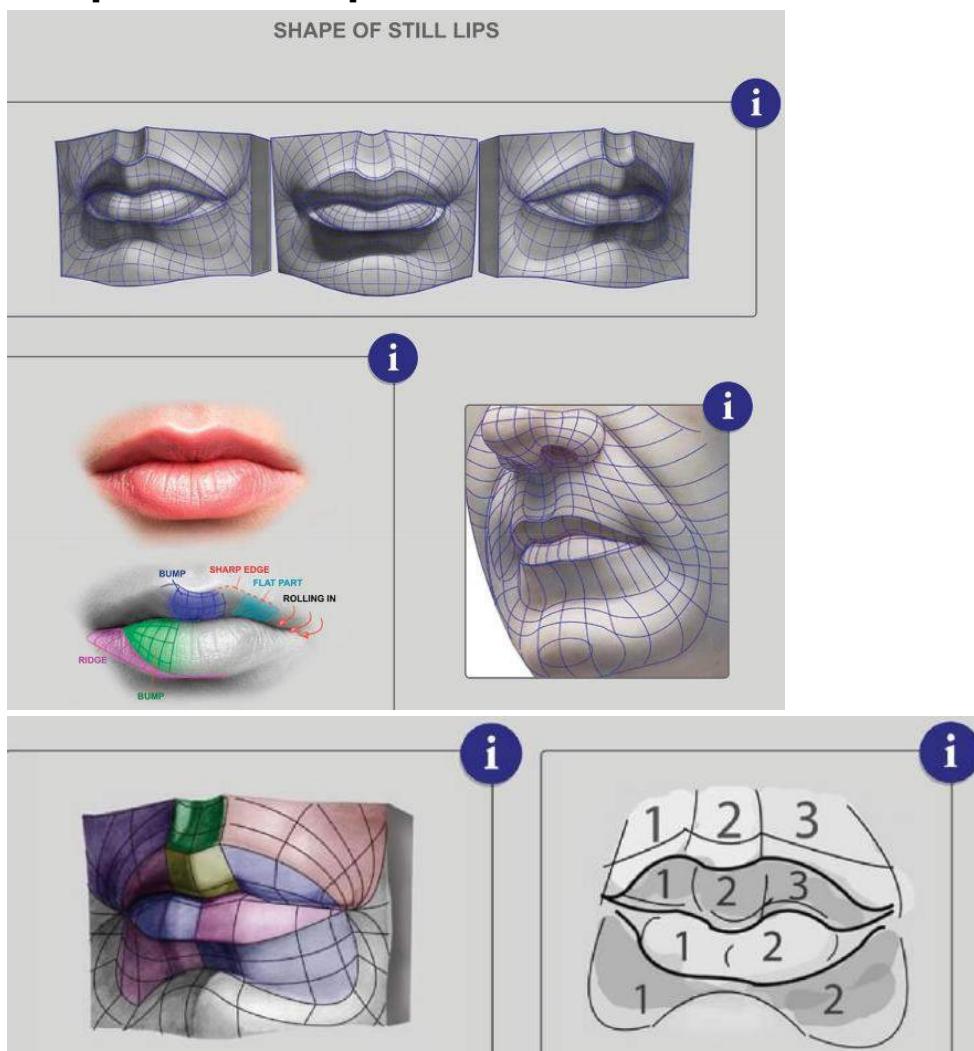




Lips Shape :



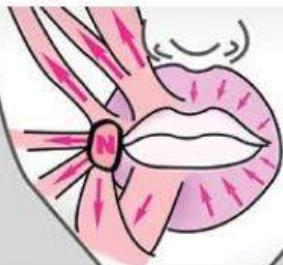
## Shape of Still Lips :



## Mouth :

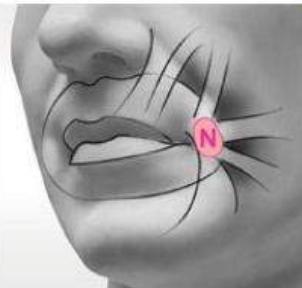
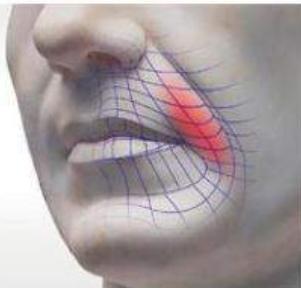
### MOUTH

MOUTH EXPRESSIONS – IT'S ALL ABOUT PULLING AND SQUEEZING.



i

WHAT IS THIS BUMP?



i

IT IS CALLED THE "NODE".

IT IS THE POINT WHERE SEVERAL FACIAL MUSCLES CONNECT TO THE CORNER OF THE MOUTH.

WHEN YOU SCULPT EXPRESSIONS, REMEMBER BONY LANDMARKS! BY PULLING IN DIFFERENT DIRECTIONS, THESE MUSCLES CREATE THE EXPRESSIONS, WHILE SKULL REMAINS THE SAME.



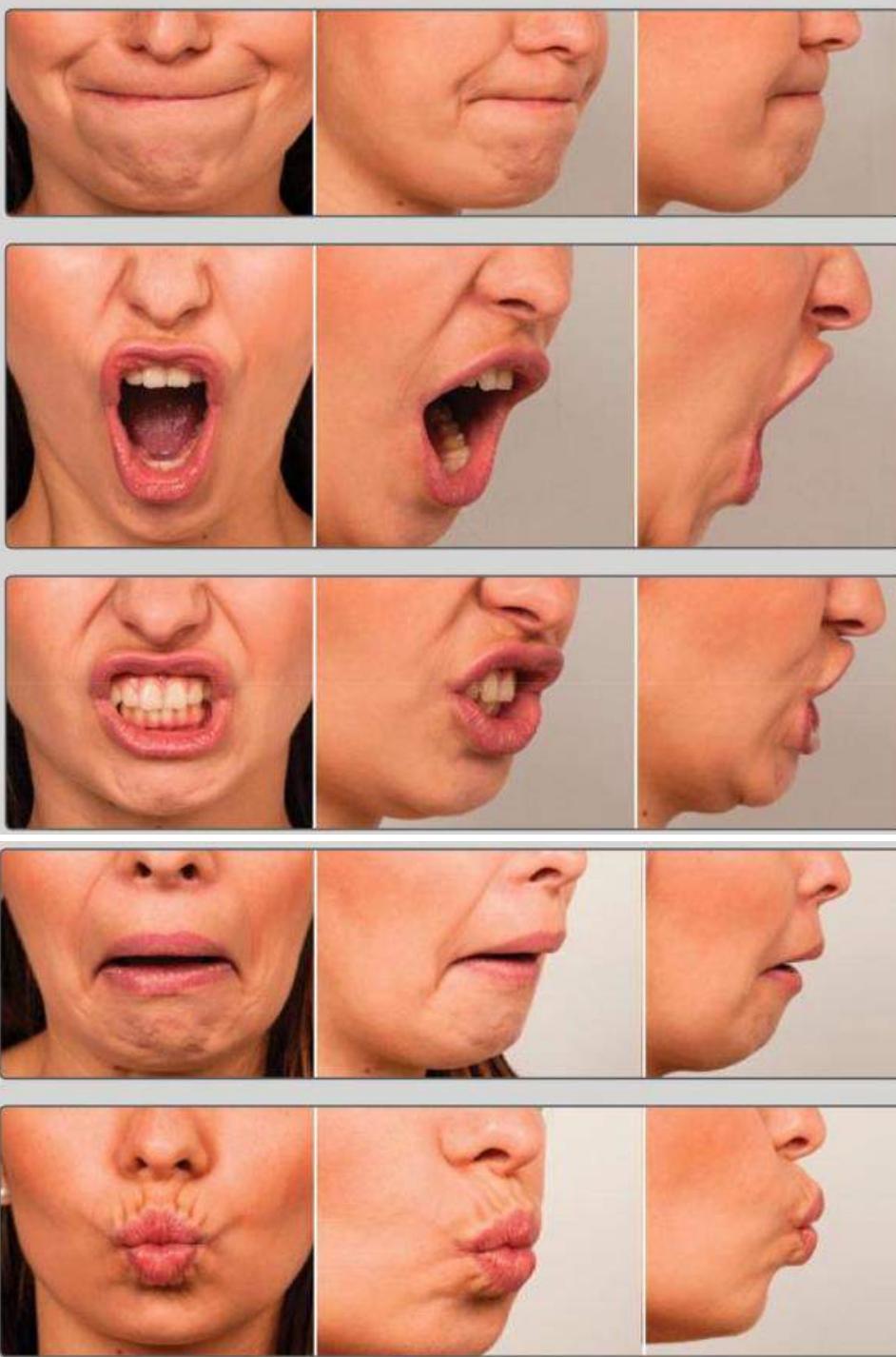
## Mouth Expressions :

### MOUTH EXPRESSIONS



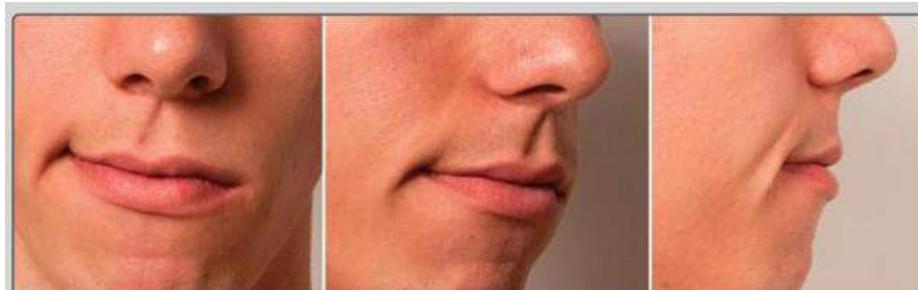
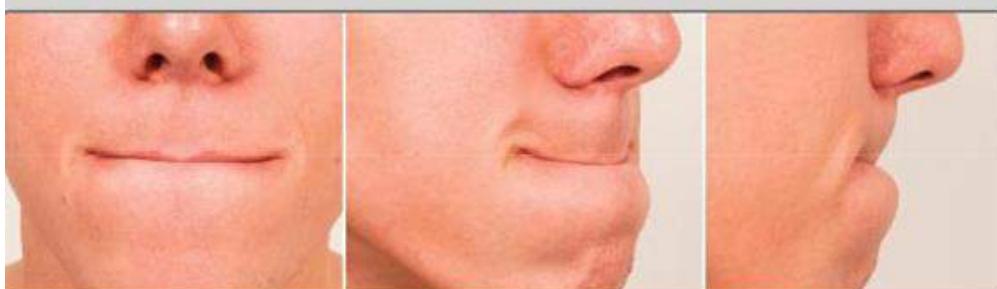
## More Mouth Expressions :

MORE MOUTH EXPRESSIONS



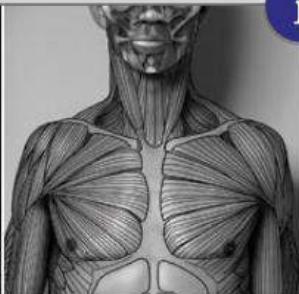
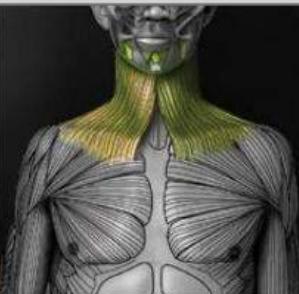
## Even more Mouth Expressions :

### EVEN MORE MOUTH EXPRESSIONS



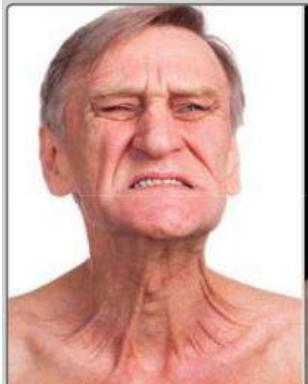
## Platysma Muscle :

### PLATYSMA MUSCLE



i

THE PLATYSMA IS A BROAD, THIN LAYER OF MUSCLE THAT IS SITUATED ON EACH SIDE OF THE NECK IMMEDIATELY UNDER THE SUPERFICIAL FASCIA.



i

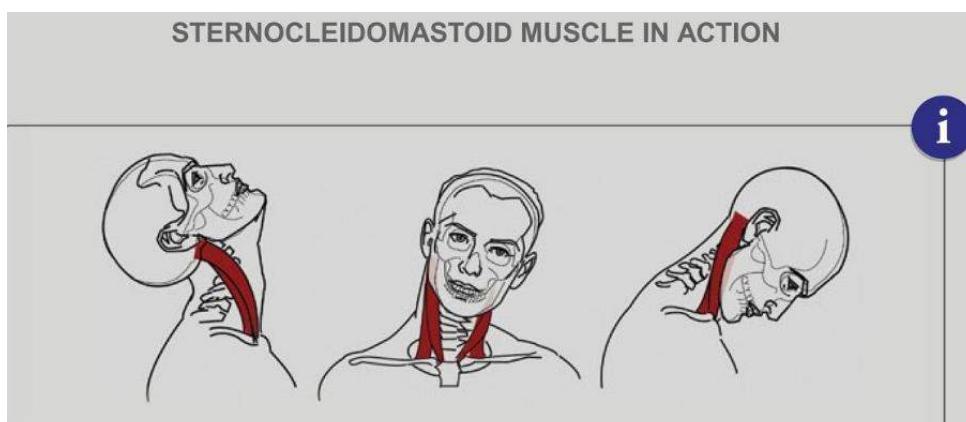
THE PLATYSMA BELONGS TO THE GROUP OF FACIAL MUSCLES AND DRAWS THE CORNERS OF THE LOWER LIP AND MOUTH TO THE SIDES AND DOWNWARD. WHEN FLEXED FORCEFULLY, IT EXPANDS THE NECK AND DRAWS ITS SKIN UPWARD.



!

WEAKNESS OF THIS MUSCLE IS OFTEN THE MAJOR FACTOR IN CAUSING SAGGING UNDER THE CHIN IN OLDER PEOPLE (THIS IS NOT DUE TO AGING SKIN OR FROM FAT ACCUMULATION).

## Sternocleidomastoid Muscle in Action :



**7TH CERVICAL VERTEBRAL BONE**  
(WHERE THE NECK MEETS THE SHOULDERS).

WHEN HEAD IS BENT FORWARD, YOU CAN SEE PROMINENT VERTEBRA AT THE TOP OF THE SPINE PROTRUDING OUTWARD SLIGHTLY.

**HEAD UP (BN) ABOVE (BE)**

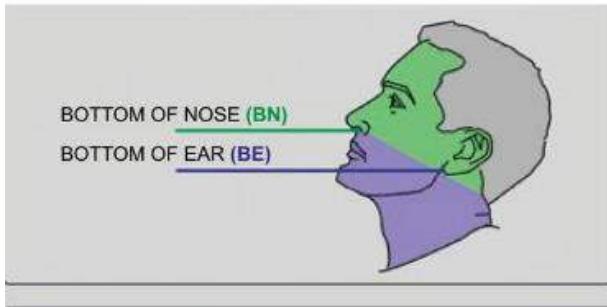
**HEAD STRAIGHT (BN) LINED UP WITH (BE)**

**HEAD DOWN (BE) ABOVE (BN)**

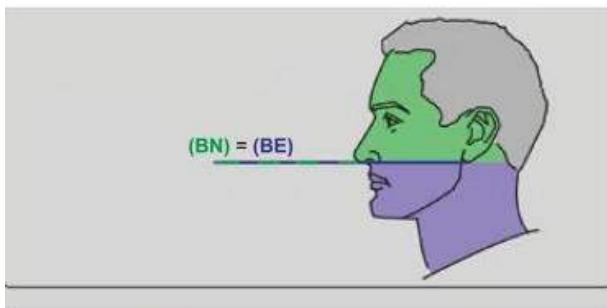
w i

## Nose and Ear alignment when looking straight, up and down :

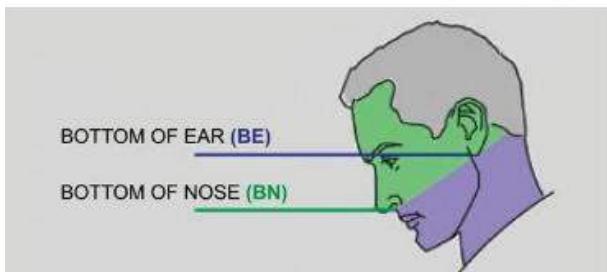
HEAD UP (BN) ABOVE (BE)



HEAD STRAIGHT (BN) LINED UP WITH (BE)

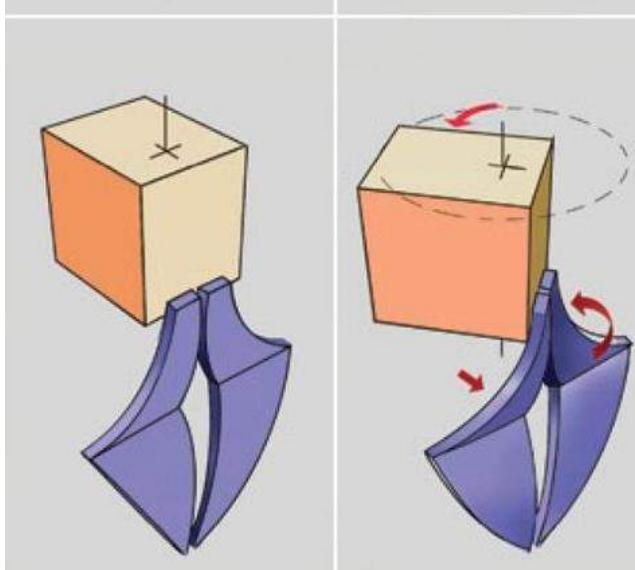
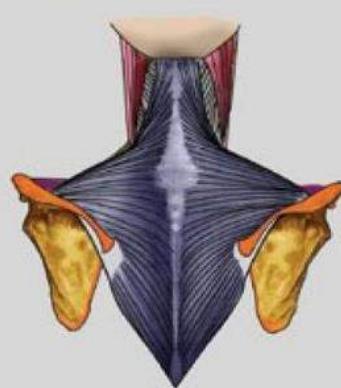
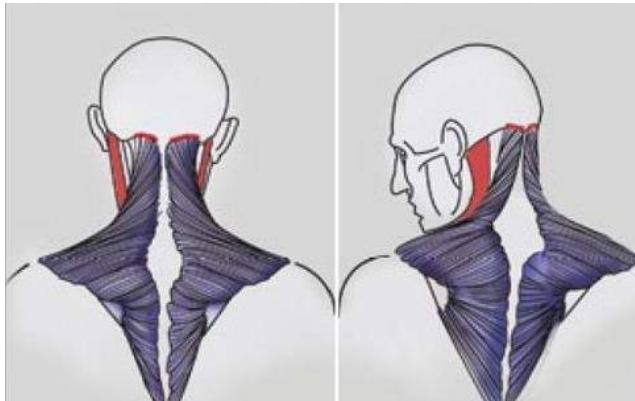


HEAD DOWN (BE) ABOVE (BN)



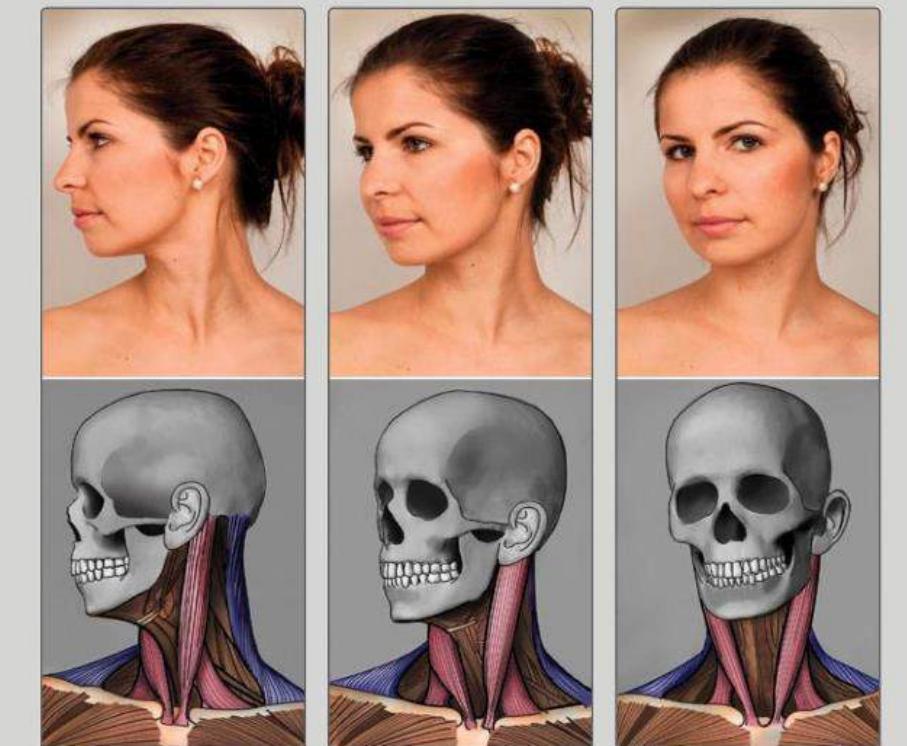
## Trapezius Muscle , Sternocleidomastoid muscle :

TRAPEZIUS MUSCLE, STERNOCLEIDOMASTOID MUSCLE

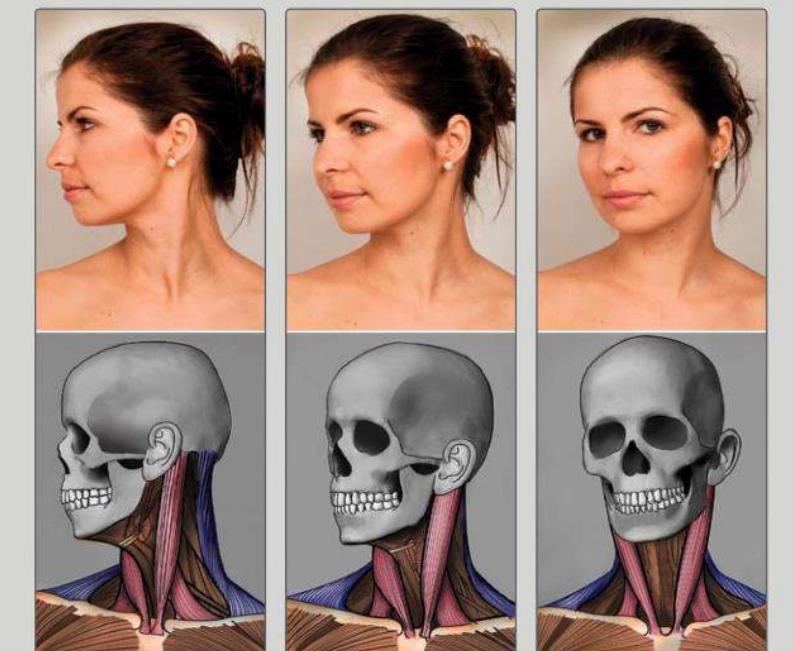


## Major Neck Muscles(Trapezius and Sternocleidomastoid) :

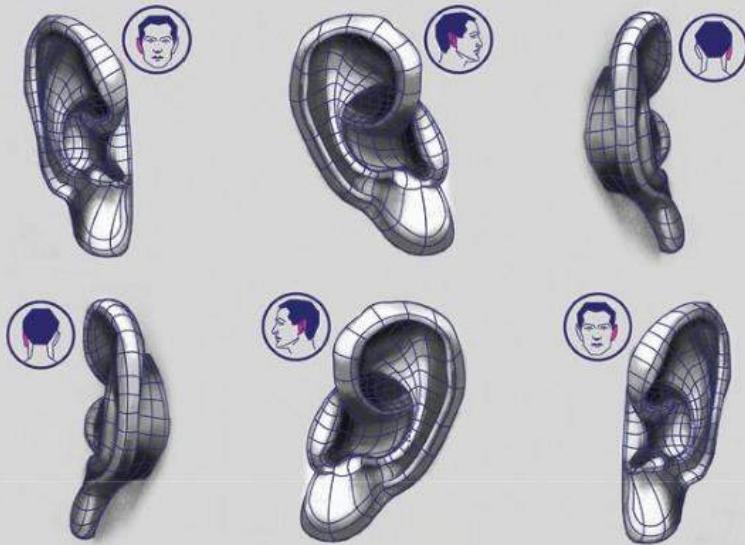
MAJOR NECK MUSCLES (TRAPEZIUS AND STERNOCLIDOMASTOID)



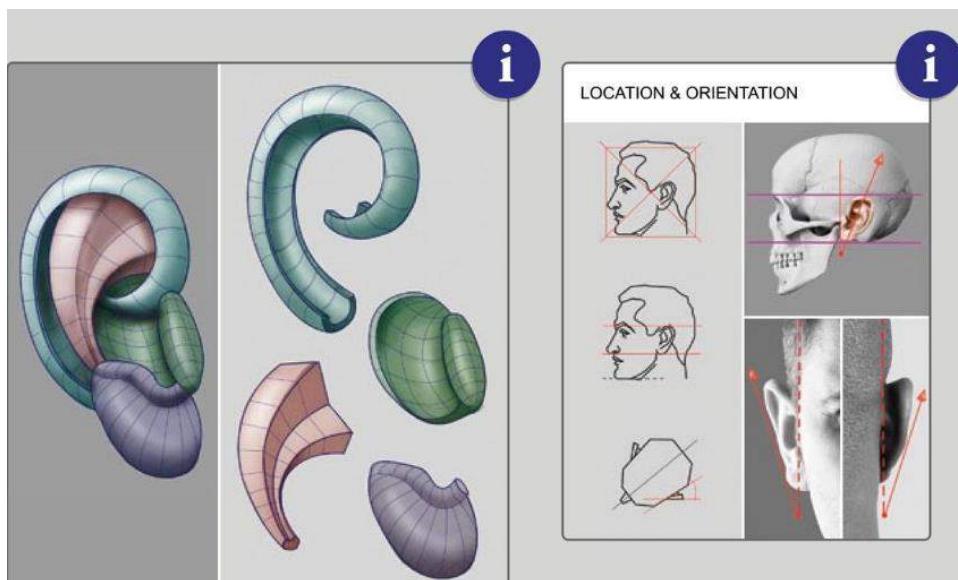
MAJOR NECK MUSCLES (TRAPEZIUS AND STERNOCLIDOMASTOID)



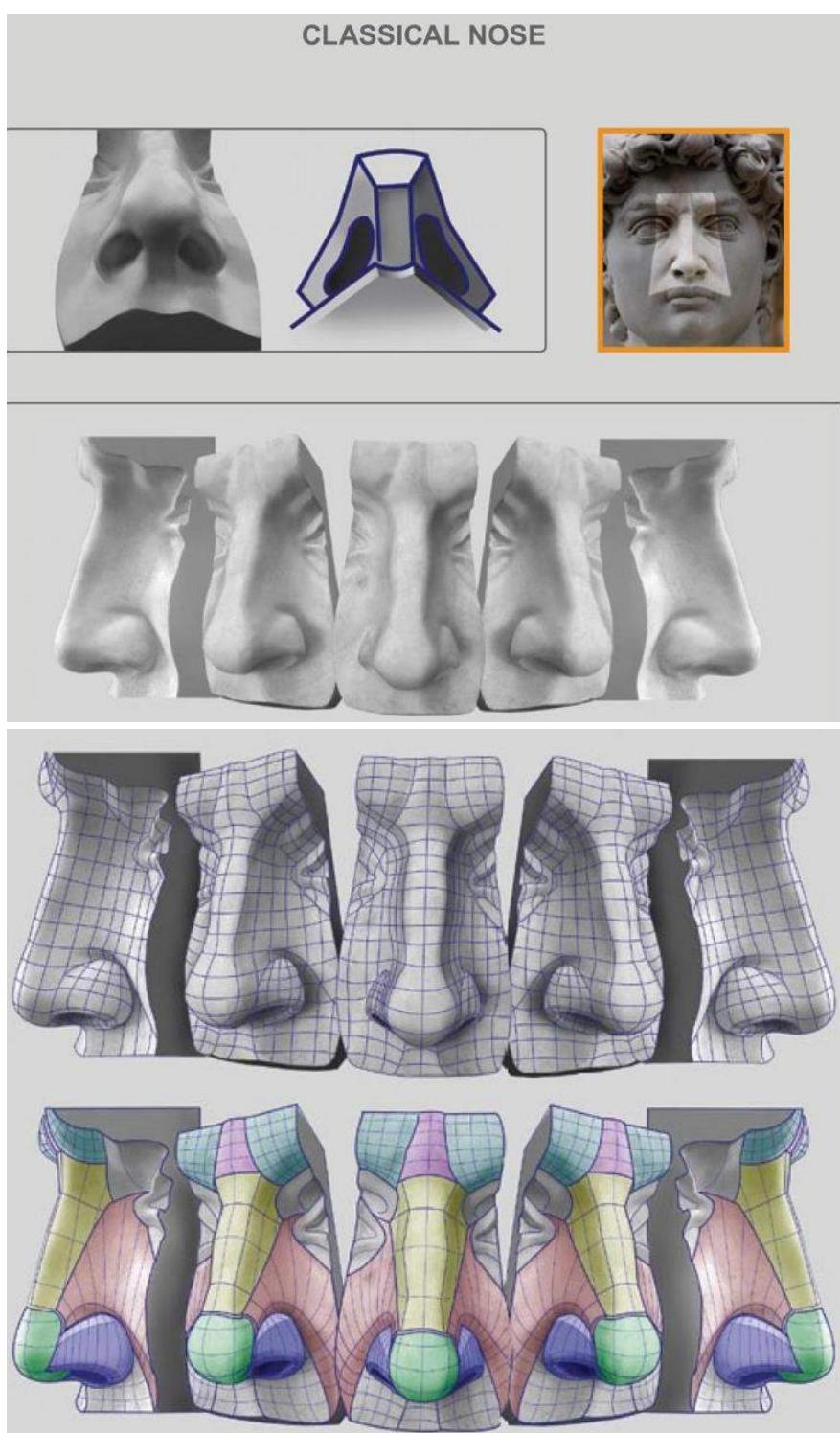
## EAR



Ear :



## Classical Nose :



# All About Noses :

## ALL ABOUT NOSES

**i**

NOSES CHANGE WITH AGE

**i**

PARTS OF A NOSE

### FEMALE VS. MALE NOSE

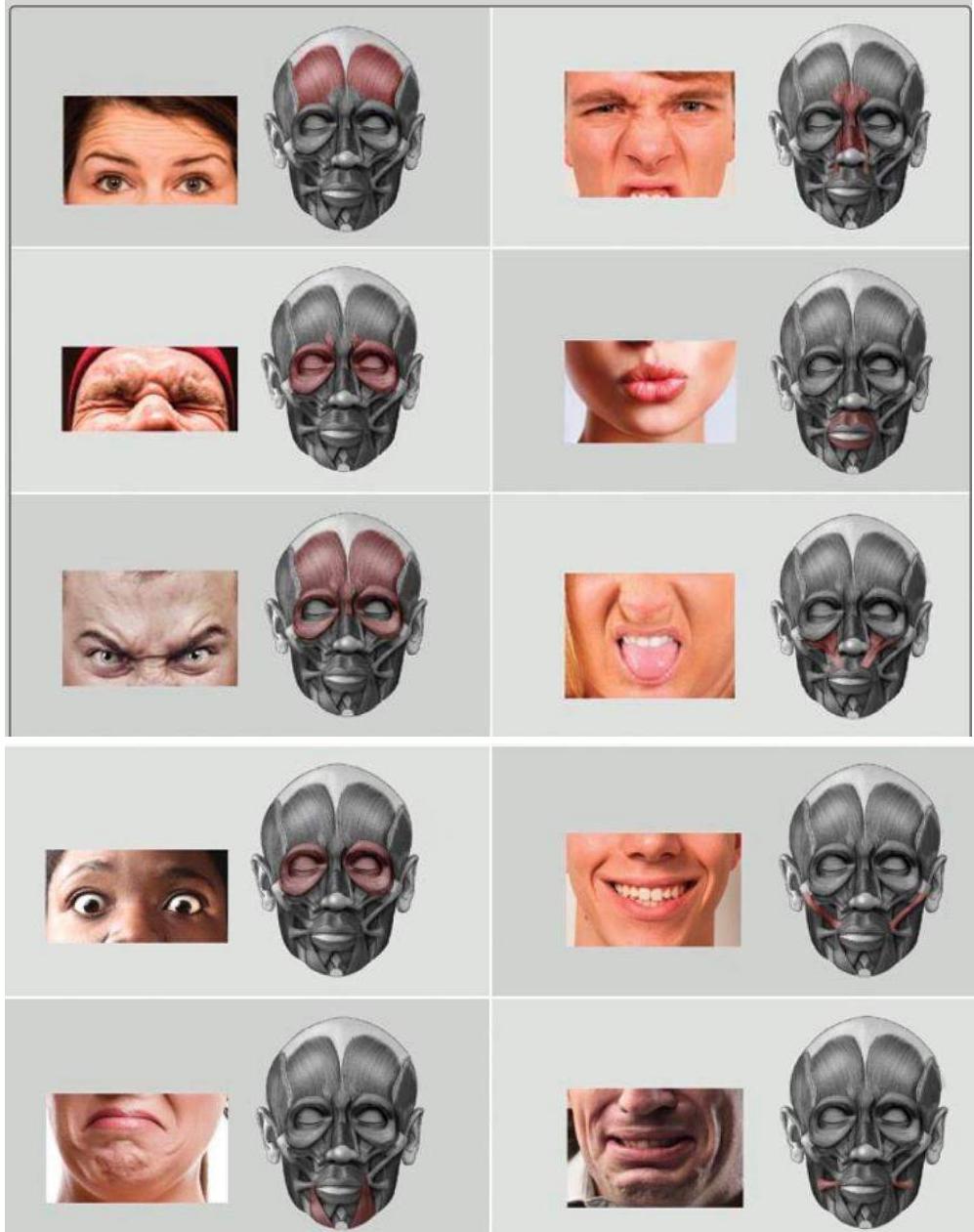
IDEALISTIC NOSE



TIPPING UP THE POINT OF THE NOSE WILL MAKE IT LOOK CHILD-LIKE. GIVING IT A CONCAVE OR THIN BRIDGE WILL MAKE IT LOOK MORE FEMININE!

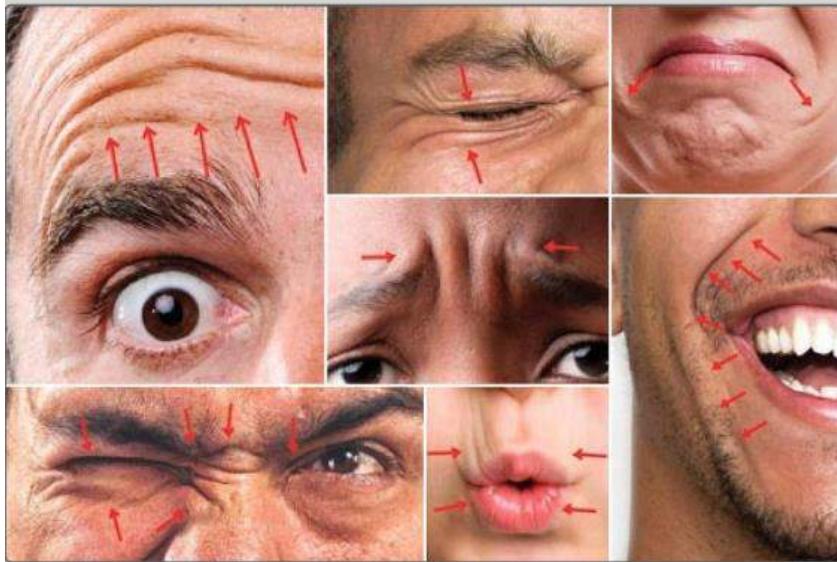
## Function of Facial Muscles :

### FUNCTIONS OF FACIAL MUSCLES

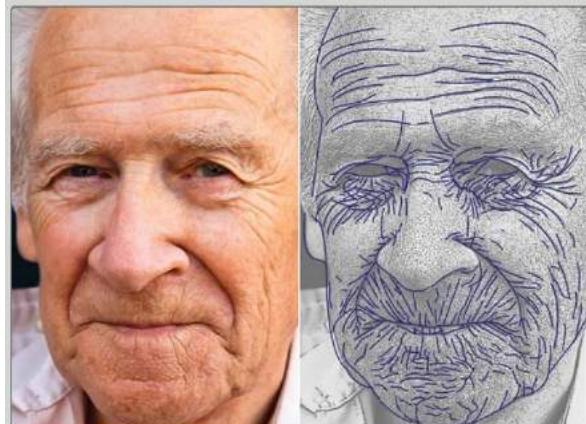


## Dynamic Wrinkles :

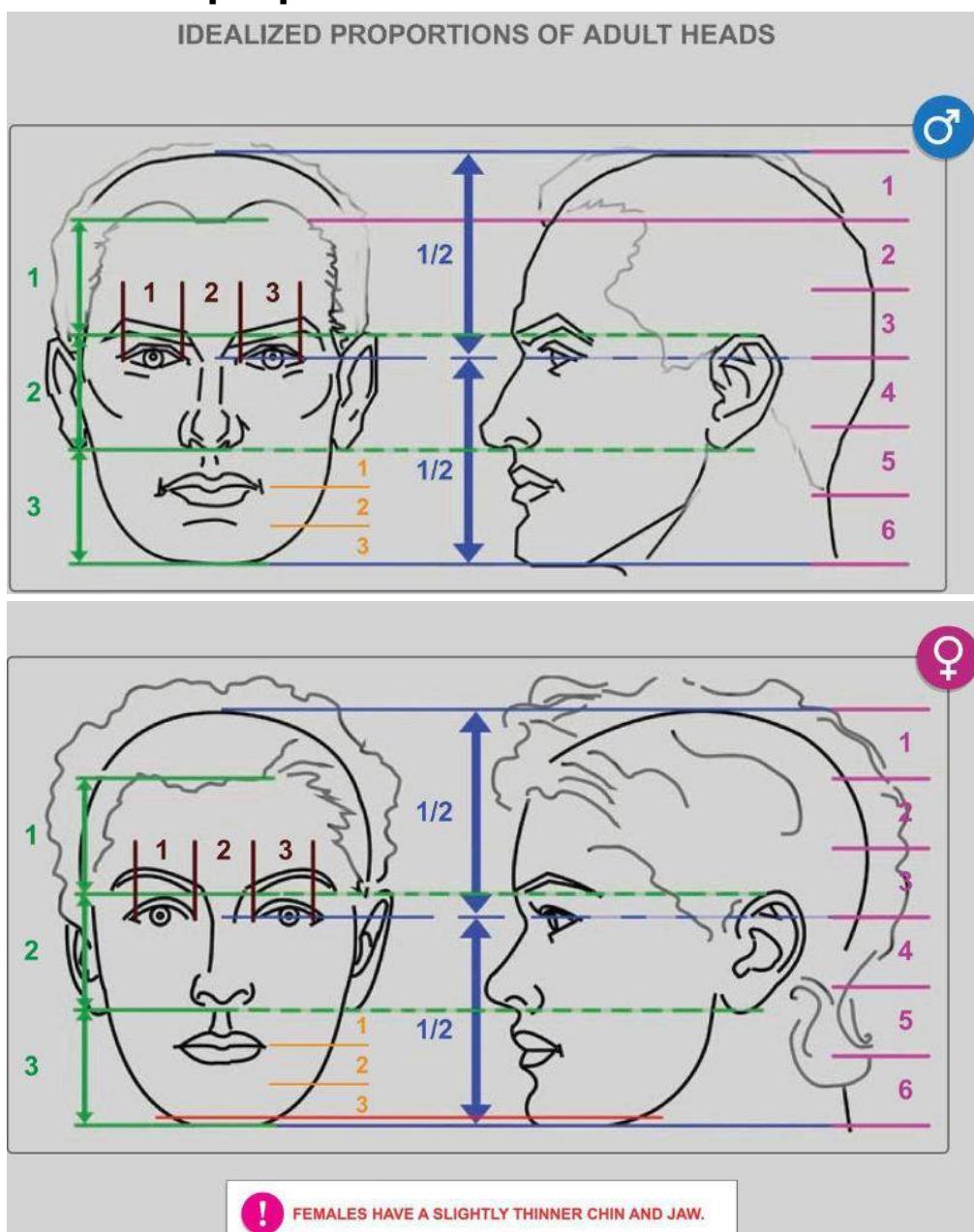
DYNAMIC WRINKLES



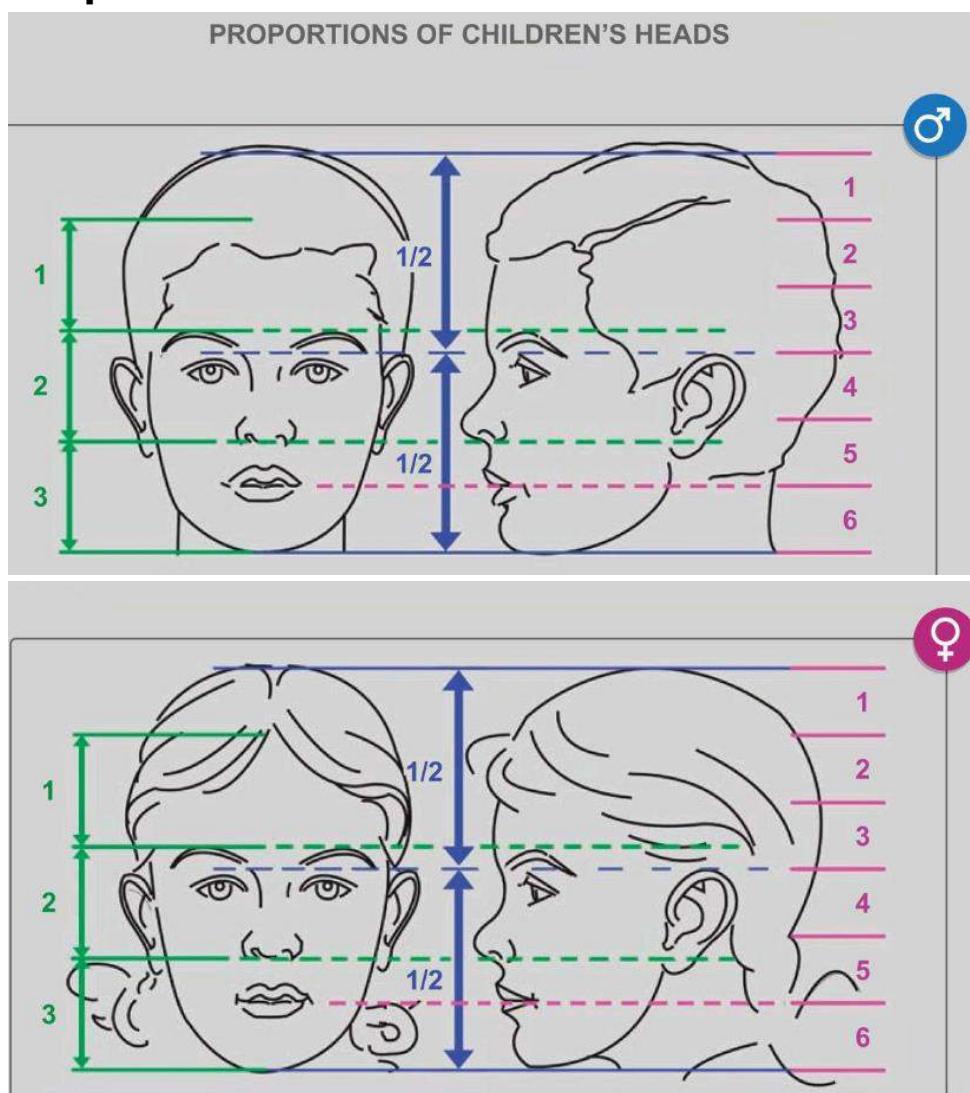
AGING WRINKLES



## Idealised proportions of Adult Heads :

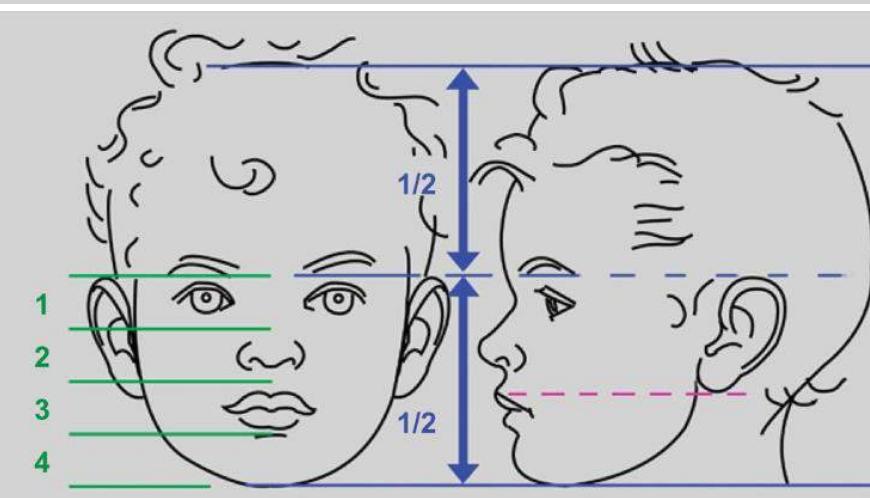
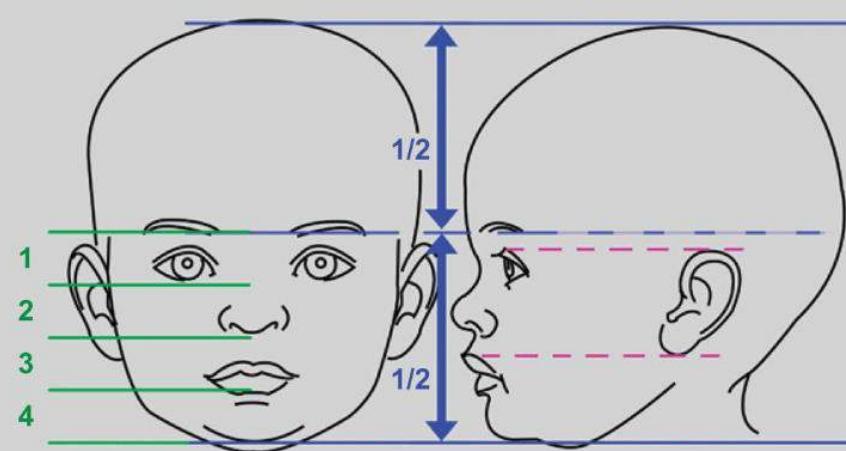


## Proportions of Children's Heads :

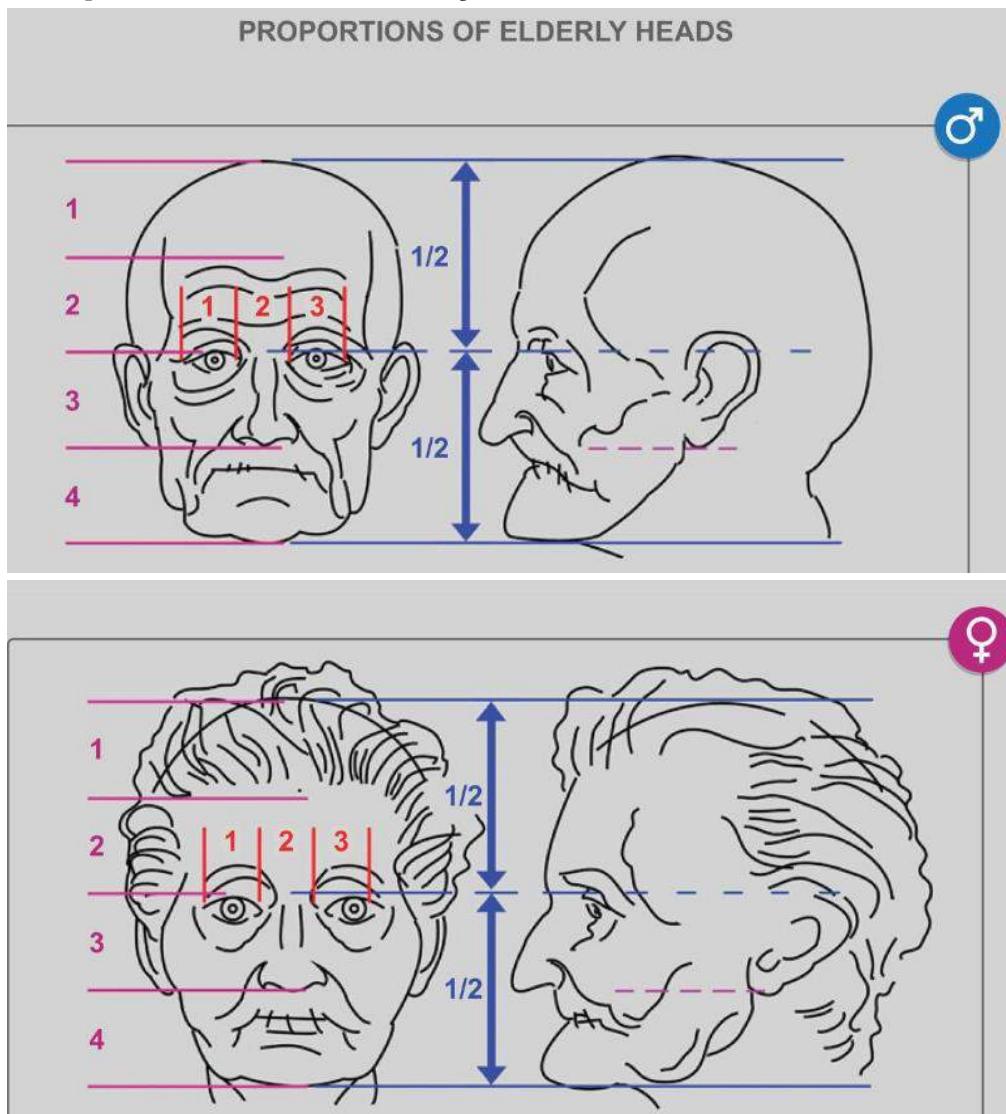


## Proportions of Baby and Toddlers Heads :

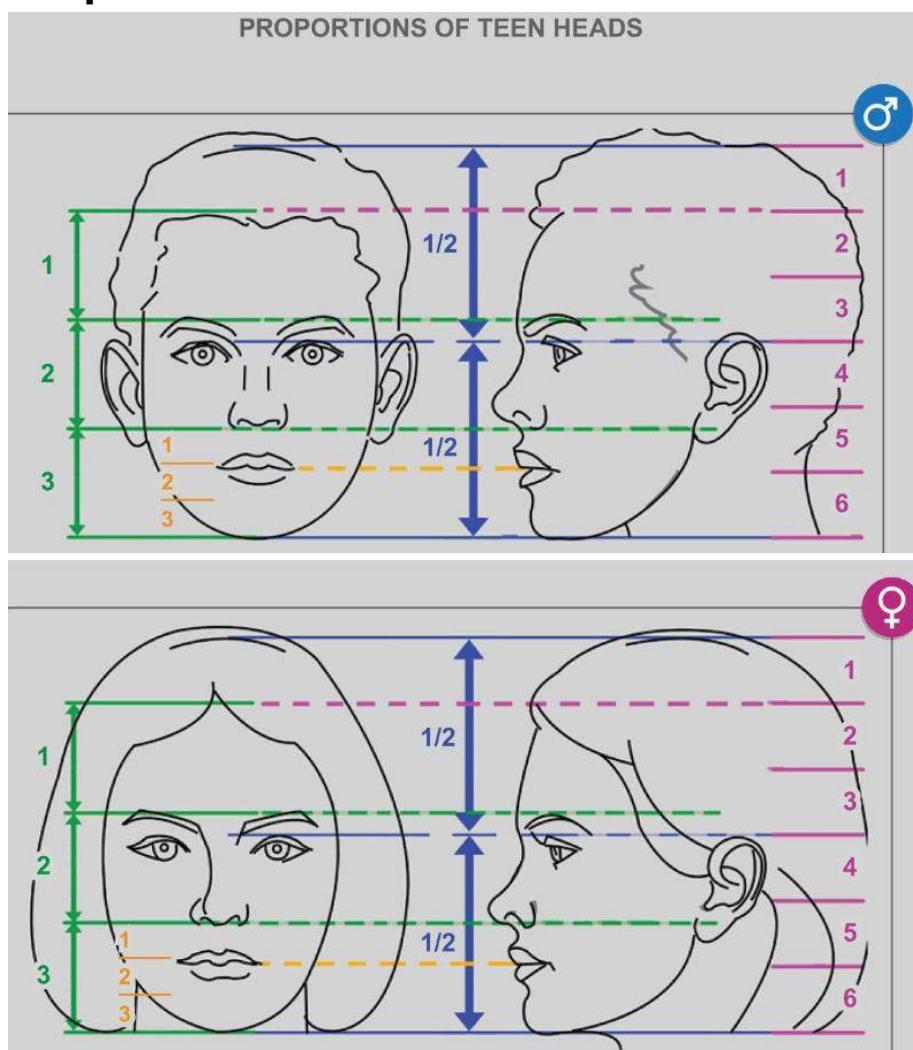
PROPORTIONS OF BABY AND TODDLER HEADS



## Proportions of Elderly Heads :



## Proportions of Teen Heads :



# Gender differences between idealised adult heads :

GENDER DIFFERENCES BETWEEN IDEALIZED ADULT HEADS

Male (♂)	Female (♀)
<ul style="list-style-type: none"><li>DISTINCT PROTRUDING BROW RIDGES</li><li>NOSE ROOT IS USUALLY EXPRESSED CLEARLY AND CAN BE QUITE DEEP</li><li>PLANE OF FOREHEAD HAS A SMALL SLOPE TOWARDS THE REAR, CONTOUR OF FOREHEAD IS NOT STRAIGHT BUT SOMEWHAT WAVY</li><li>CHEEKBONES EXPRESSED CLEARLY</li><li>BUSHY EYEBROWS STAND OUT, AS A RULE ARE LESS ARCHED SHAPE AND SIT LOWER OVER EYES</li><li>UPPER EYELID IS NOT PARTICULARLY DISTINGUISHED AND IS LOCATED CLOSE TO EDGE OF THE INFRAORBITAL FORAMEN</li><li>LONGER NOSE COMPARED TO A FEMALE</li><li>UNDERLYING THE NOSE IS A CLEARLY VISIBLE BONE-SKELETAL STRUCTURE, IT IS USUALLY LARGE. FORM IS ALMOST STRAIGHT OR SLIGHTLY CONVEX.</li><li>NOSE IS THICK AND BROAD</li><li>BASE OF NOSE LIES ON A HORIZONTAL PLANE</li><li>TIP OF NOSE IS LARGE AND ROUNDED</li><li>FOLD CONTOUR OF UPPER LIP IS SLIGHTLY CONVEX</li><li>CAUCASIAN MALE LIPS ARE NOT AS FULL AND PUFFY AS A FEMALE'S</li><li>PROTRUDING CHEEKBONES</li><li>CHIN IS MASSIVE, CLEARLY DEFINED, OFTEN DIMPLED</li><li>LOWER JAW'S WIDEST CORNERS ARE MARKED CLEARLY AND SOMEWHAT SHIFTED LATERALLY (DUE TO DEVELOPED CHEWING MUSCLES)</li></ul>	<ul style="list-style-type: none"><li>CLEARLY EXPRESSED EYEBROWS</li><li>SMALLER NOSE ANGLE</li><li>MORE VERTICAL, PROMINENT AND ROUNDER PLANE OF FOREHEAD</li><li>PROTRUDING CHEEKBONES</li><li>THIN EYEBROWS WITH AN ARCHED FORM, USUALLY MUCH HIGHER THAN THE EYES OF MALES</li><li>LARGER UPPER EYELID</li><li>DEEPENING OF ROOT OF THE NOSE IS ALMOST UNNOTICEABLE</li><li>STRUCTURE OF NOSE IS THIN AND USUALLY STRAIGHT OR SLIGHTLY CONCAVE</li><li>NOSE, THIN WELL-DEFINED</li><li>BASE OF NOSE ON PLANE, TILTED SOMEWHAT UPWARD</li><li>TIP OF THE NOSE CLEARLY EXPRESSED (DUE TO CARTILAGE STRUCTURE)</li><li>UPPER LIP OFTEN HAS A SLIGHT INDENTATION CENTERED UNDER THE NOSE CALLED THE PHILTRUM</li><li>LIPS ARE SMALL, OFTEN FULL AND POUTY</li><li>CHEEKS ARE SMOOTH, AND SOMETIMES PUBESCENT, FLAT OR SLIGHTLY CONVEX</li><li>A SMALL CHIN WITH A ROUND SHAPE</li><li>LOWER JAW IS MARKEDLY DEFINED, WITH A ROUNDED ANGLE</li><li>IN RELATION TO THE SIZE OF HEAD AND SHOULDERS, WOMEN HAVE A LONG, SLENDER NECK</li></ul>

## Emotion - Excitement :

EMOTION – EXCITEMENT



## Emotion - Happiness :

EMOTION – HAPPINESS



## Emotion - Anger :

EMOTION – ANGER



## Emotion - Surprise :

EMOTION – SURPRISE



## Emotion - Disgust :

EMOTION – DISGUST

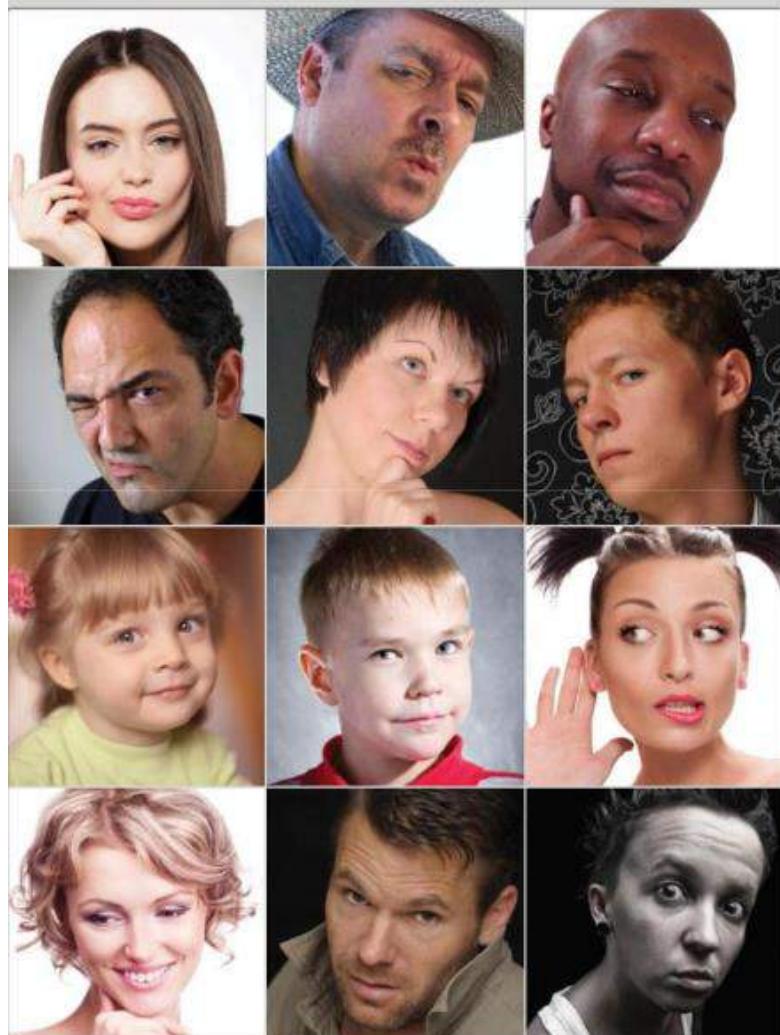


## Emotion Fear :

EMOTION – FEAR



EMOTION – INTEREST



**Emotion - Interest :**

## Emotion - Worry :



### ETHNICITIES



**Ethnicities :**

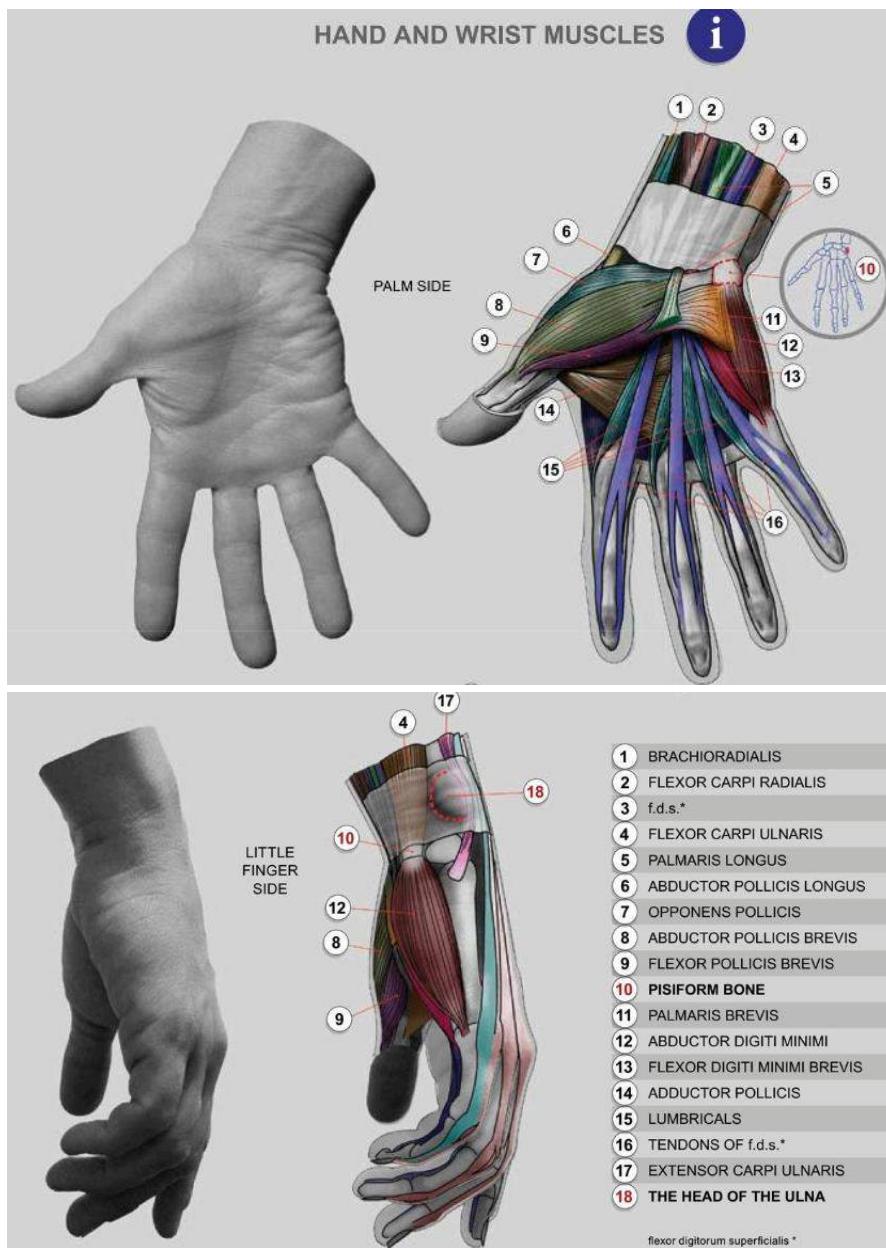
## Baby Emotions :



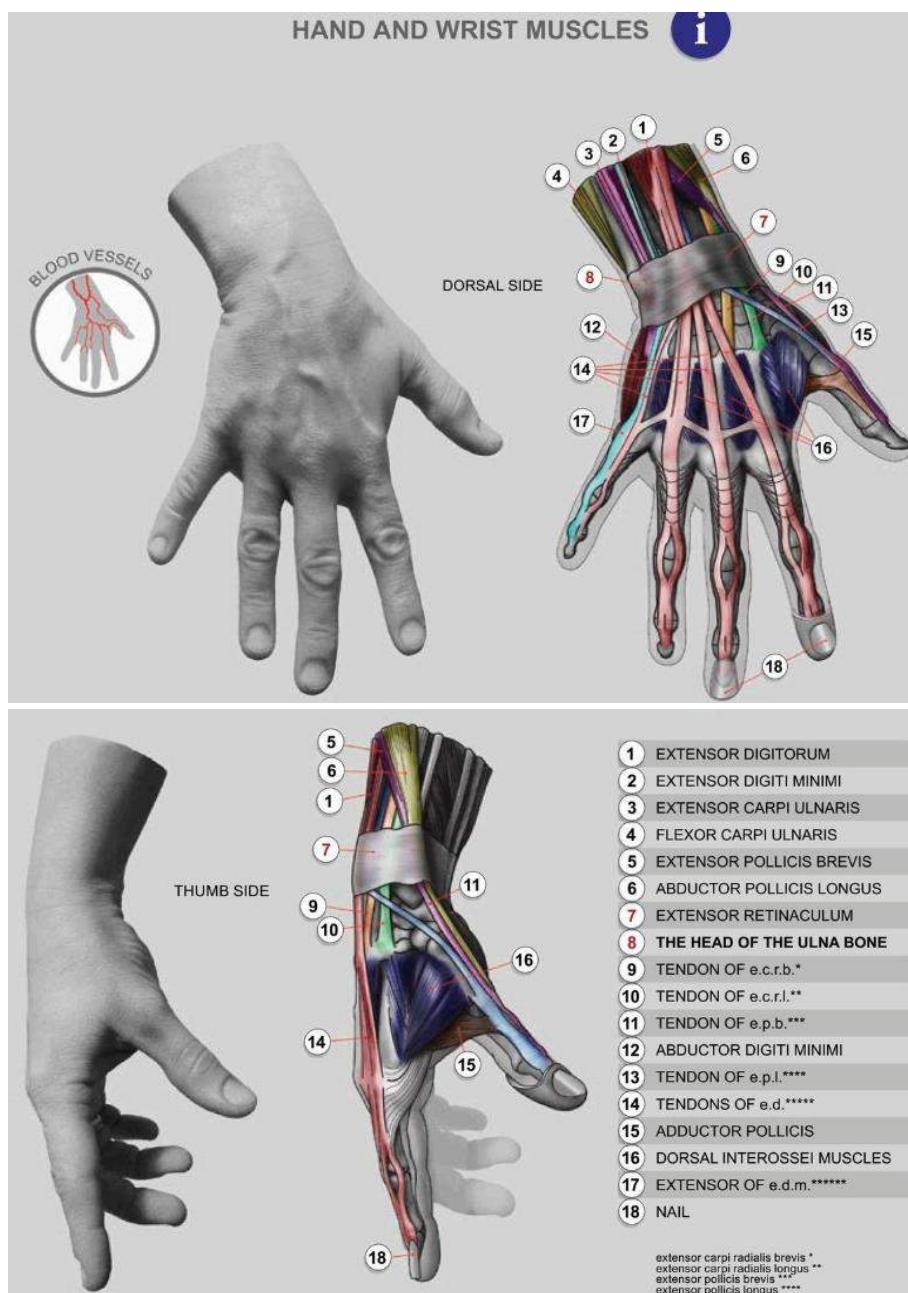
## Senior Emotions :



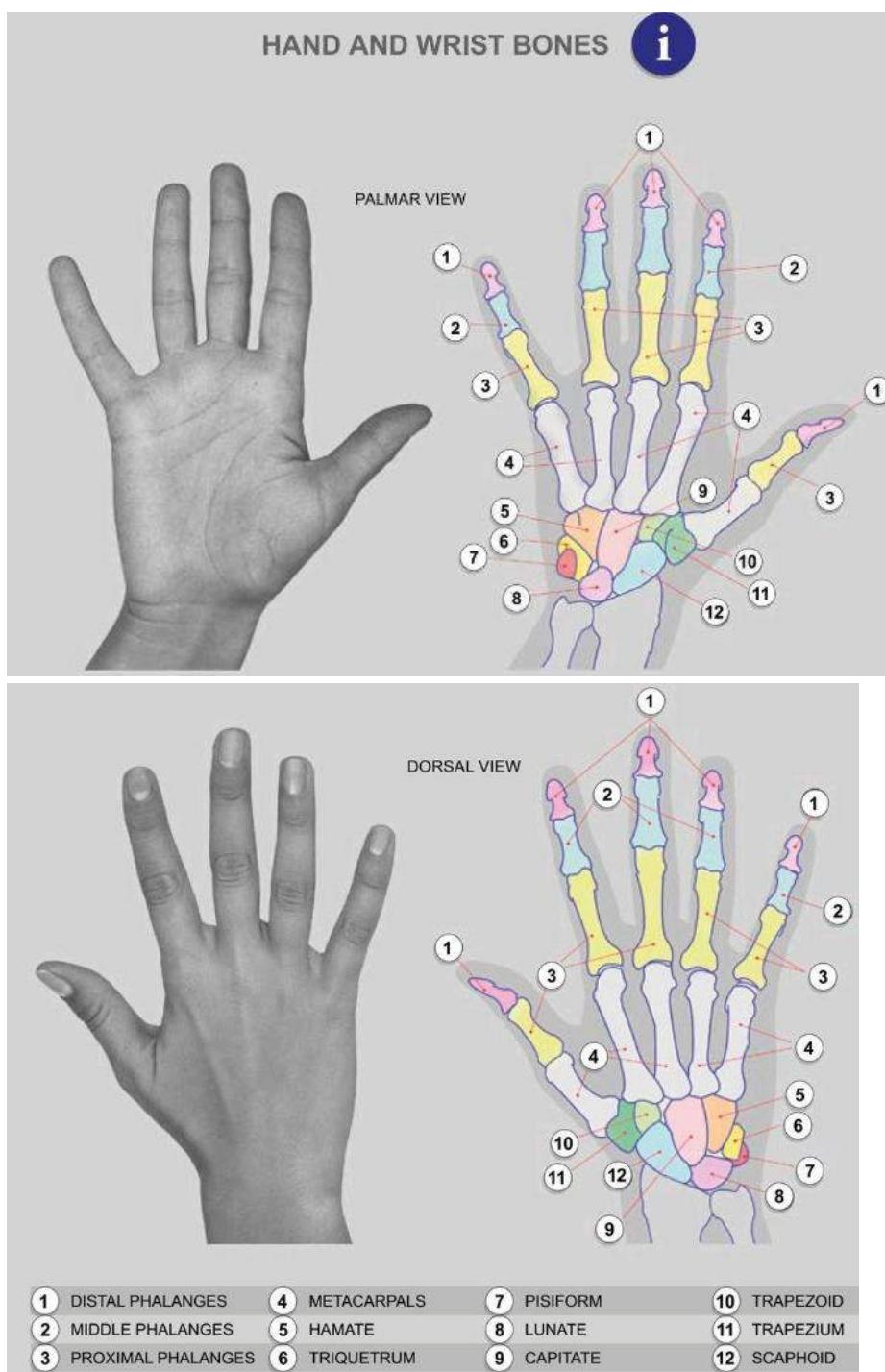
## Hand and Wrist Muscles :



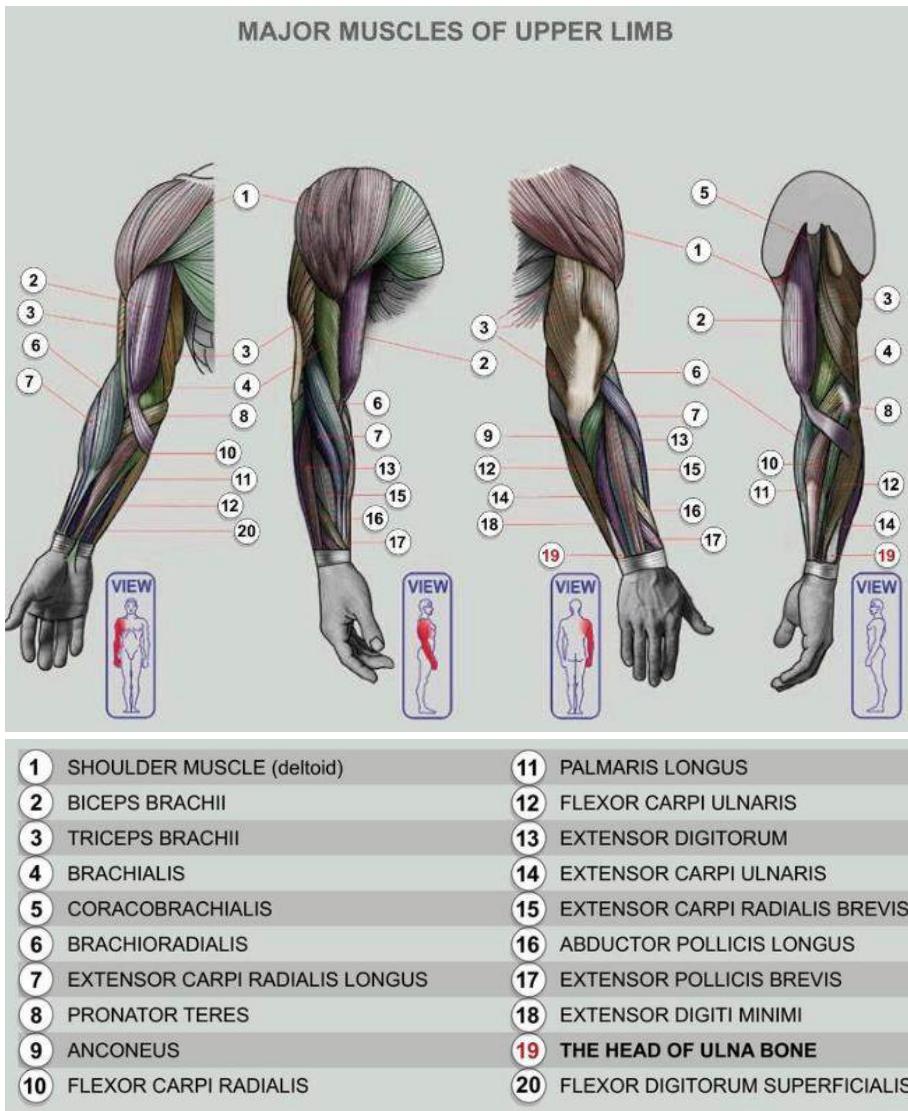
# Hand and Wrist Muscles :



## Hand and Wrist Bones :



## Major Muscles of upper limb :

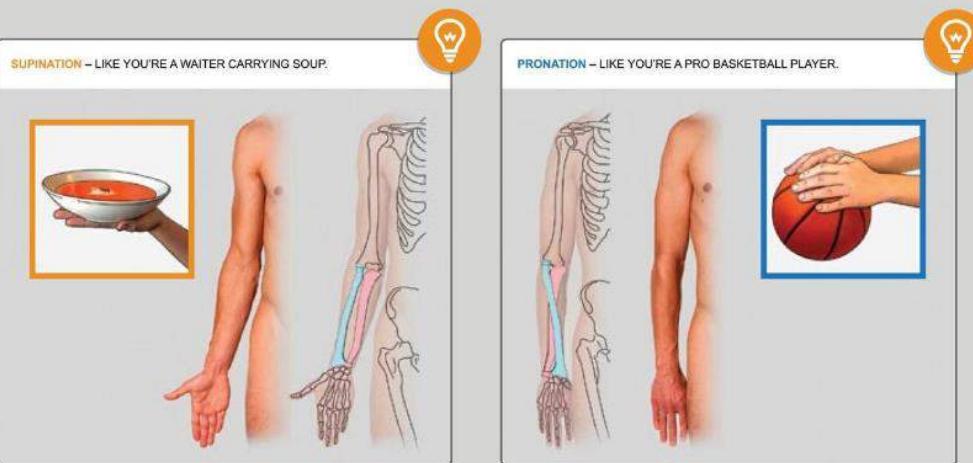


# Supination and Pronation :

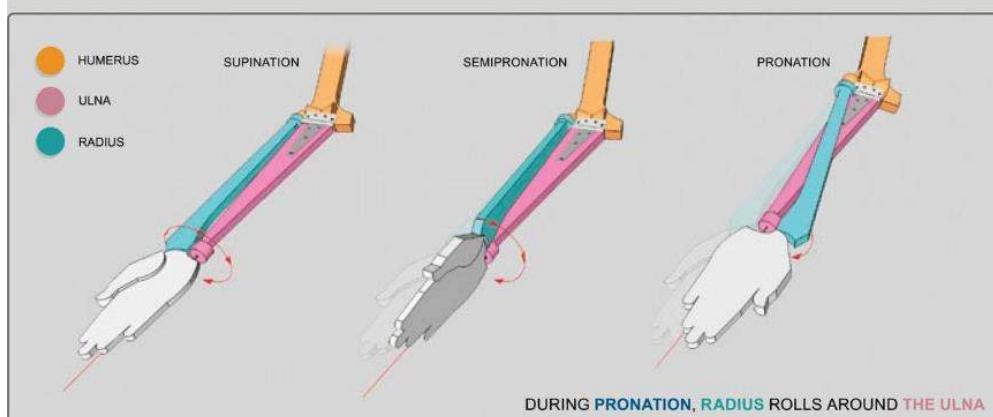
## SUPINATION AND PRONATION

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IN THE POSITION OF THE ARM CALLED **SUPINATION**, THE **RADIUS** AND **ULNA** ARE PARALLEL, THE PALM OF THE HAND FACES FORWARD OR UPWARD, AND THE THUMB IS AWAY FROM THE BODY. IN THE POSITION CALLED **PRONATION**, THE **RADIUS** AND **ULNA** ARE CROSSED, THE PALM FACES TO THE REAR OR DOWNWARD, AND THE THUMB IS TOWARD THE BODY.



NOTE THAT PRONATION OF THE FOREARM DOES NOT INVOLVE ROTATION OF THE UPPER-ARM FROM THE SHOULDER JOINT!

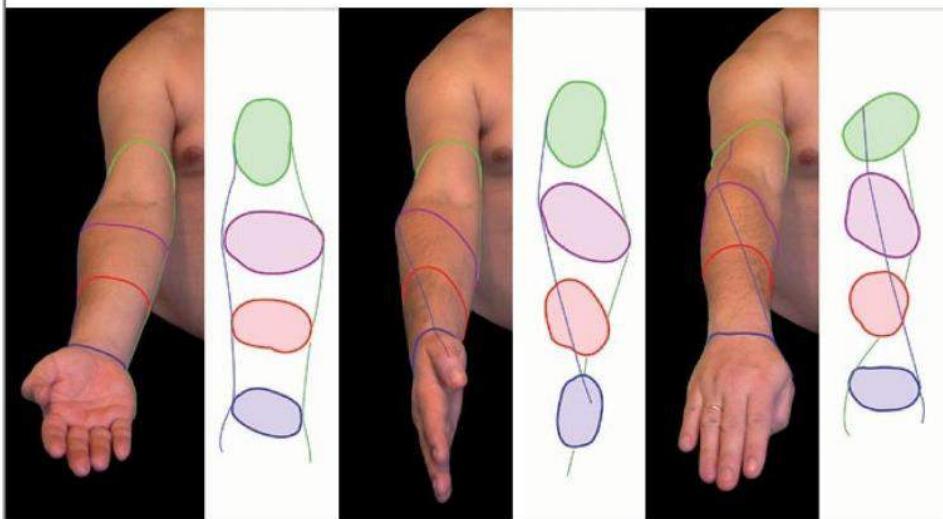


**Supination and pronation** are terms used to describe the up or down orientation of your hand, arm, or foot. When your palm or forearm faces up, it's supinated. When your palm or forearm faces down, it's pronated.

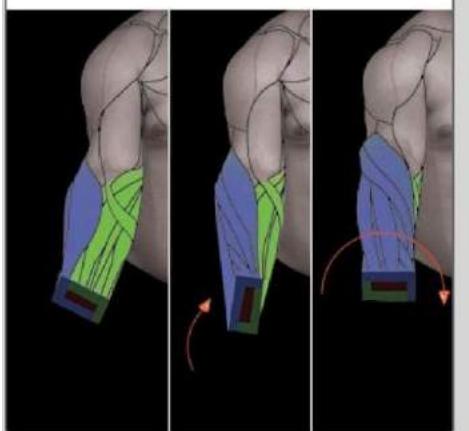
# Pronation and Form Changes :

## PRONATION AND FORM CHANGES

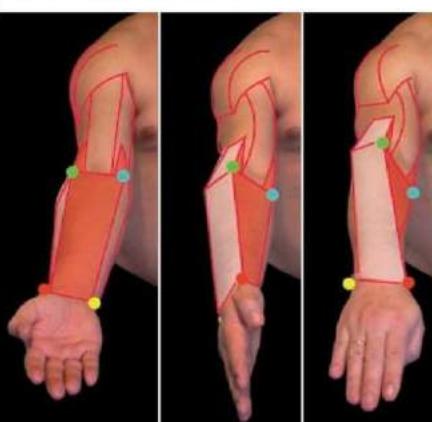
CROSS SECTIONS OF ARM DURING PRONATION



FLEXORS AND EXTENSORS



THIS IS AN EXAMPLE OF HOW IMPORTANT IT IS TO KNOW THE ORIGIN AND INSERTION POINTS OF MUSCLES.

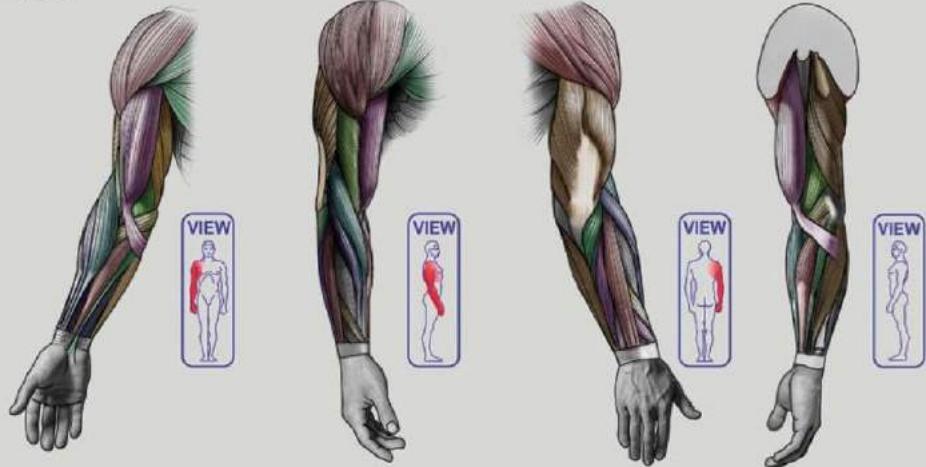


## Supinated Upper Limb :

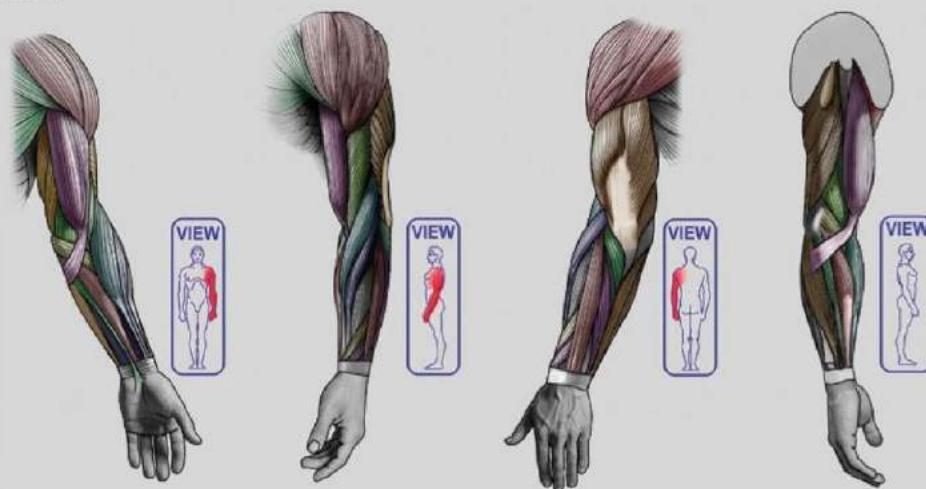
### SUPINATED UPPER LIMB

(WHEN THE FOREARM OR PALM FACES TOWARD THE FRONT)

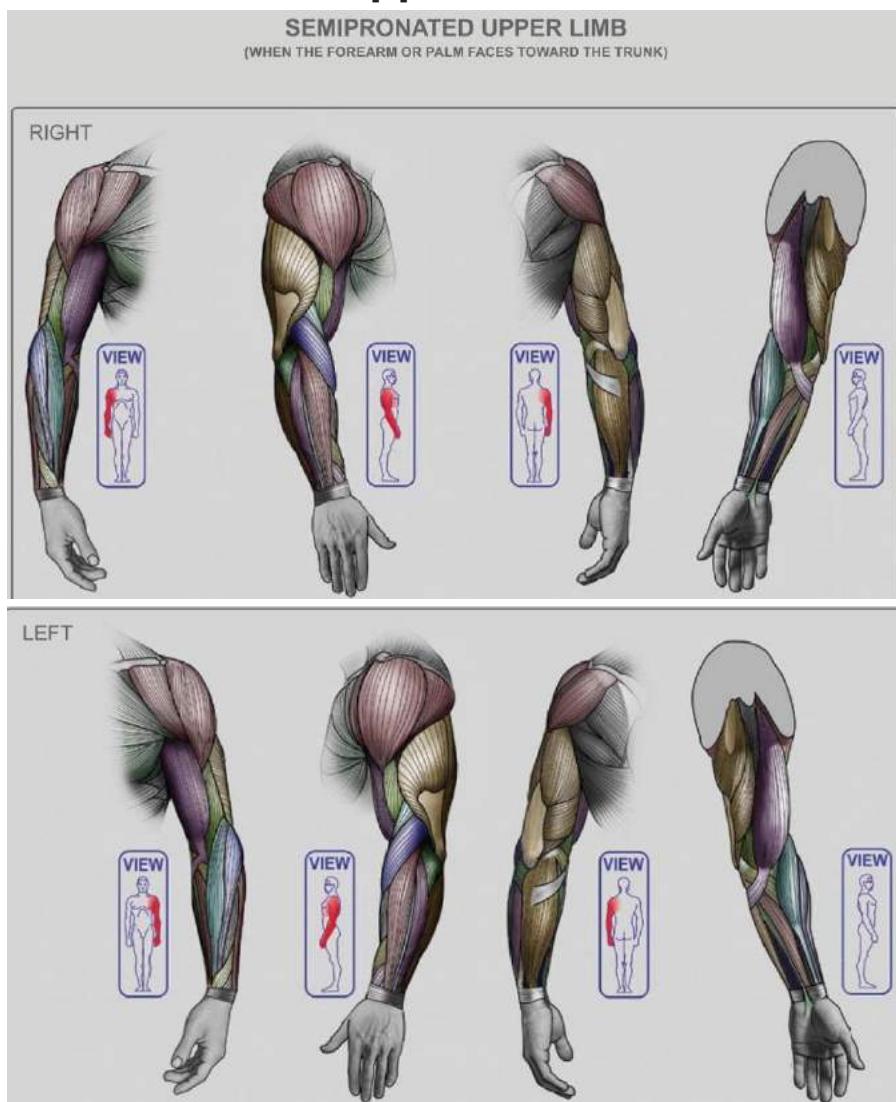
RIGHT



LEFT



## Semi Pronated Upper Limb :

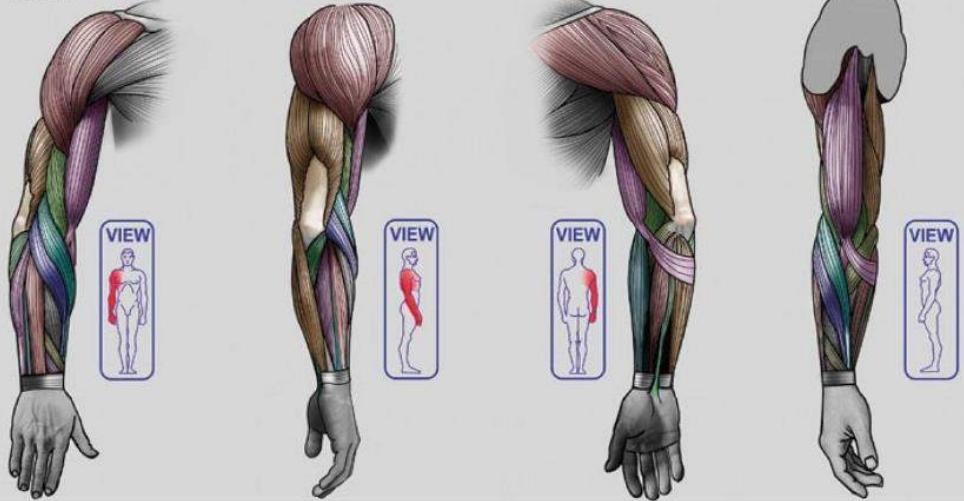


## Pronated Upper Limb :

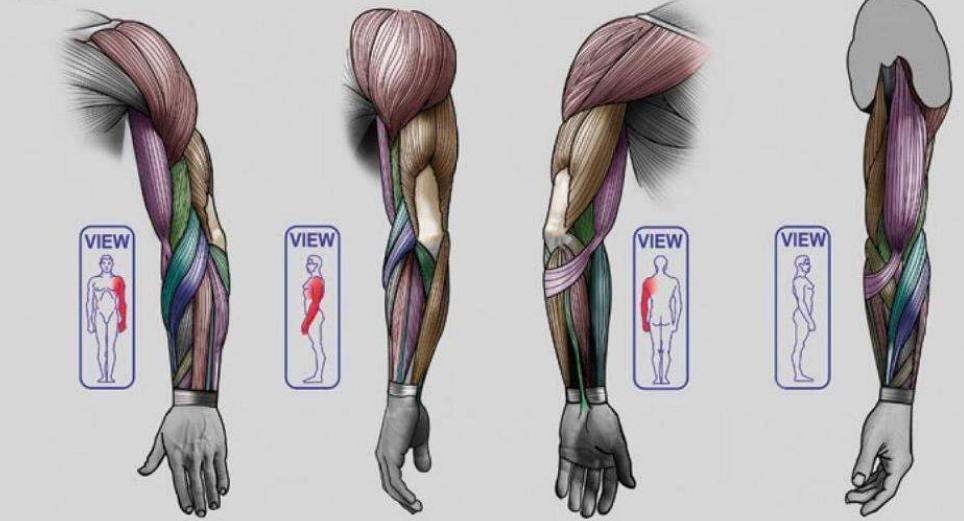
### PRONATED UPPER LIMB

(WHEN FOREARM OR PALM FACES TOWARD THE BACK)

RIGHT



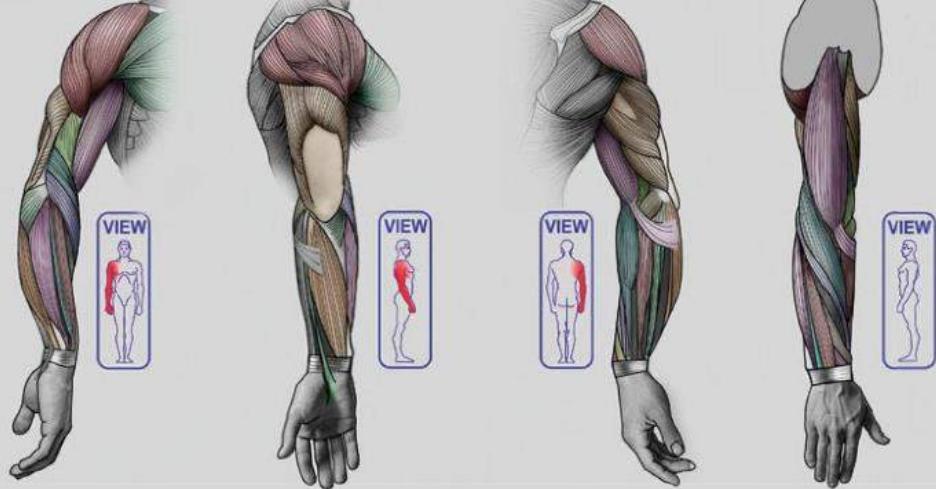
LEFT



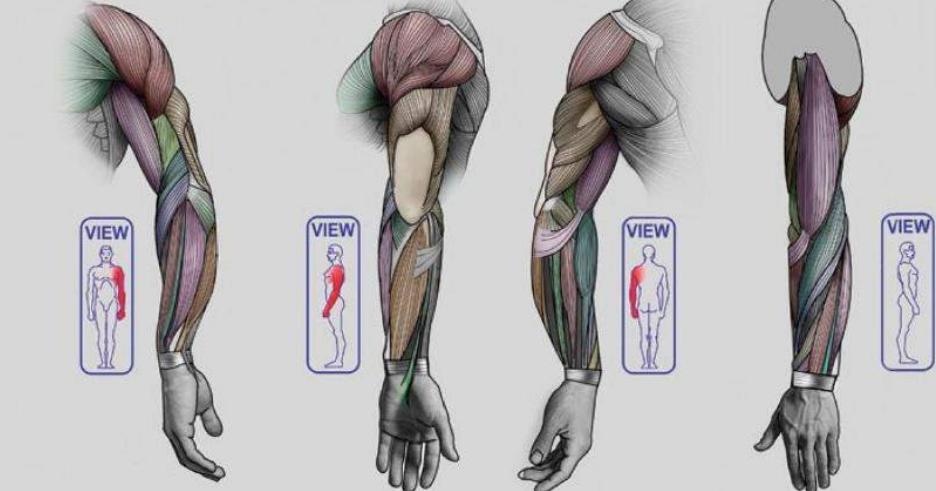
## Forced Pronation of the Upper Limb :

FORCED PRONATION OF THE UPPER LIMB  
(WHEN THE FOREARM OR PALM FACES AWAY FROM THE TRUNK)

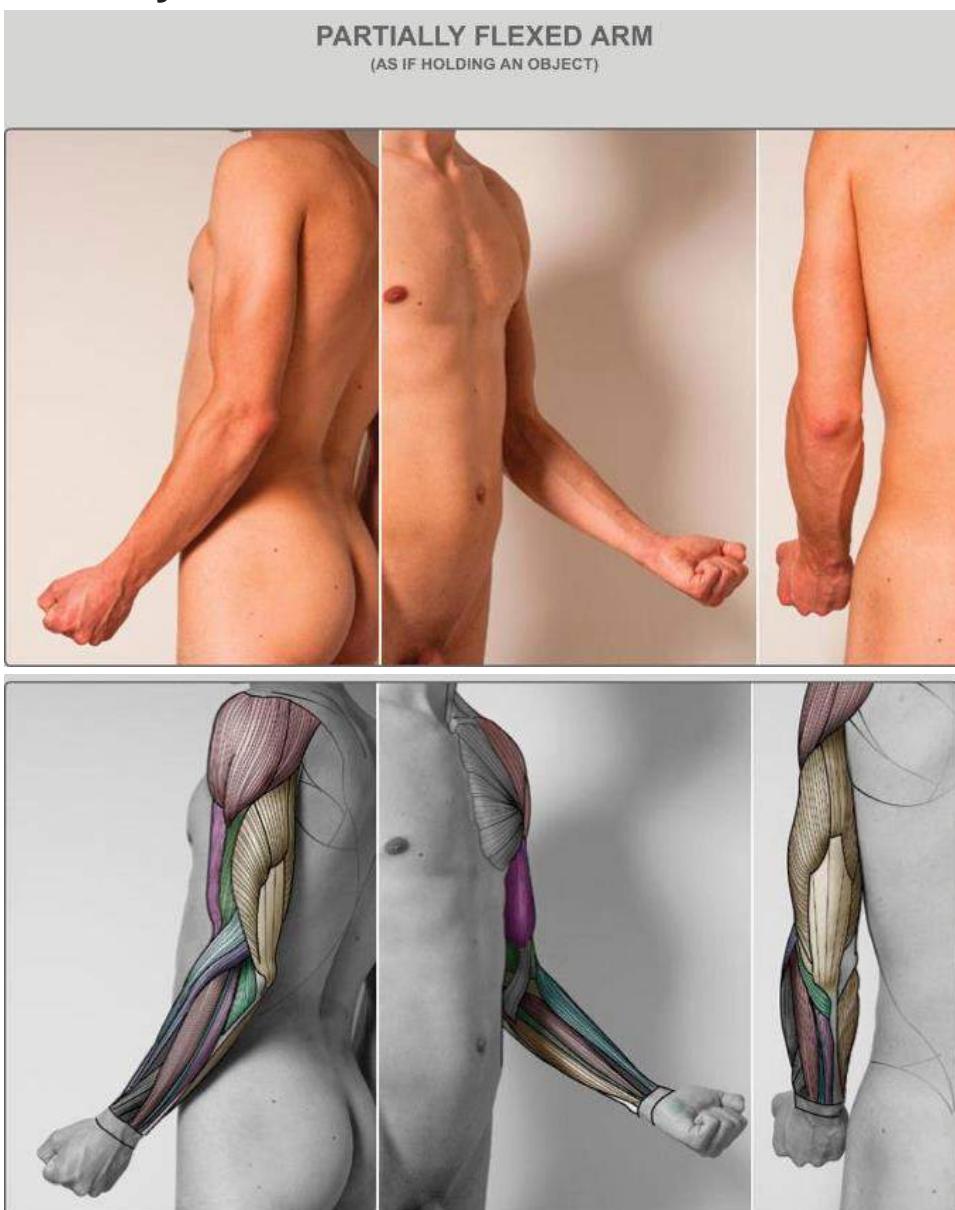
RIGHT



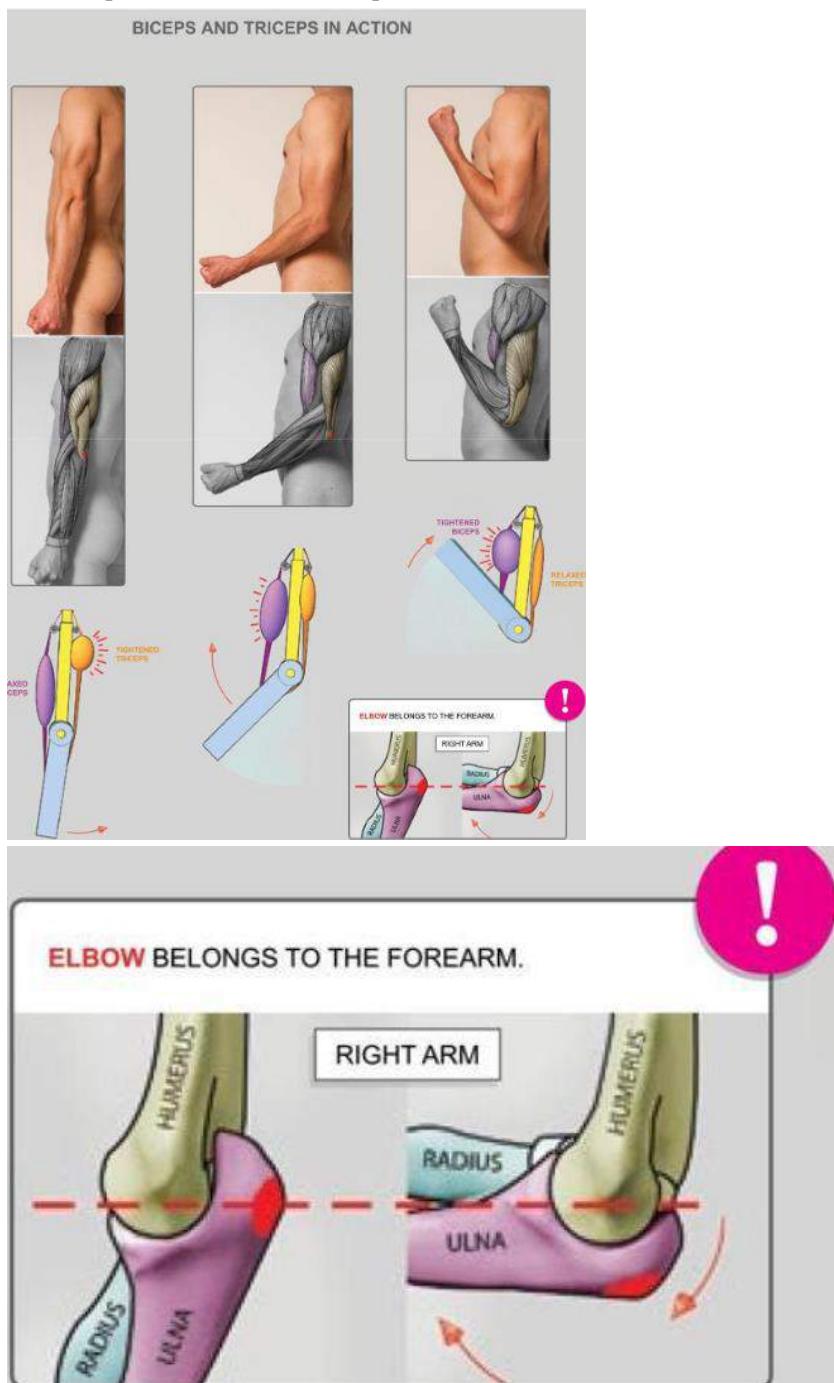
LEFT



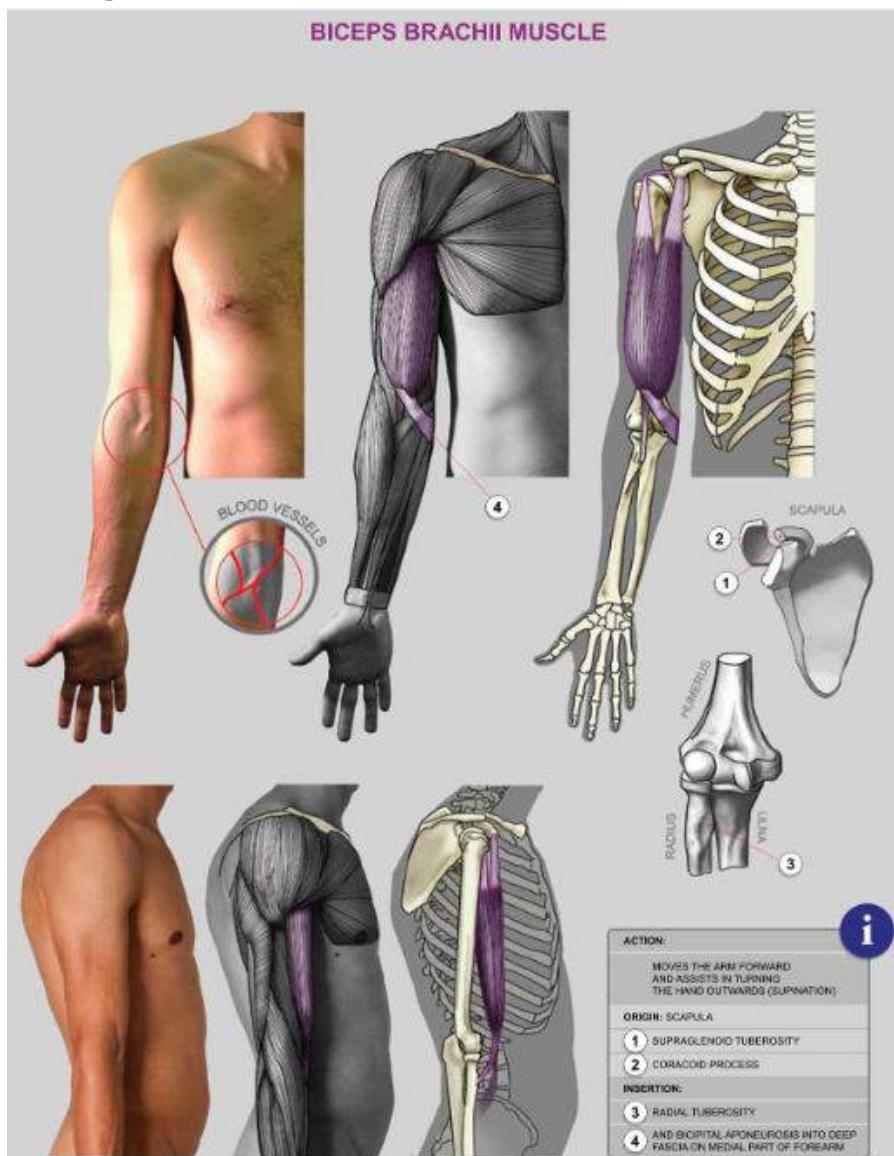
## Partially Flexed Arm :



## Biceps and Triceps in Action :

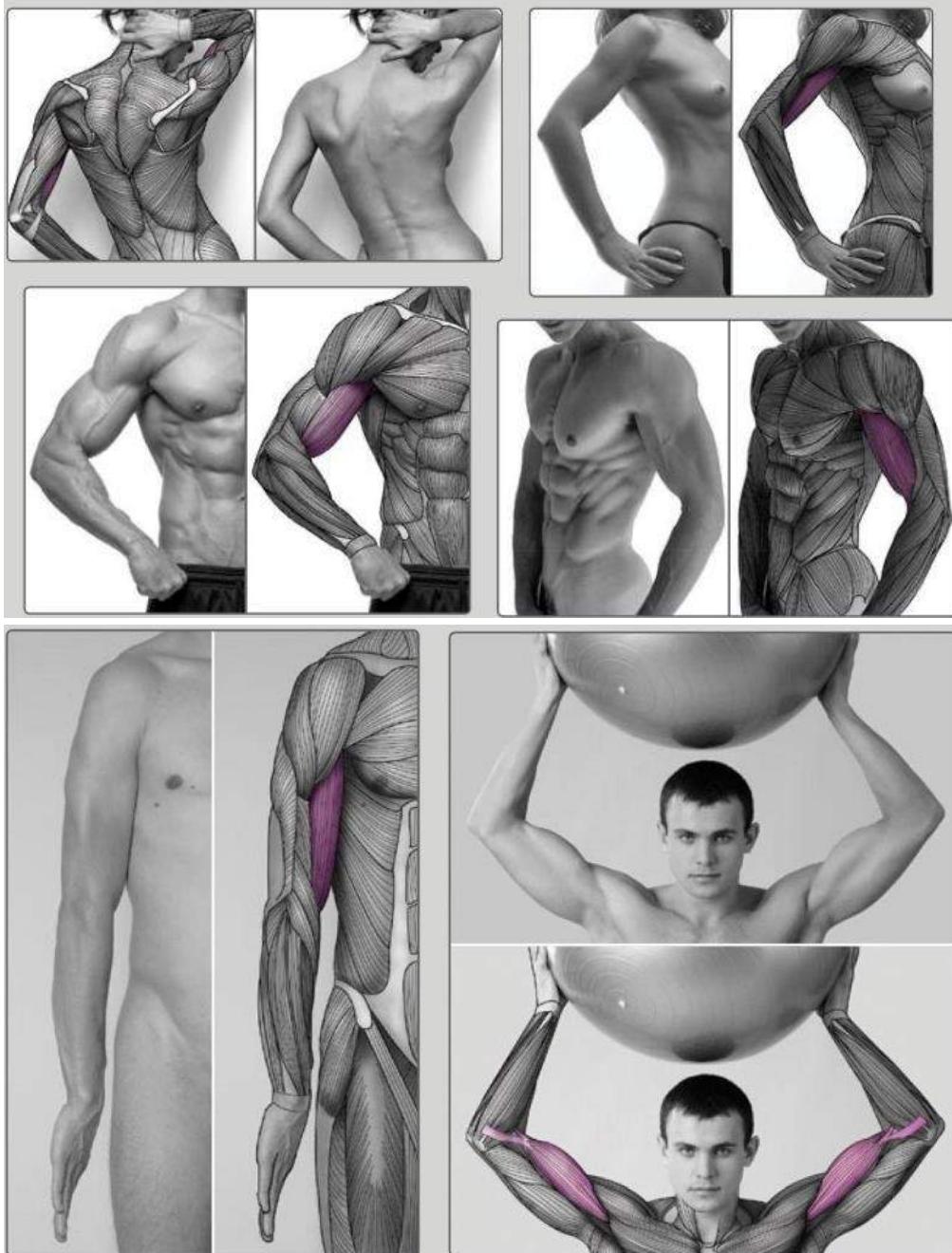


## Biceps Brachii Muscle :

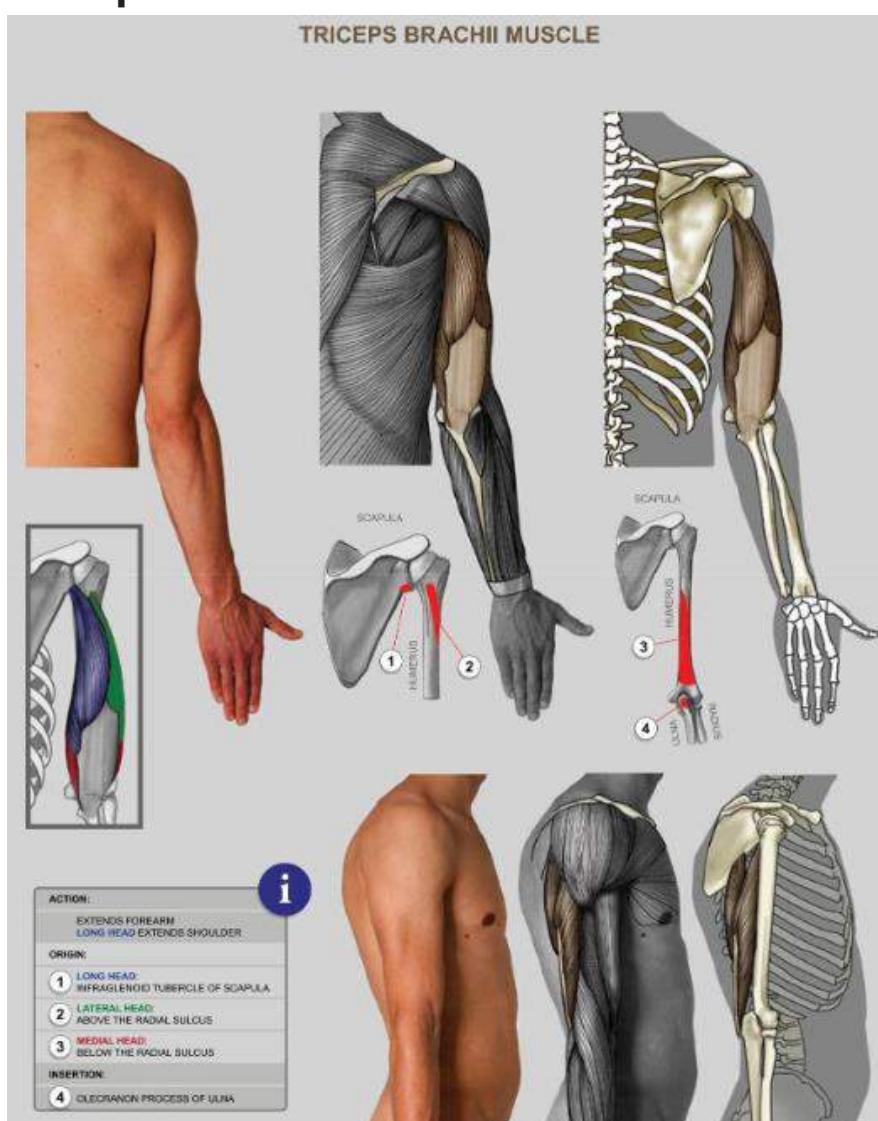


## Biceps Brachii Muscle :

### BICEPS BRACHII MUSCLE

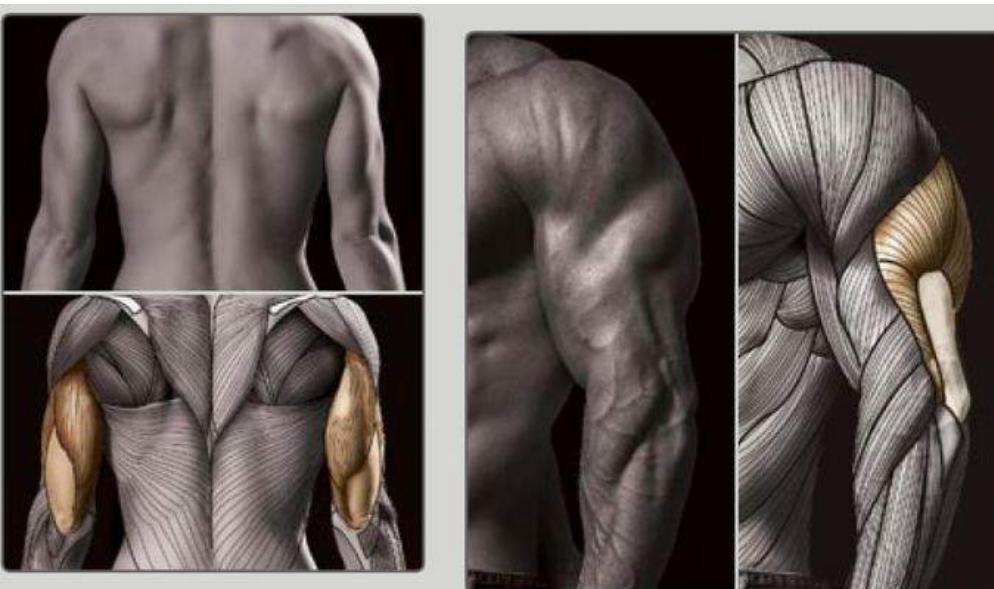
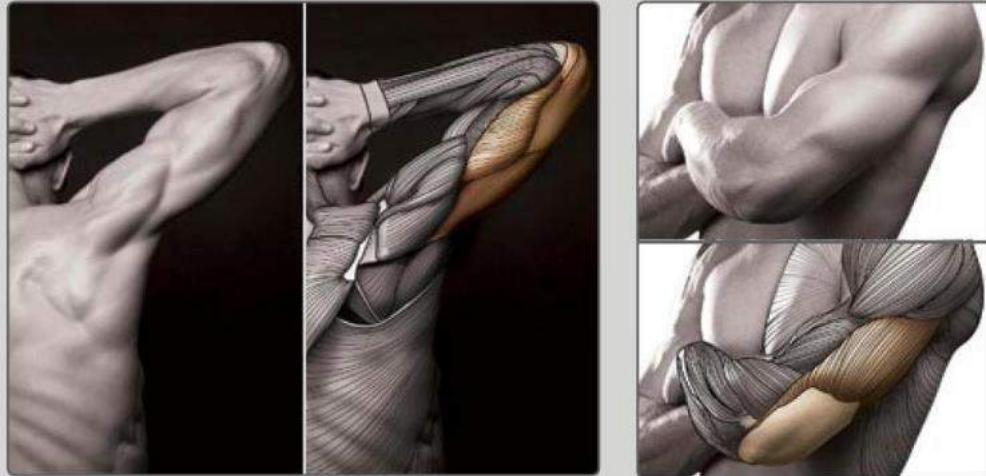


## Triceps Brachii Muscle :

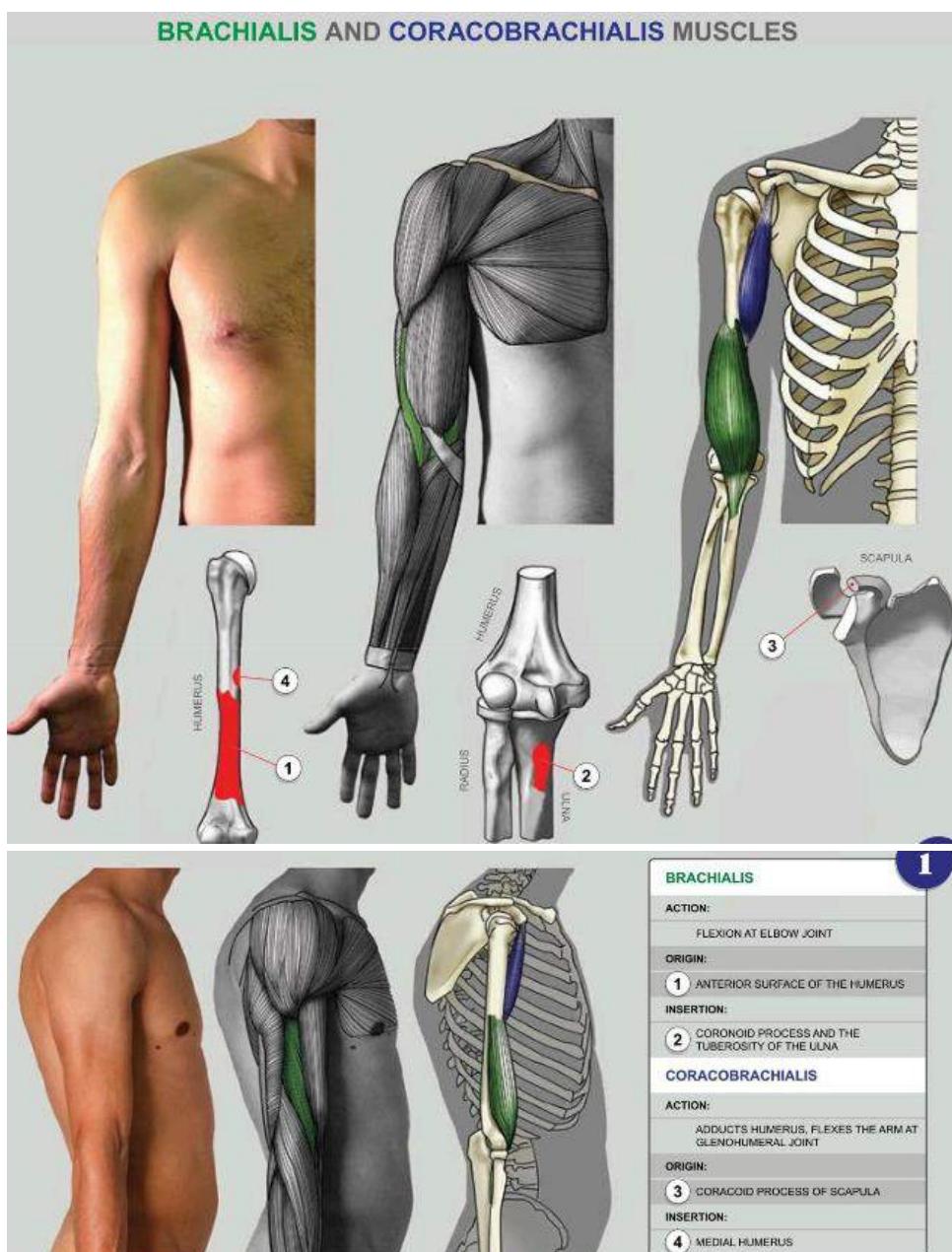


## Triceps Brachii Muscle :

### TRICEPS BRACHII MUSCLE

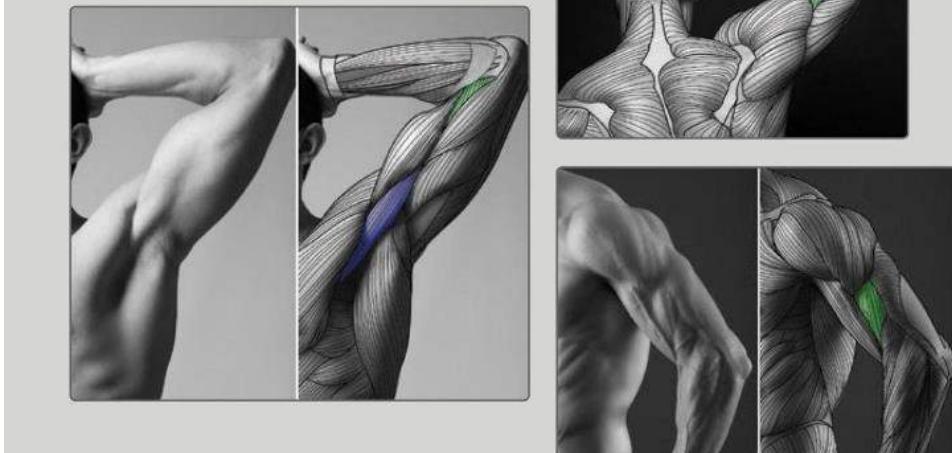
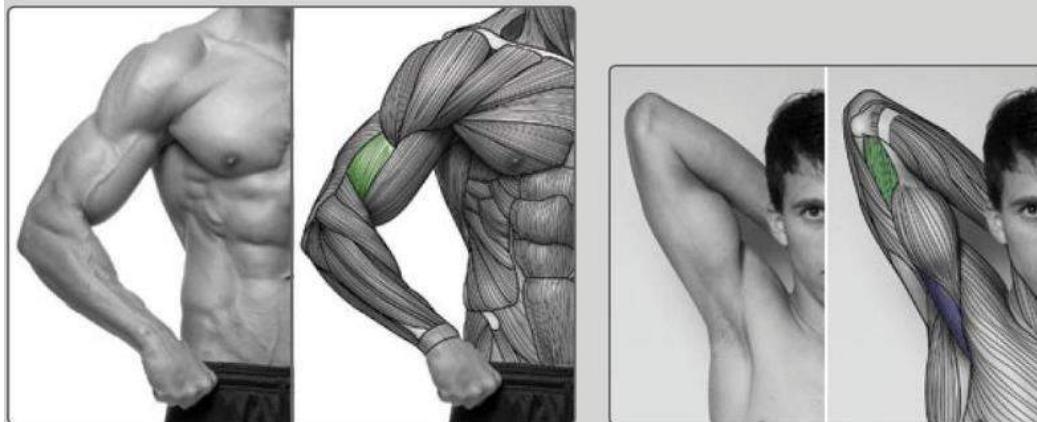


## Brachialis and Coracobrachialis Muscles :

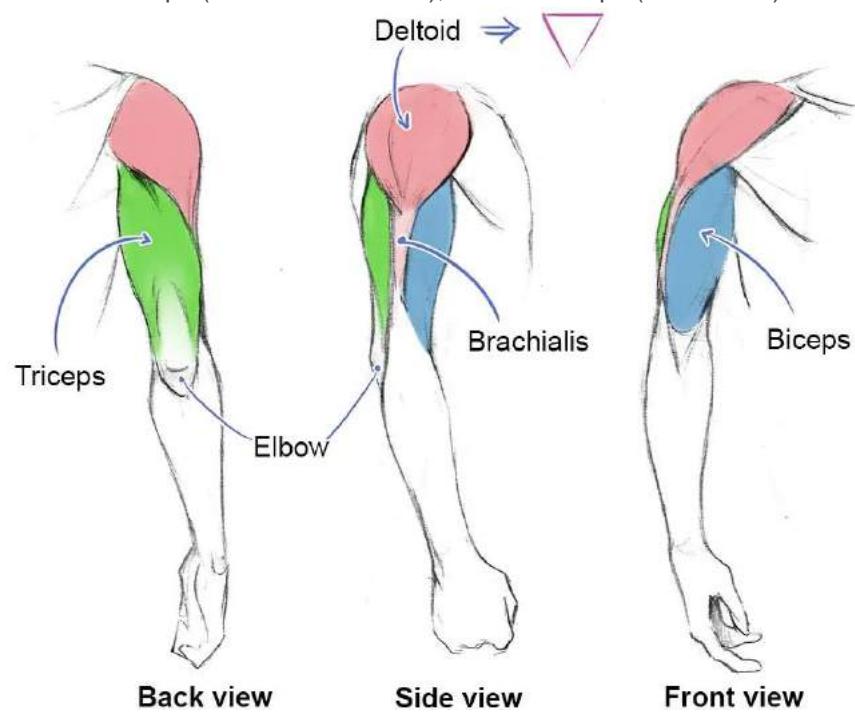


## Brachialis and Coracobrachialis Muscles :

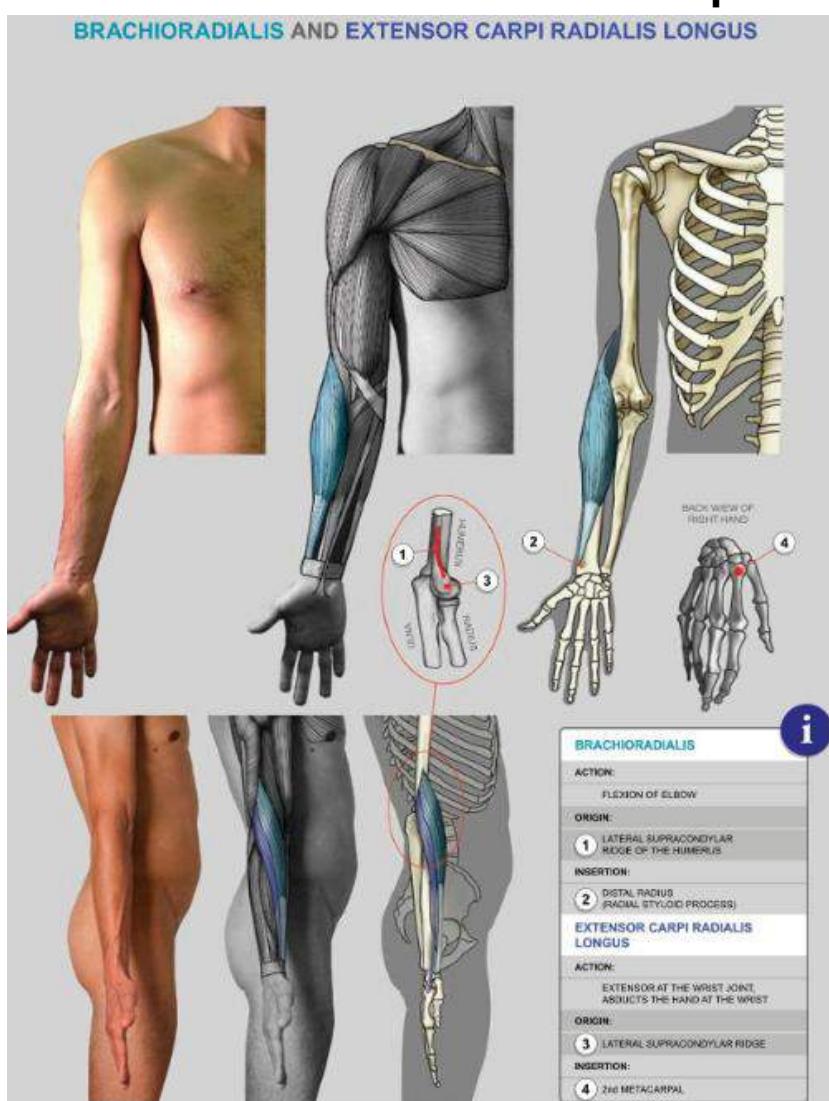
BRACHIALIS AND CORACOBRACHIALIS MUSCLES



**Brachialis muscle -** This muscle is pretty deep down – Think of it as a divider between the biceps (located in the front), and the triceps (in the back).

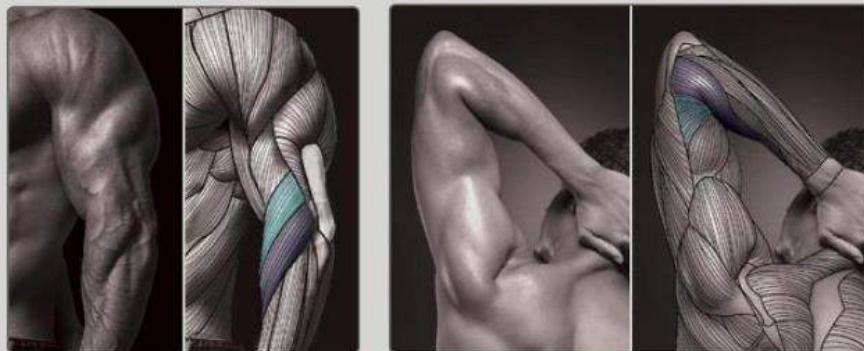


## Brachioradialis and extensor carpi radialis longus :



## Brachioradialis and extensor carpi radialis Longus :

BRACHIORADIALIS AND EXTENSOR CARPI RADIALIS LONGUS



## Anconeus, Extensor Carpi Ulnaris e.t.c :

**ANconeus, EXTENSOR CARPI ULNARIS, EXTENSOR DIGITI MINIMI AND EXTENSOR DIGITORUM MUSCLES**

**ANconeus**

**ACTION:**  
STABILIZES THE ELBOW

**ORIGIN:**  
LE LATERAL EPICONDYLE OF THE HUMERUS

**INSERTION:**

- 1 LATERAL SURFACE OF THE OLECRANON PROCESS
- 2 SUPERIOR PART OF THE POSTERIOR Ulna DISTALLY

**EXTENSOR CARPI ULNARIS**

**ACTION:**  
EXTENDS AND ADDUCTS THE WRIST

**ORIGIN:**  
LE LATERAL EPICONDYLE OF THE HUMERUS, Ulna

**INSERTION:**

- 3 5th METACARPAL.

**EXTENSOR DIGITI MINIMI**

**ACTION:**  
EXTENDS THE WRIST AND THE LITTLE FINGER AT ALL JOINTS

**ORIGIN:**  
LE LATERAL EPICONDYLE OF THE HUMERUS

**INSERTION:**

- 4 AT THE EXTENSOR EXPANSION ON PROXIMAL PHALANX OF THE LITTLE FINGER

**EXTENSOR DIGITORUM**

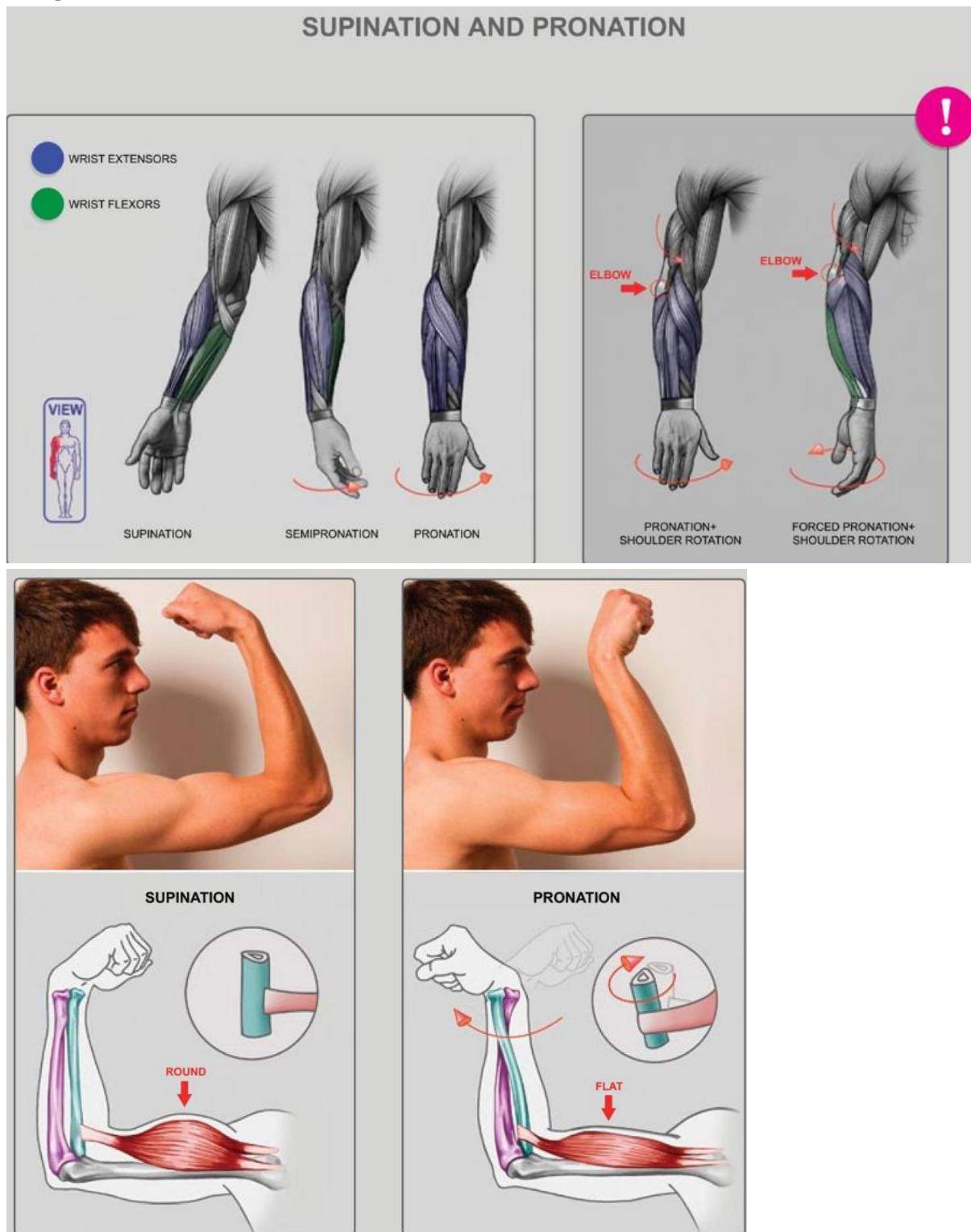
**ACTION:**  
EXTENDS HAND, WRIST AND FINGERS

**ORIGIN:**  
LE LATERAL EPICONDYLE OF THE HUMERUS

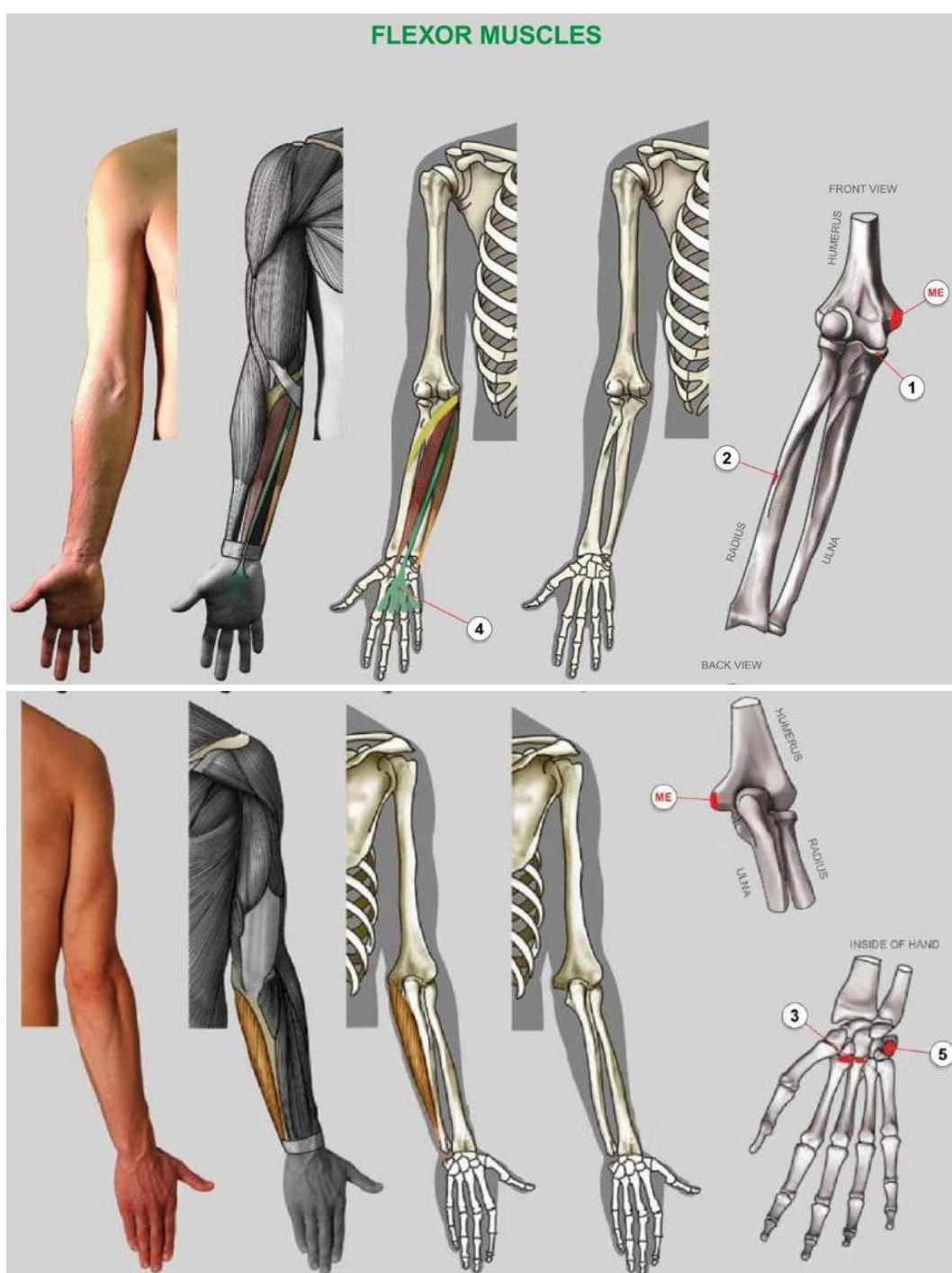
**INSERTION:**

- 5 EXTENSOR EXPANSION OF MIDDLE AND DISTAL PHALANGES OF THE 2nd, 3rd, 4th AND 5th FINGERS

## Supination & Pronation :

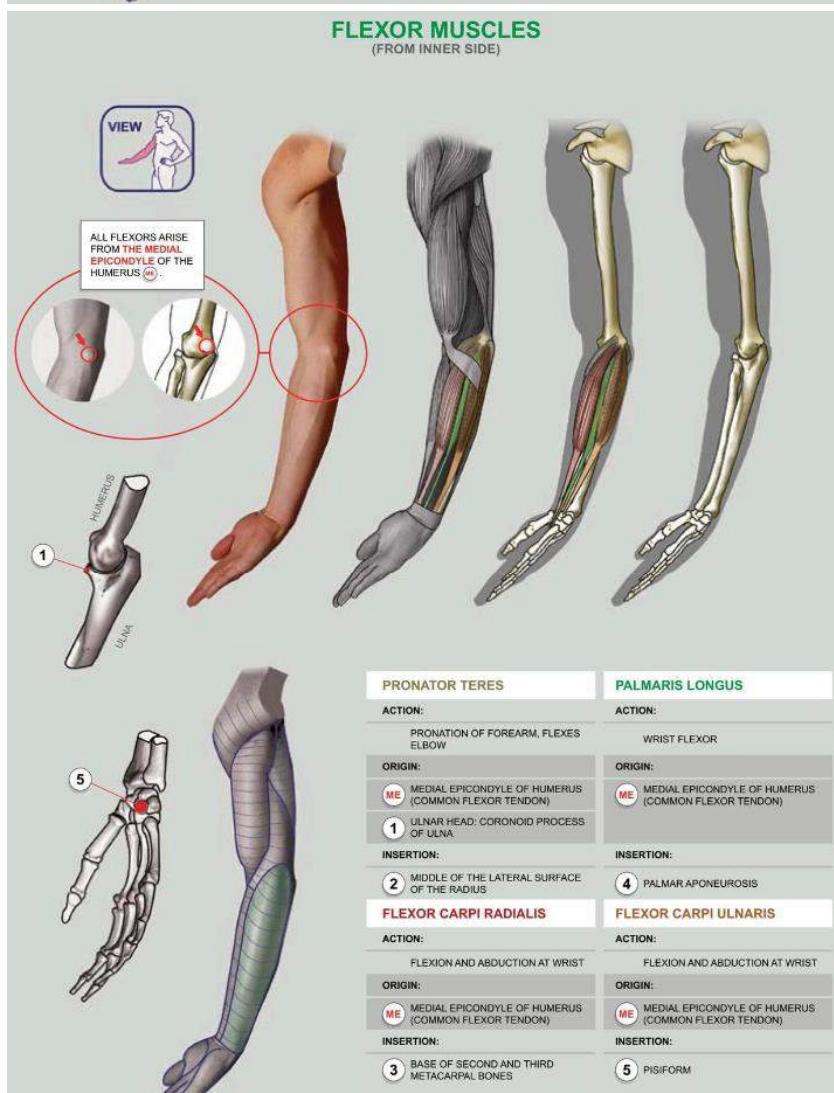
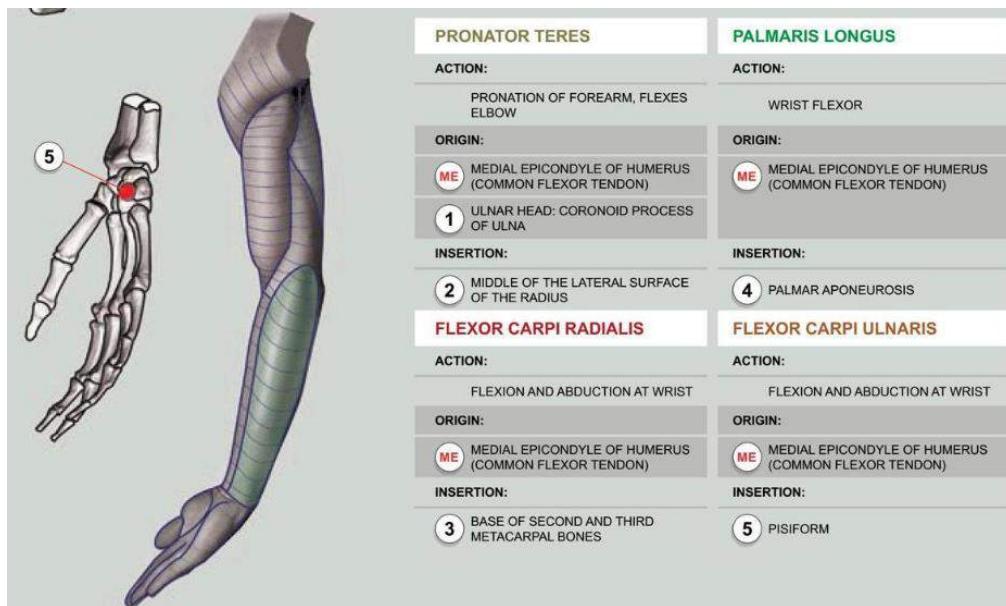


## Flexor Muscles :

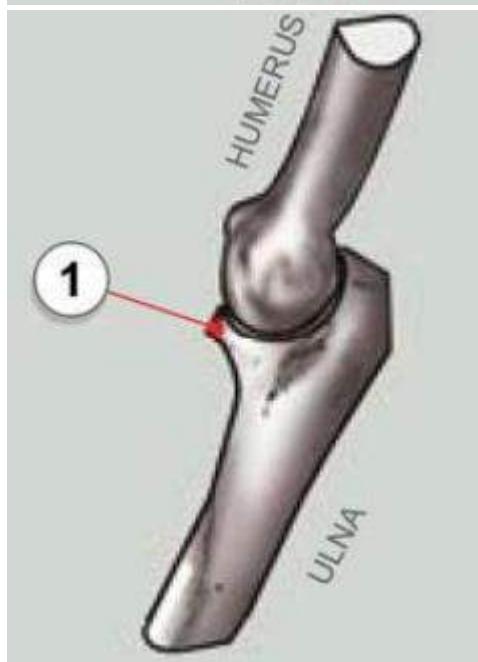


## Flexor Muscles :





**All Flexors arise from the Medial Epicondyle of the Humerus :**

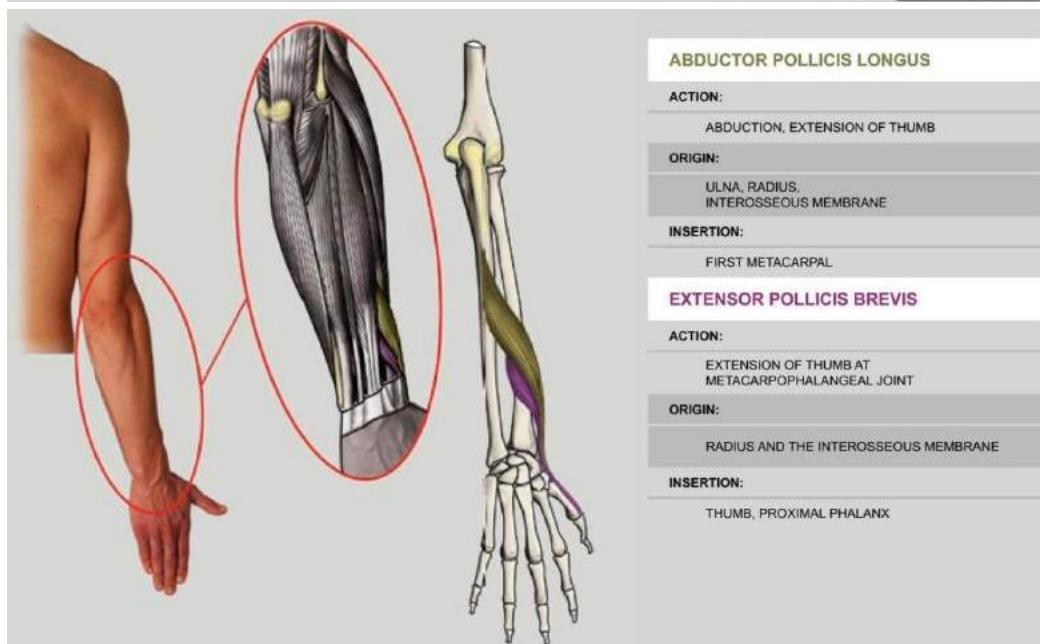
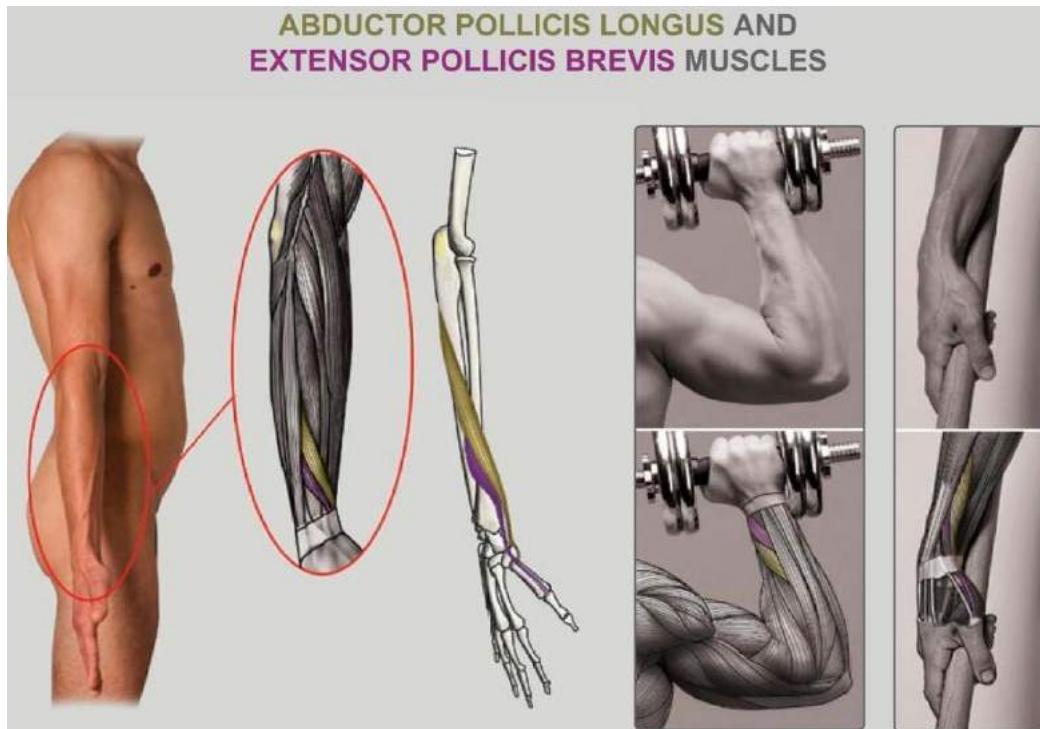


## Flexor Muscles :

### FLEXOR MUSCLES

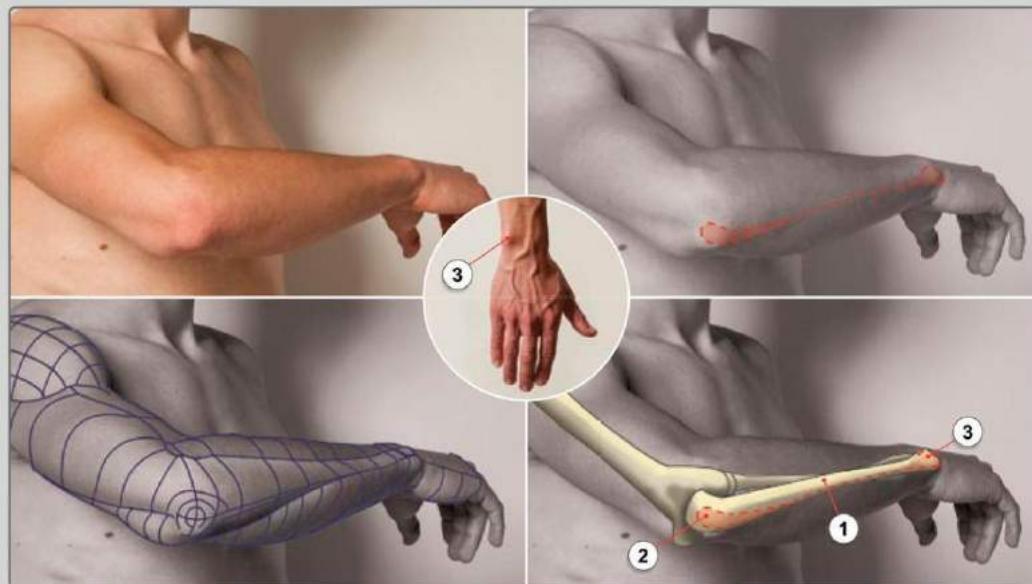


## Abductor Pollicis Longus & Extensor Pollicis Brevis Muscles :



## The Body of the Ulna :

### THE BODY OF THE ULNA

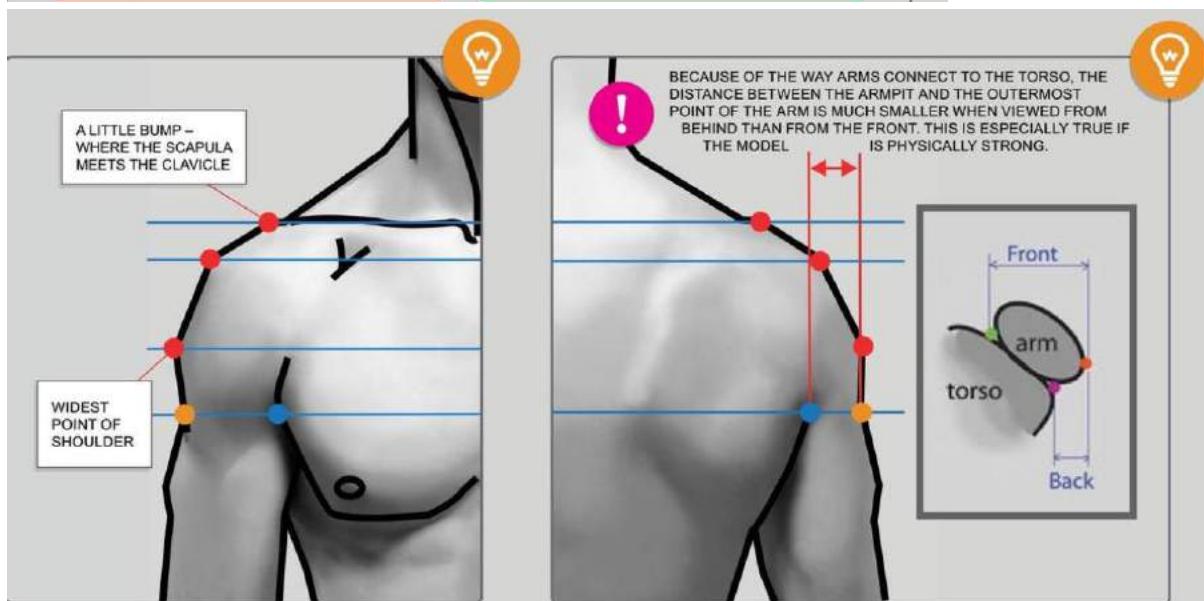
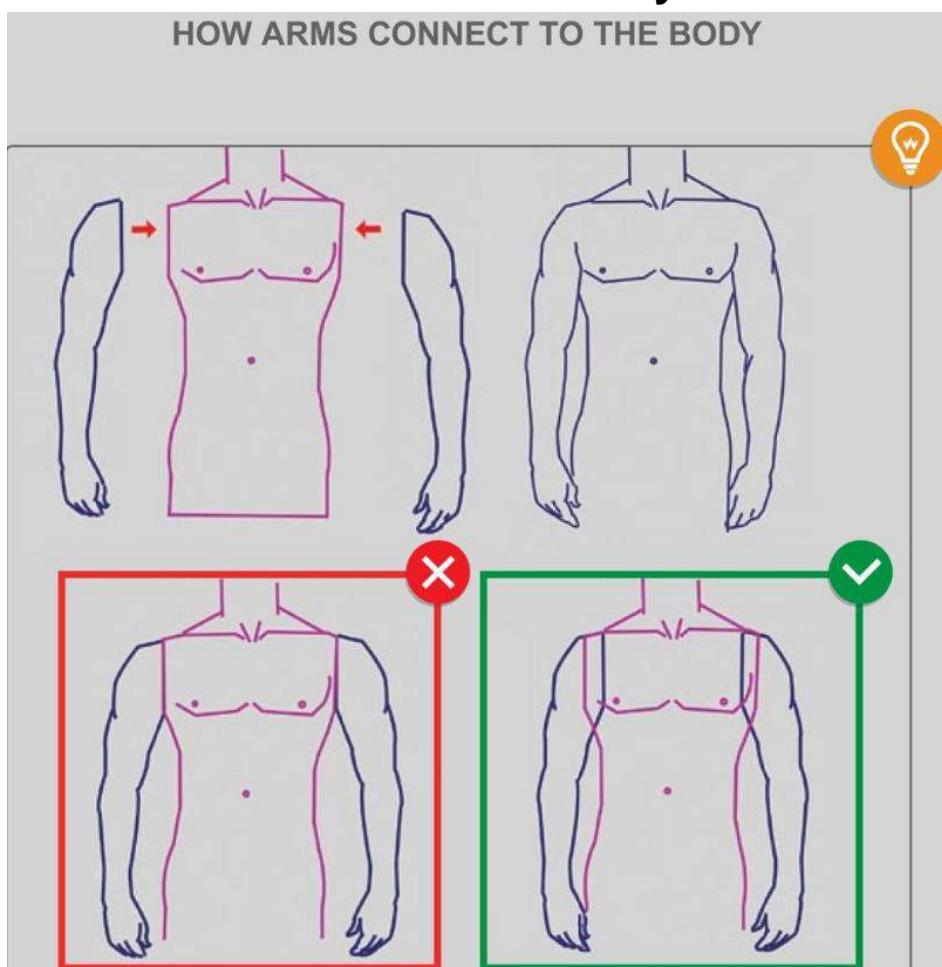


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THE BODY OF THE ULNA ① IS AN IMPORTANT LANDMARK. WHEREVER YOU TURN THE HAND, THE ULNA ALWAYS EXTENDS FROM THE ELBOW ② TO LITTLE FINGER SIDE OF THE HAND, WHERE IT IS VISIBLE AS A BUMP ③ IT IS ALWAYS VISIBLE AS A RIDGE OR FURROW. BOTH ENDS OF THE BONE ARE NOT COVERED BY MUSCLES, ONLY BY THIN LAYER OF SKIN.

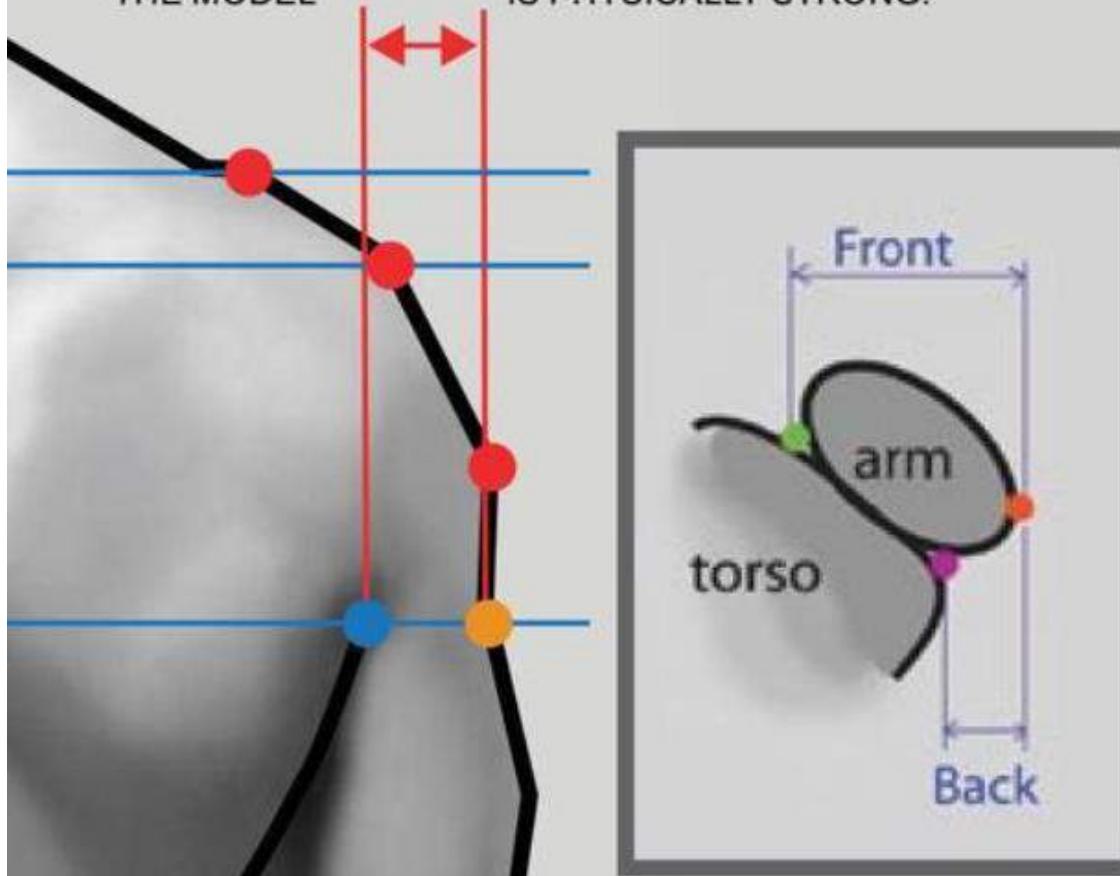


## How Arms connect to the Body :



## Distance between Armpit & the outermost point of the Arm :

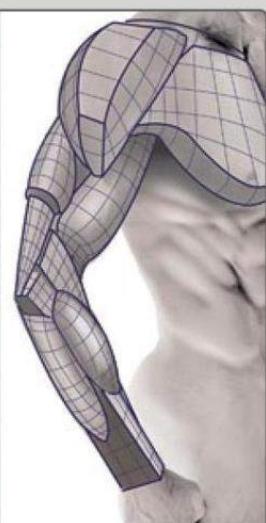
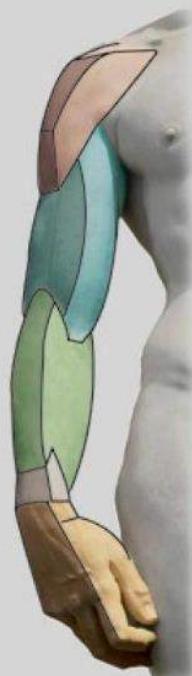
BECAUSE OF THE WAY ARMS CONNECT TO THE TORSO, THE DISTANCE BETWEEN THE ARMPIT AND THE OUTERMOST POINT OF THE ARM IS MUCH SMALLER WHEN VIEWED FROM BEHIND THAN FROM THE FRONT. THIS IS ESPECIALLY TRUE IF THE MODEL IS PHYSICALLY STRONG.



## Blocking out a Semipronated Arm :

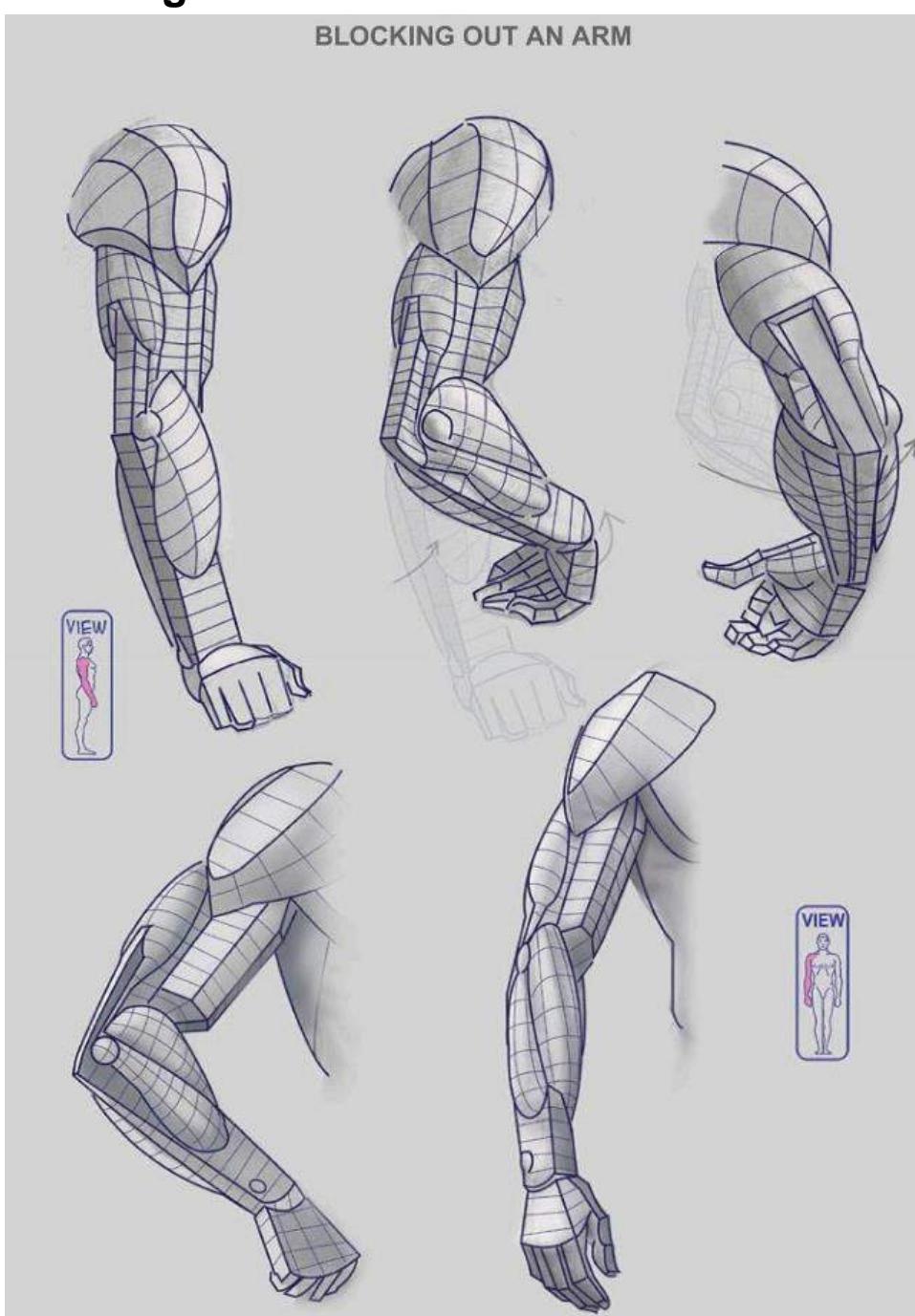
### BLOCKING OUT A SEMIPRONATED ARM

JUST LIKE A CHAIN



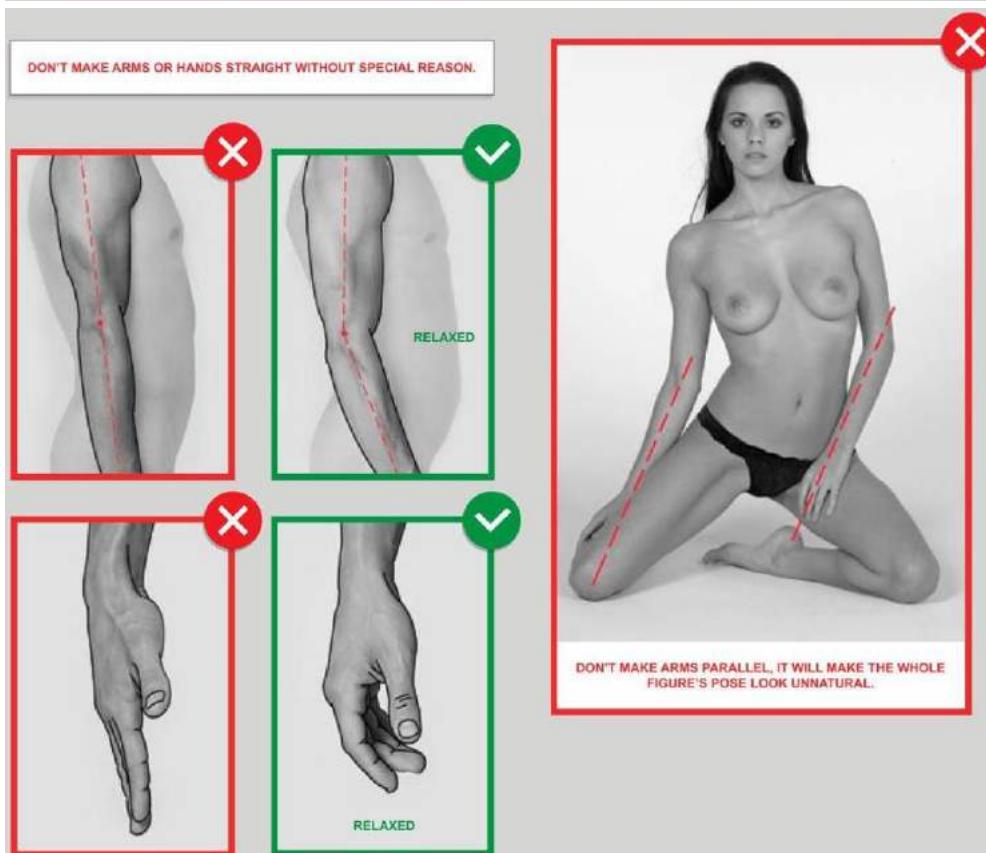
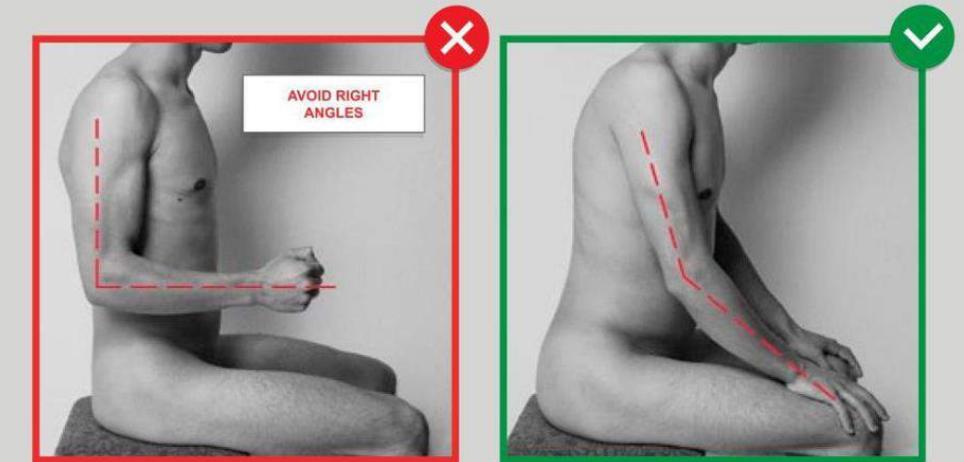
## Blocking out an Arm :

BLOCKING OUT AN ARM

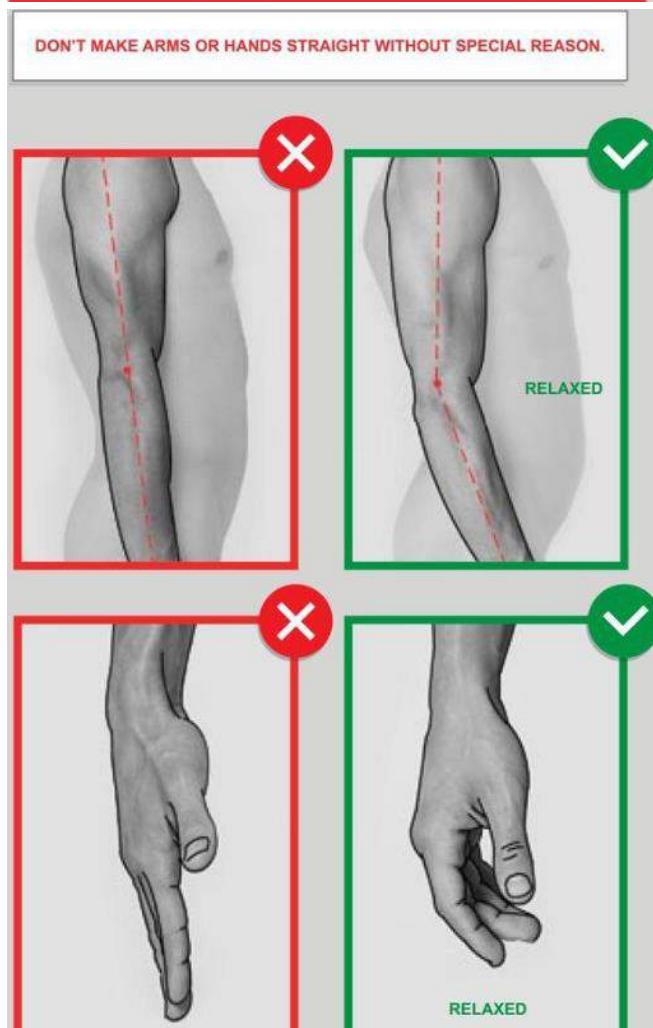
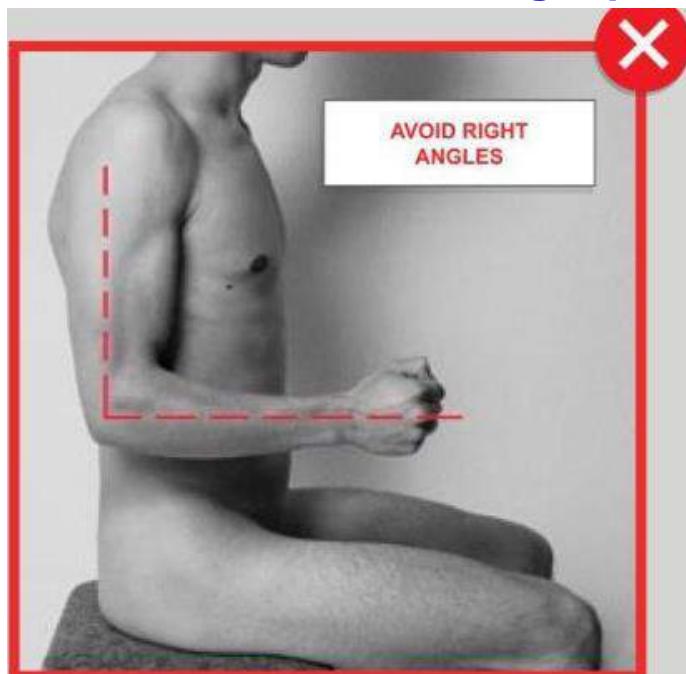


## How to make Arms and Hands look less Stiff :

HOW DO YOU MAKE ARMS AND HANDS LOOK LESS STIFF?

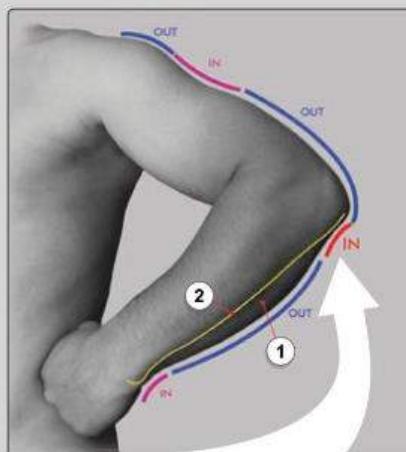
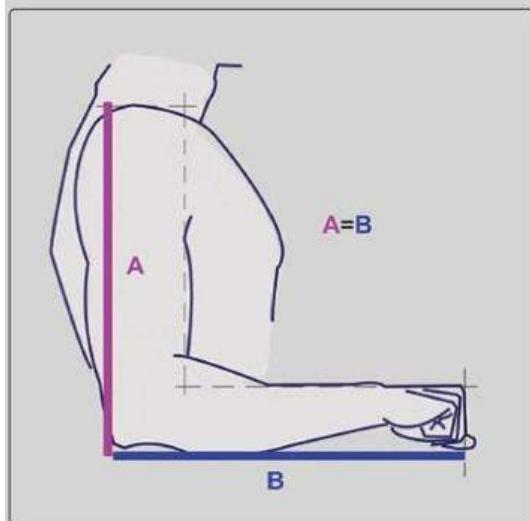


## Arms and Hands drawing Tips :



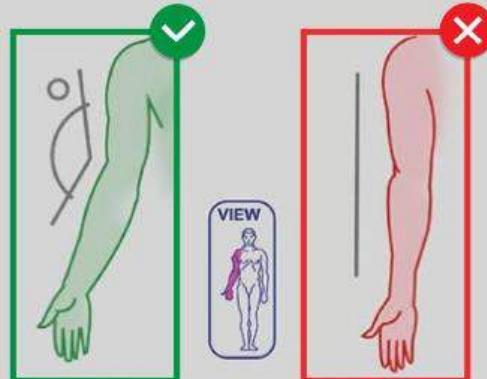
## Handy Tips :

### HANDY TIPS



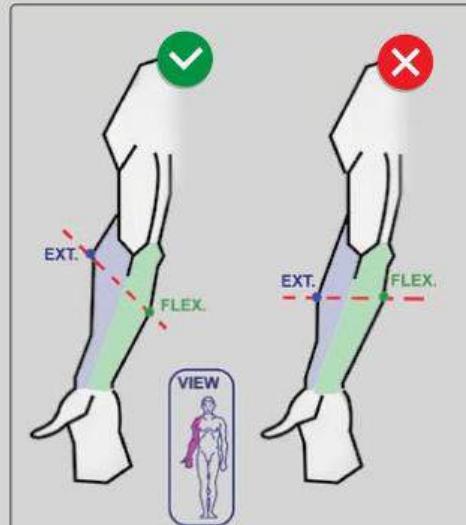
BODY SILHOUETTE APPEARS TO BEND INWARD RIGHT BELOW THE ELBOW DUE TO THE FLEXOR CARPI ULNARIS MUSCLE ① POPPING OUTWARD.

ULNA BONE ② REMAINS STRAIGHT.

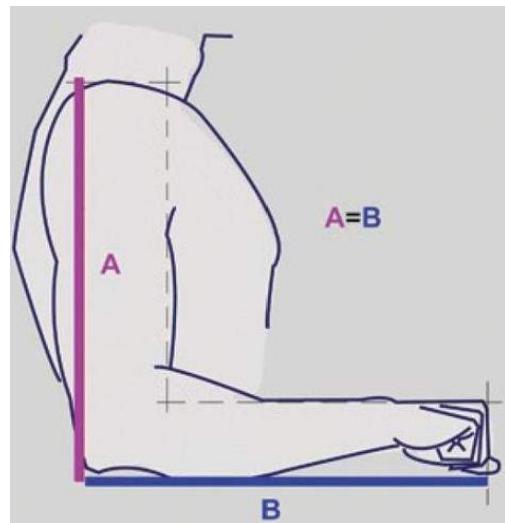


WHEN ARMS ARE HELD OUT AT THE SIDES WITH PALMS FACING FORWARD (SUPINATION), FOREARM AND HAND ARE ABOUT 5 TO 15 DEGREES AWAY FROM THE BODY. THIS IS CALLED "THE CARRYING ANGLE".

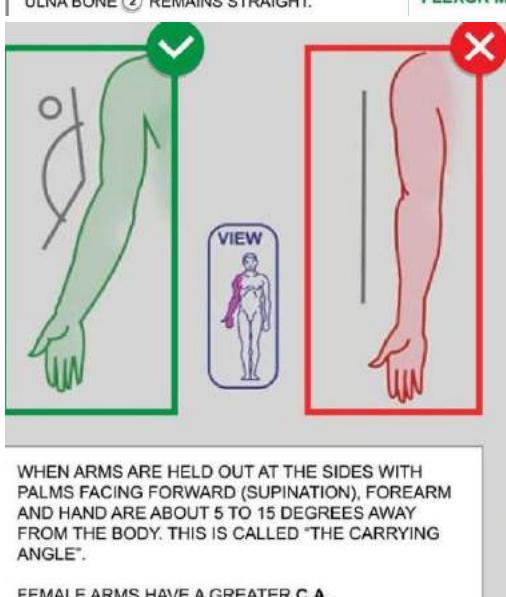
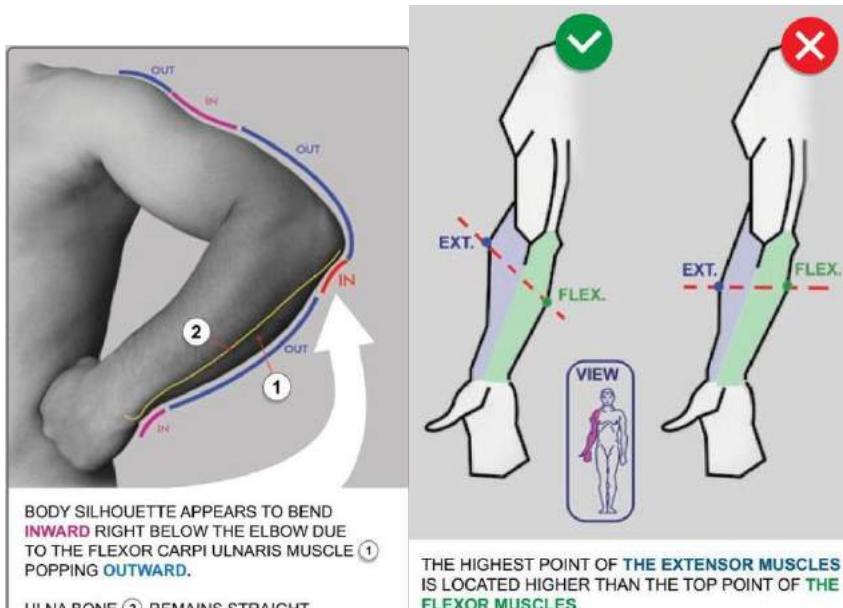
FEMALE ARMS HAVE A GREATER C.A.



THE HIGHEST POINT OF THE EXTENSOR MUSCLES IS LOCATED HIGHER THAN THE TOP POINT OF THE FLEXOR MUSCLES.

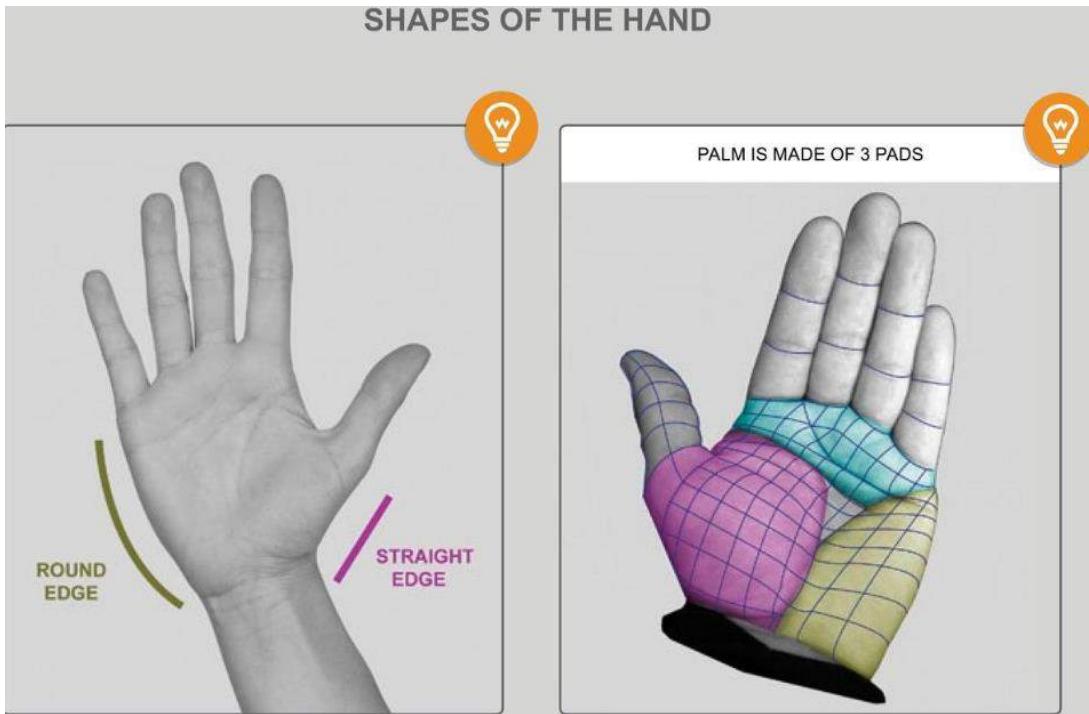


## Hand Drawing Tips :

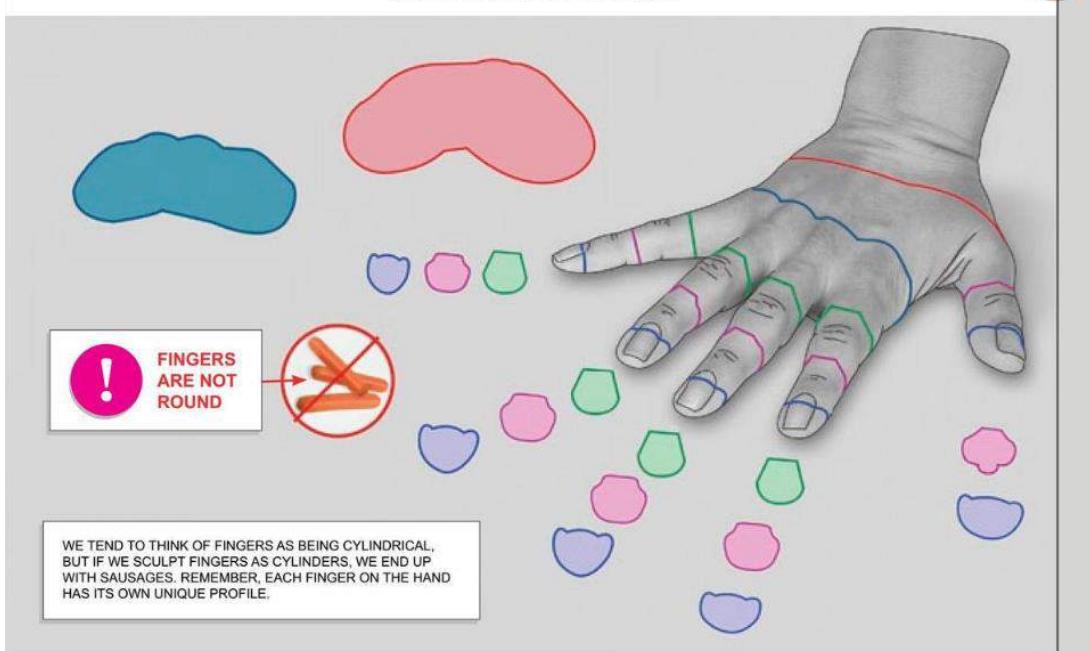


## Shapes of the Hand :

### SHAPES OF THE HAND



### CROSS SECTIONS OF THE HAND



# Idealised Hand Proportions :

IDEALIZED HAND PROPORTIONS

**SIZE OF AN ADULT'S HAND**

MAKE SURE YOU ARE MODELING THE HAND LARGE ENOUGH.  
IDEALLY, HAND IS THE SAME SIZE AS FACE (FROM TIP OF CHIN TO HAIRLINE).

**BABY**

LENGTH OF HAND IS THE DISTANCE FROM CHIN TO EYEBROW LINE.

**TEEN**

LENGTH OF HAND IS THE DISTANCE FROM CHIN TO THE MIDDLE OF FOREHEAD.

**1st METHOD**

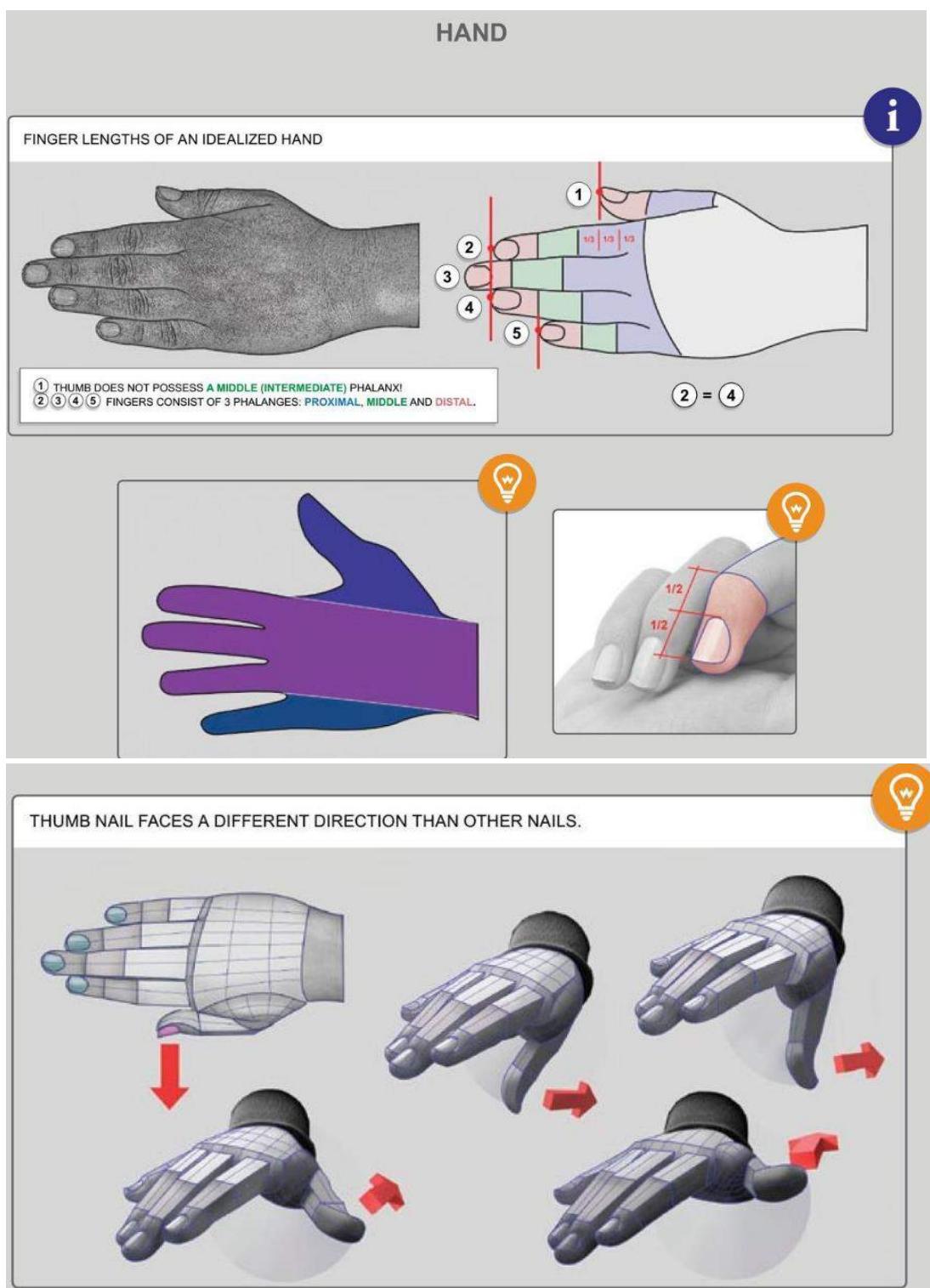
C = 75% of B  
B = 75% of A

**2nd METHOD (9+1/4 parts)**

C	1	2	2 parts + (1/4 of parts)
B	1	2	3 parts
A	1	2	4 parts

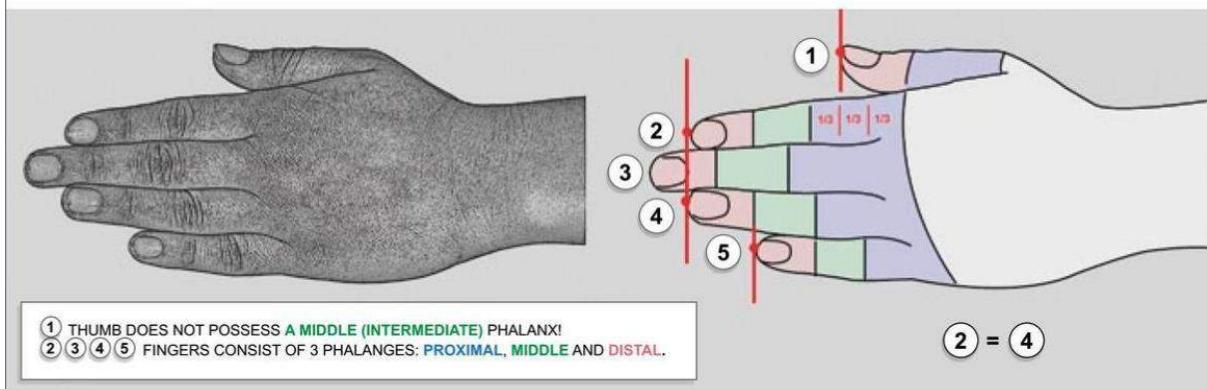
**THERE ARE TWO METHODS YOU CAN USE TO CALCULATE FINGER LENGTH.**

## Hand :



## Finger Lengths of an Idealised Hand :

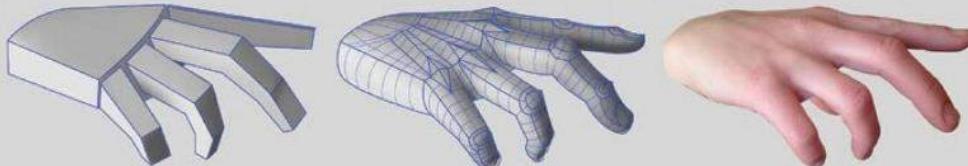
FINGER LENGTHS OF AN IDEALIZED HAND



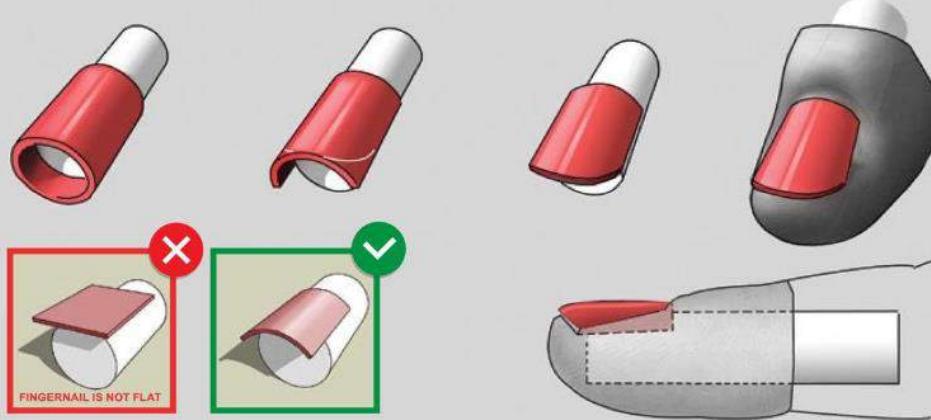
# Shaping Hand & Fingers :

## SHAPING HAND AND FINGERS

IT IS MUCH EASIER TO BEGIN MODELING FINGERS FROM SIMPLE SQUARE FORMS.

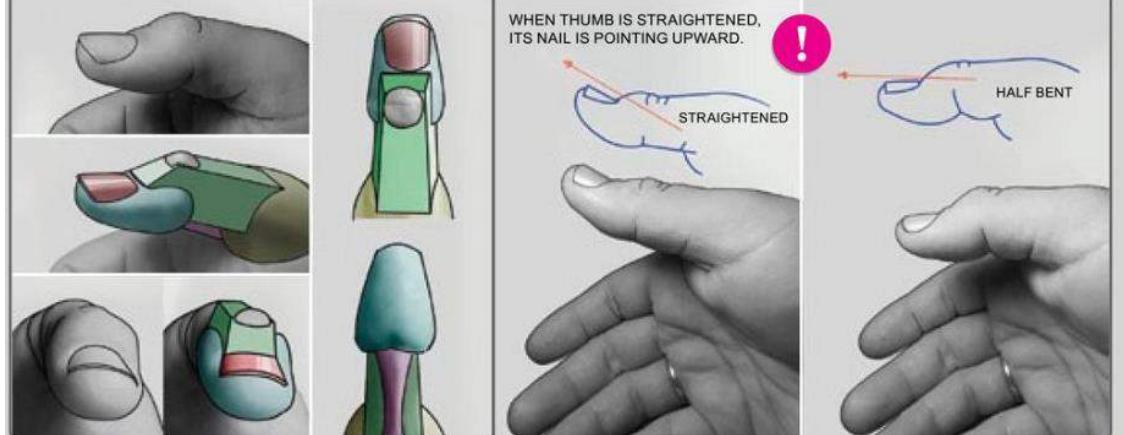


FINGERNAIL

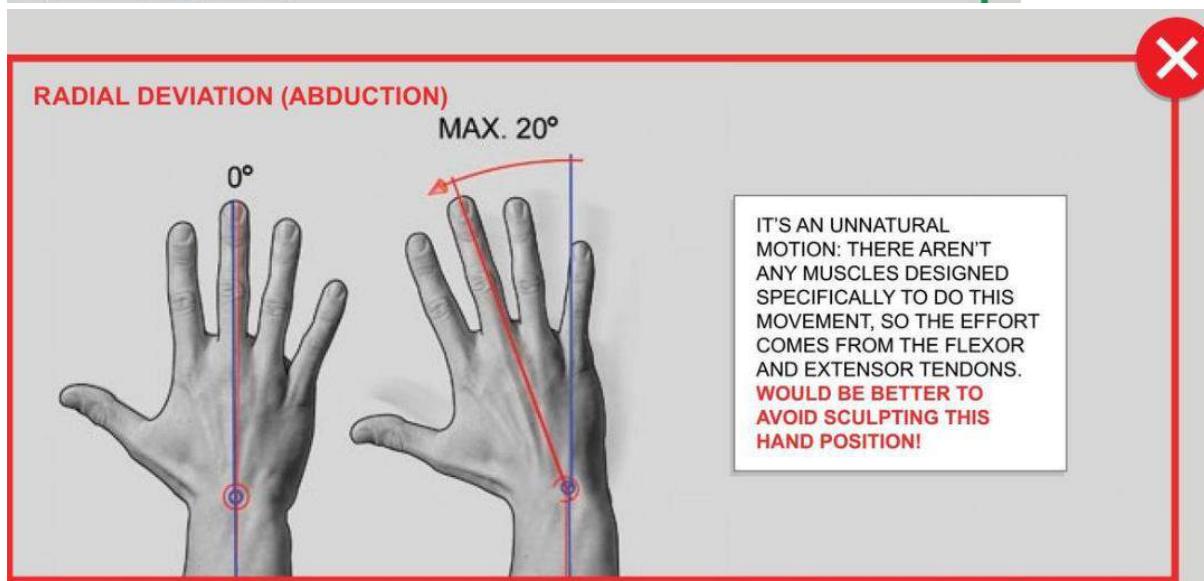
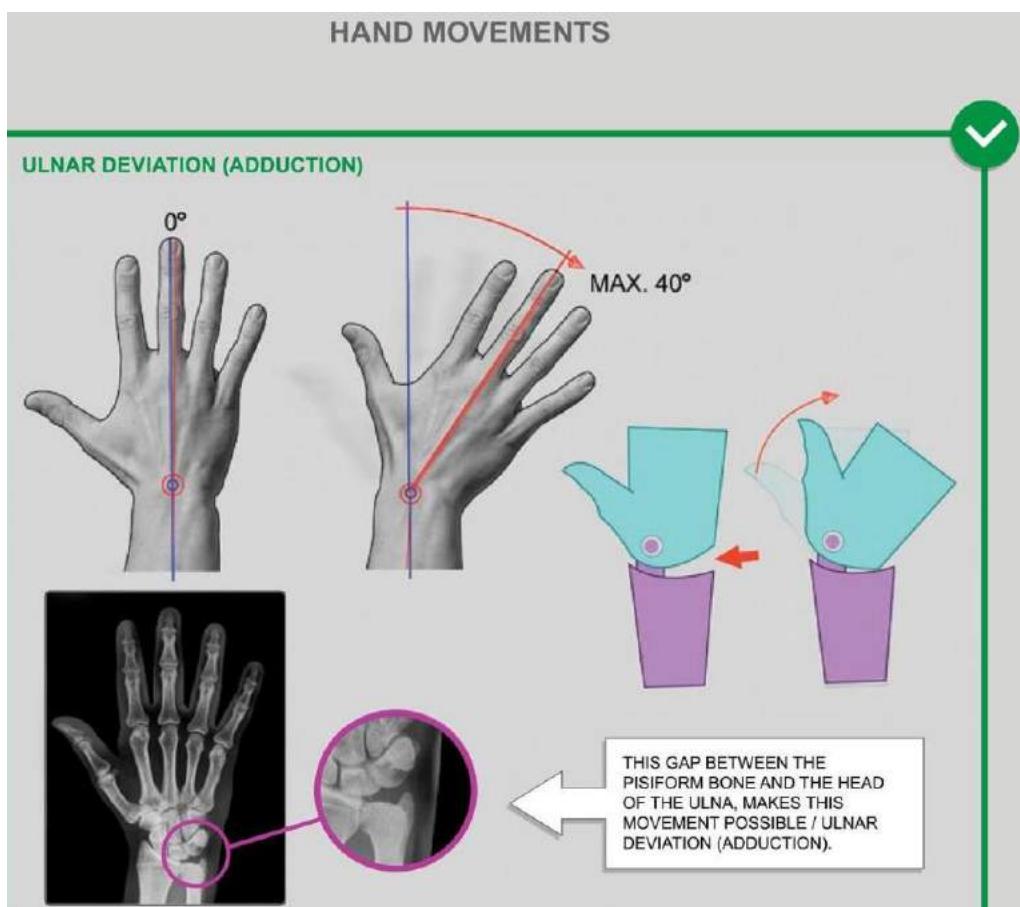


THUMB IS SHAPED DIFFERENTLY THAN OTHER FINGERS.

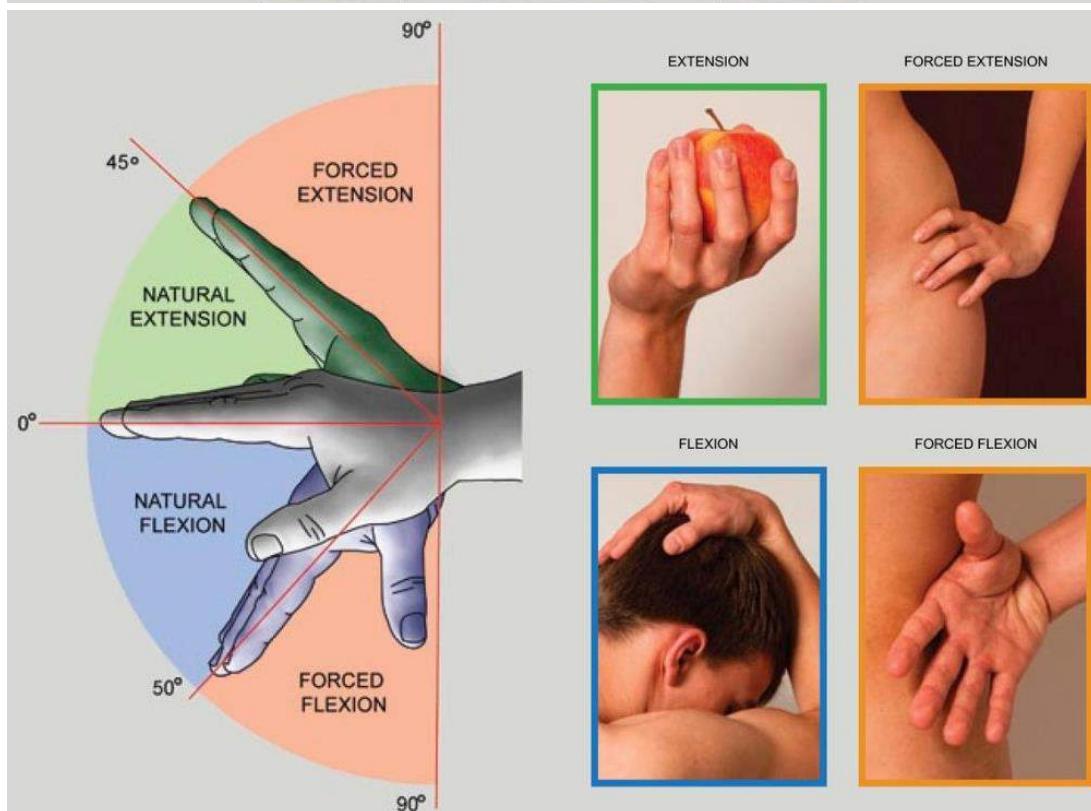
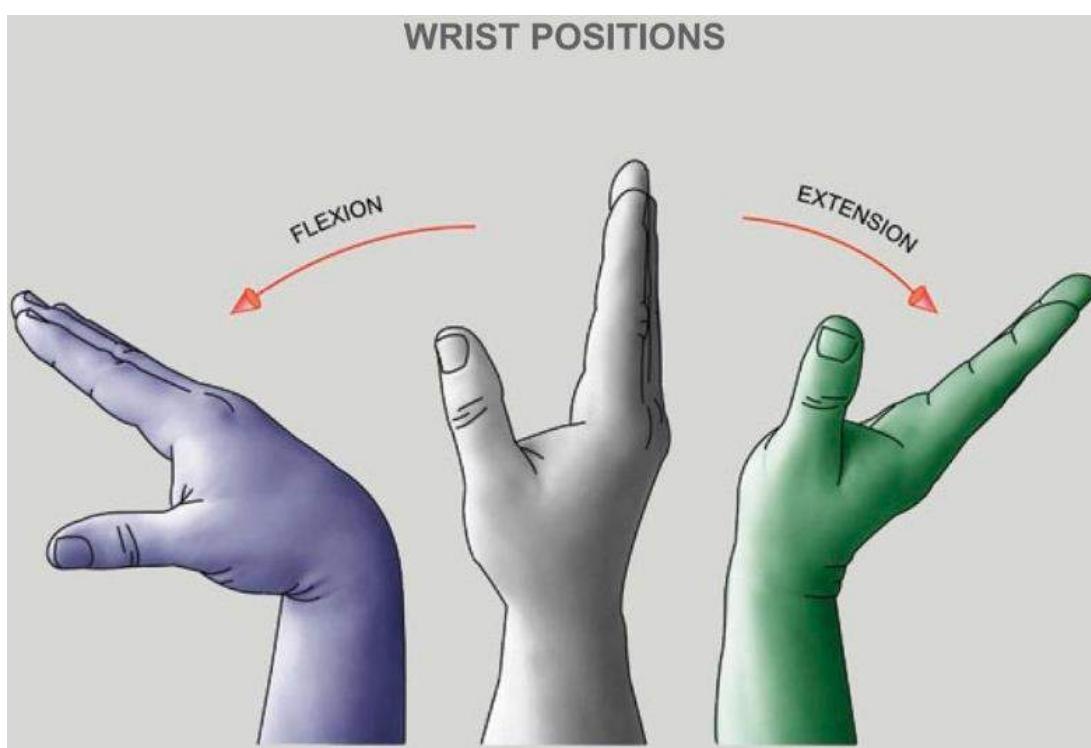
WHEN THUMB IS STRAIGHTENED,  
ITS NAIL IS POINTING UPWARD.



## Hand Movements :

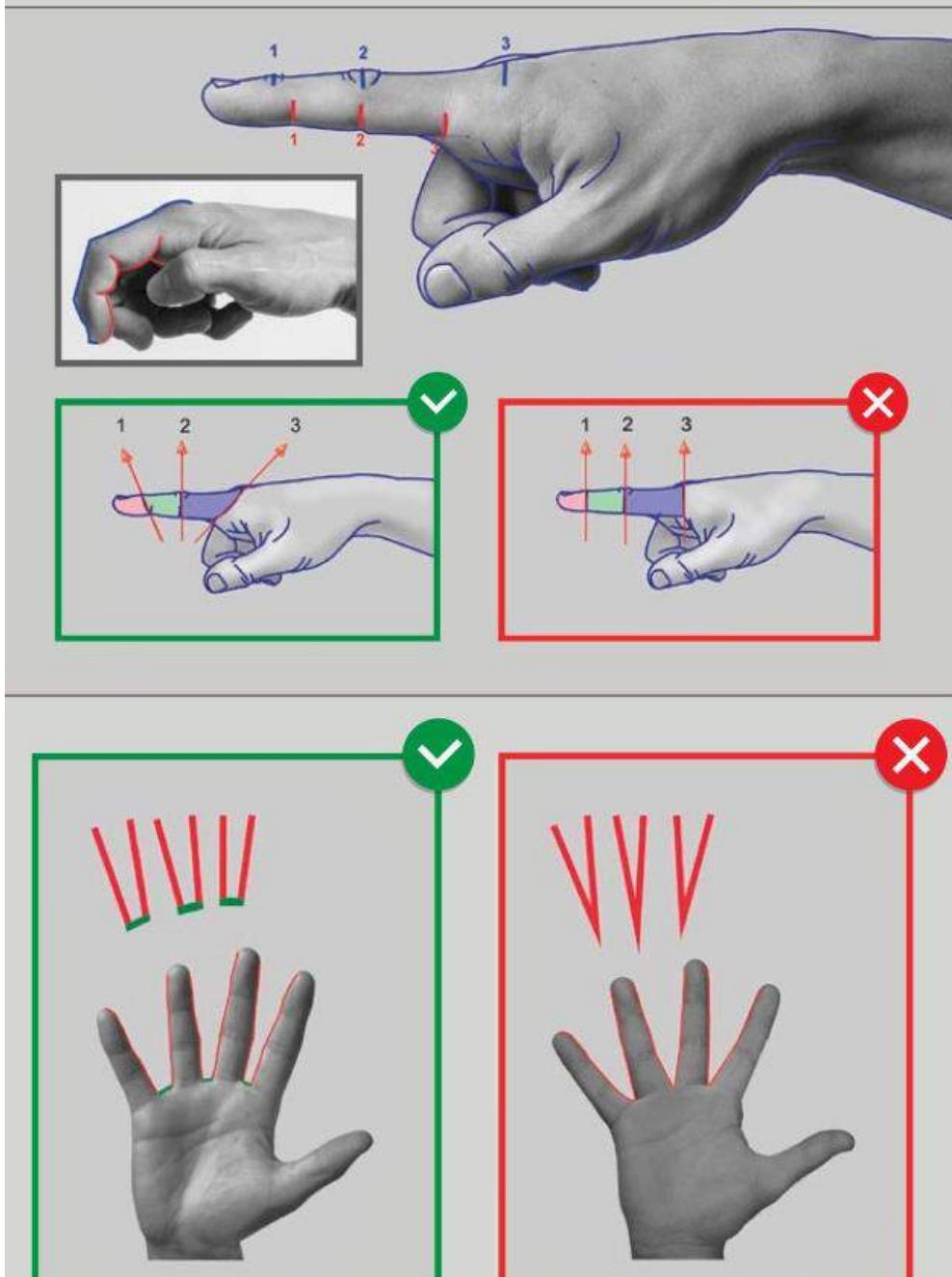


## Wrist Positions :



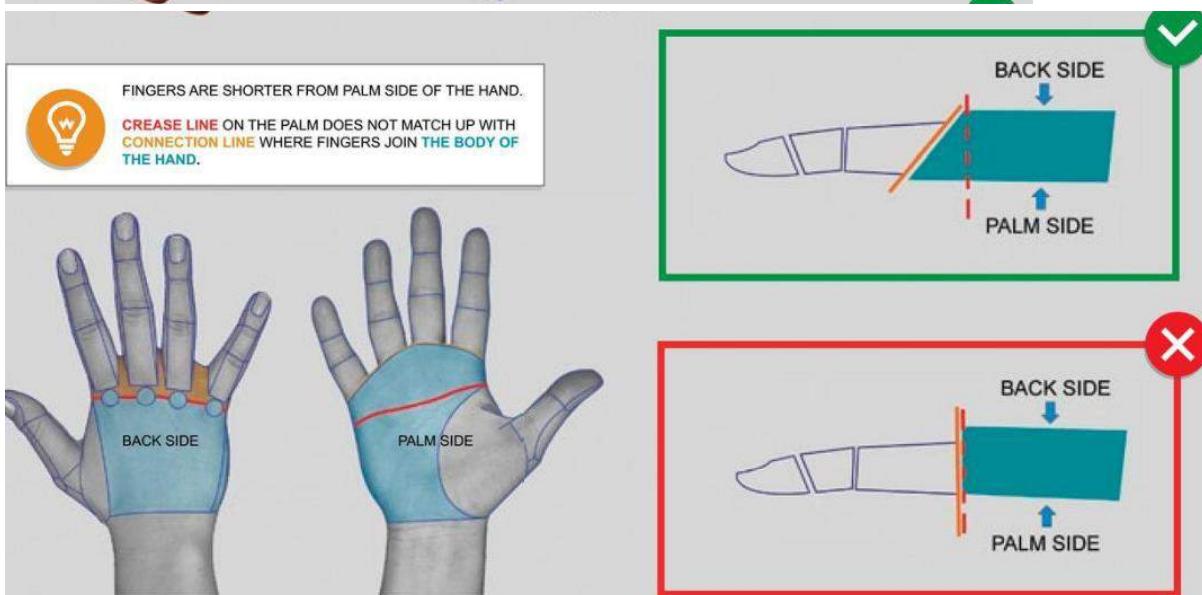
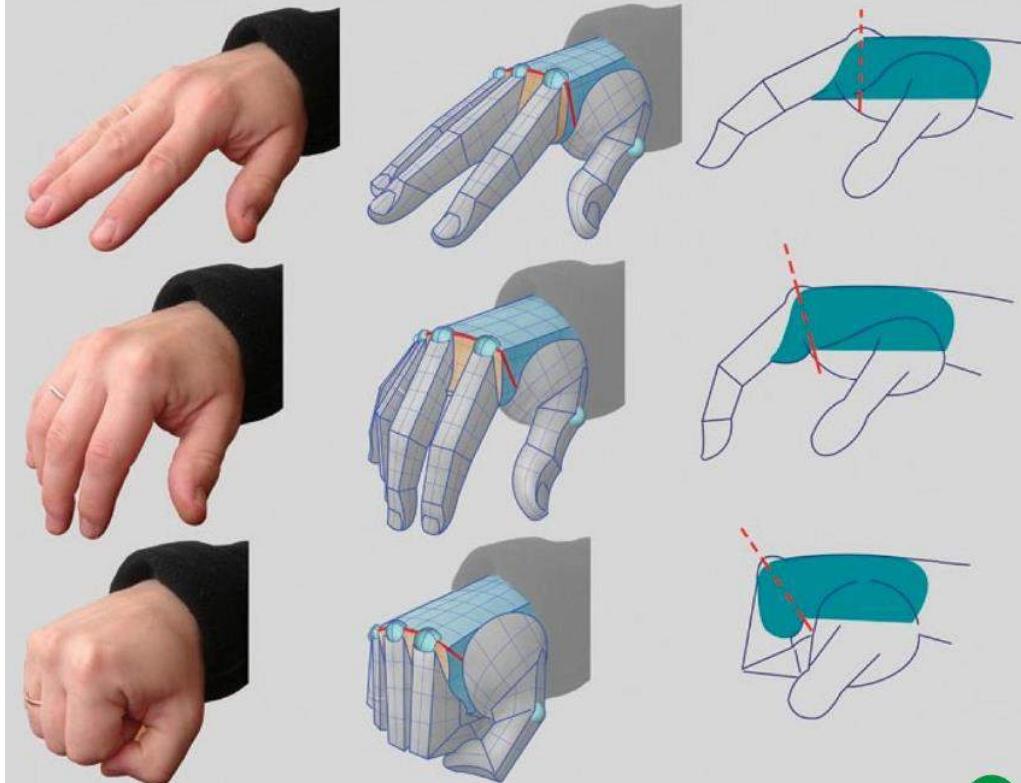
## Creases and Gaps of Fingers :

### CREASES AND GAPS OF FINGERS



## Bending and Connecting Lines of Fingers :

### BENDING AND CONNECTION LINE OF FINGERS

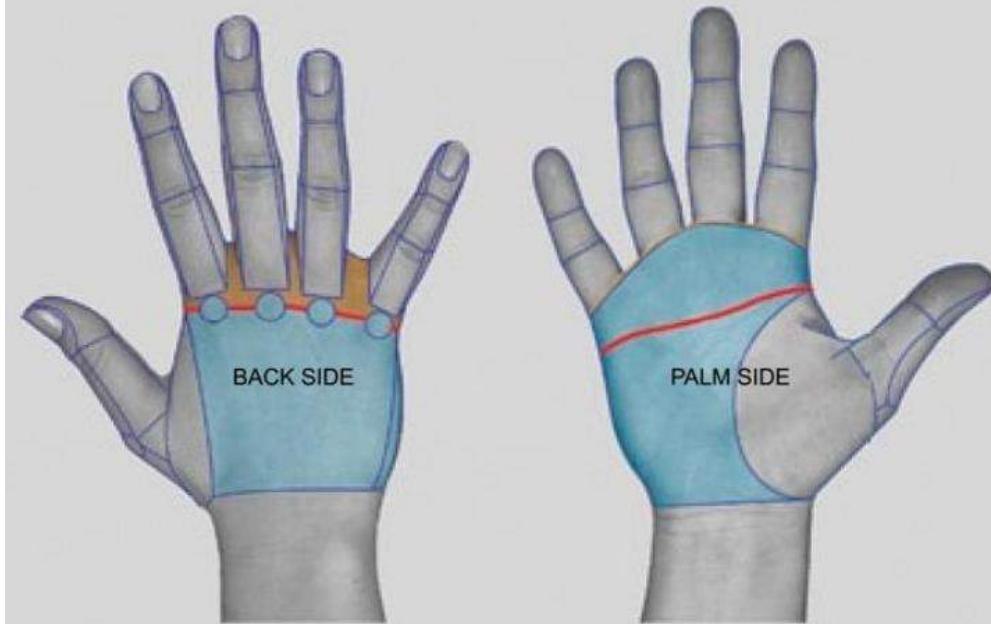


## Connecting Lines of Fingers :

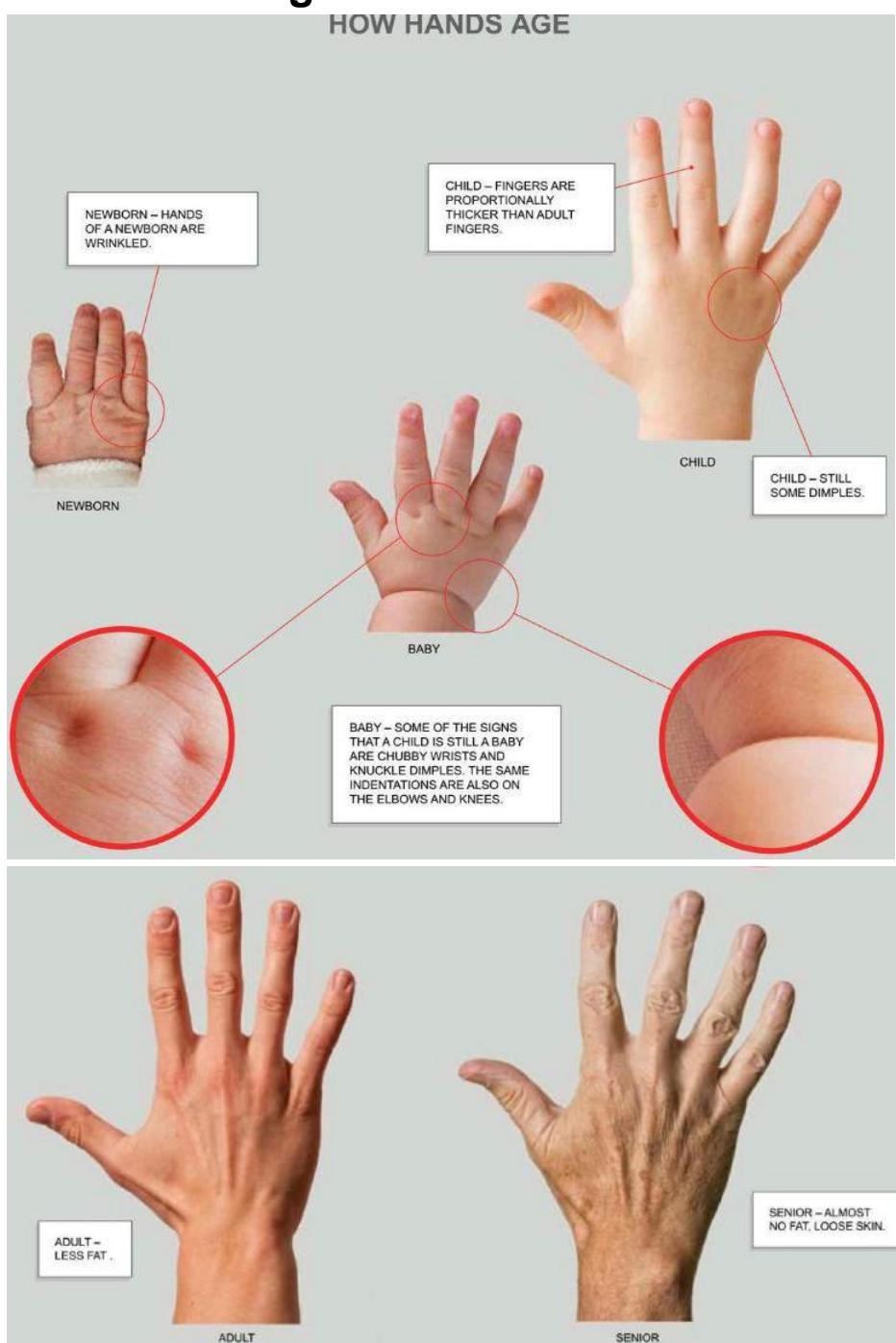


FINGERS ARE SHORTER FROM PALM SIDE OF THE HAND.

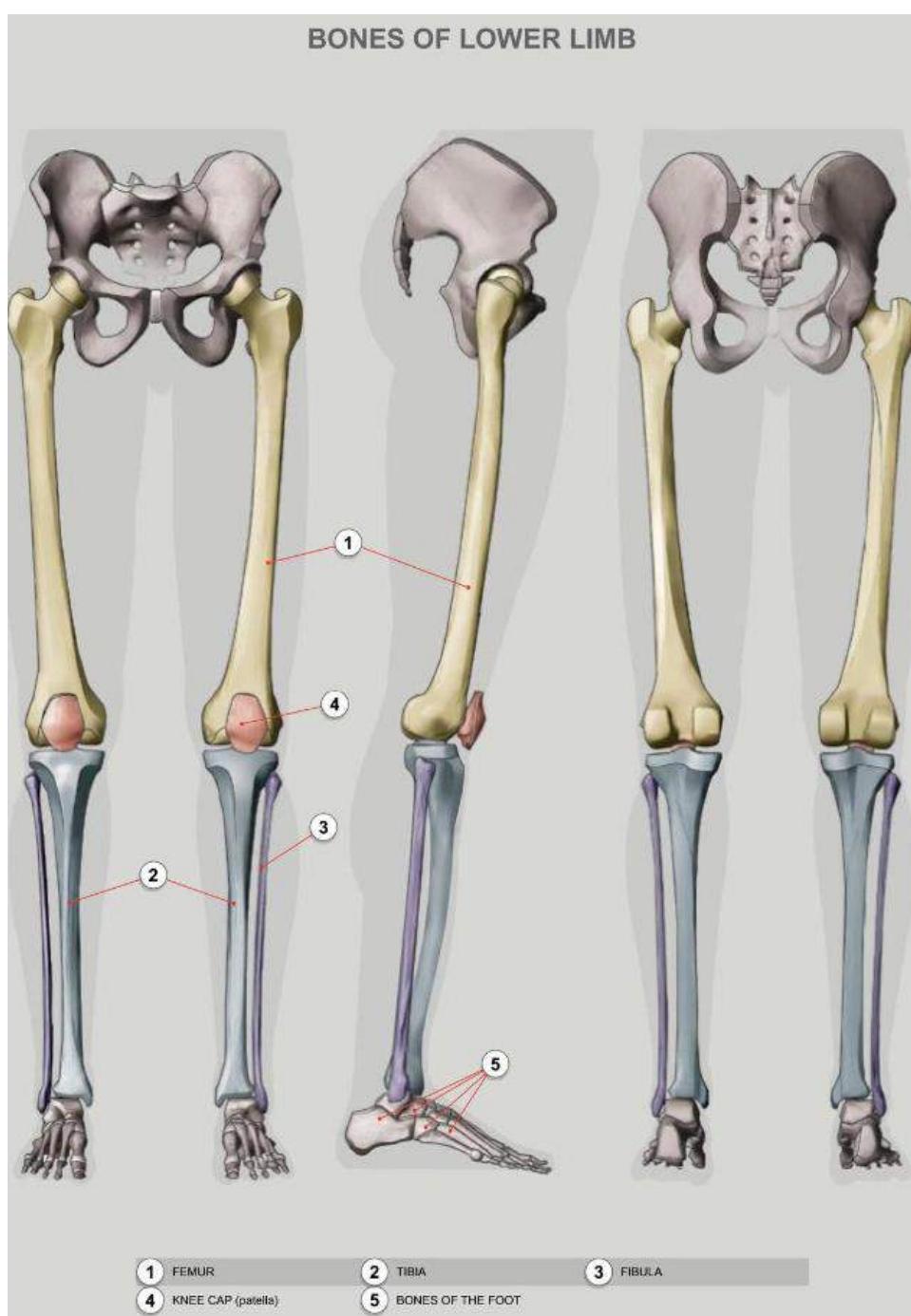
CREASE LINE ON THE PALM DOES NOT MATCH UP WITH CONNECTION LINE WHERE FINGERS JOIN THE BODY OF THE HAND.



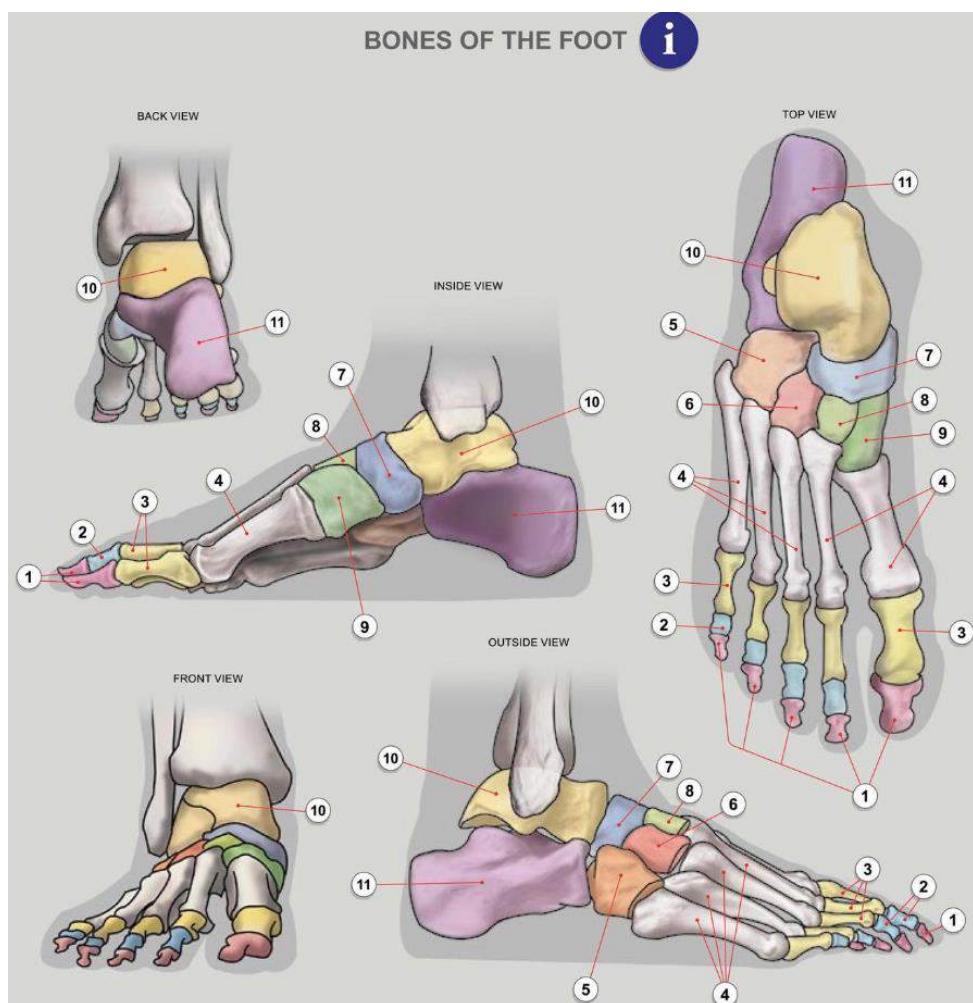
## How Hands Age :



## Bones of Lower Limb :



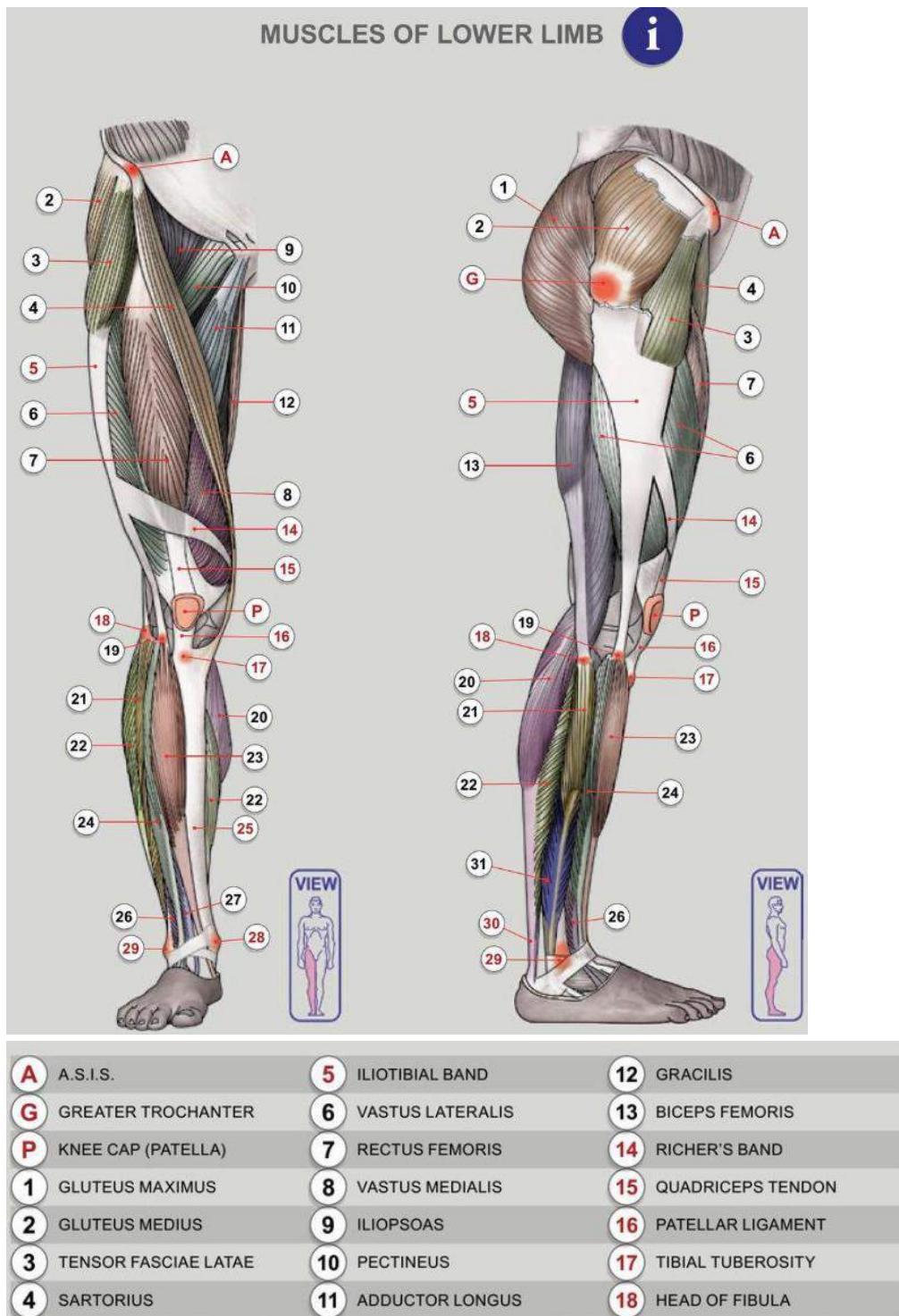
## Bones of The Foot :



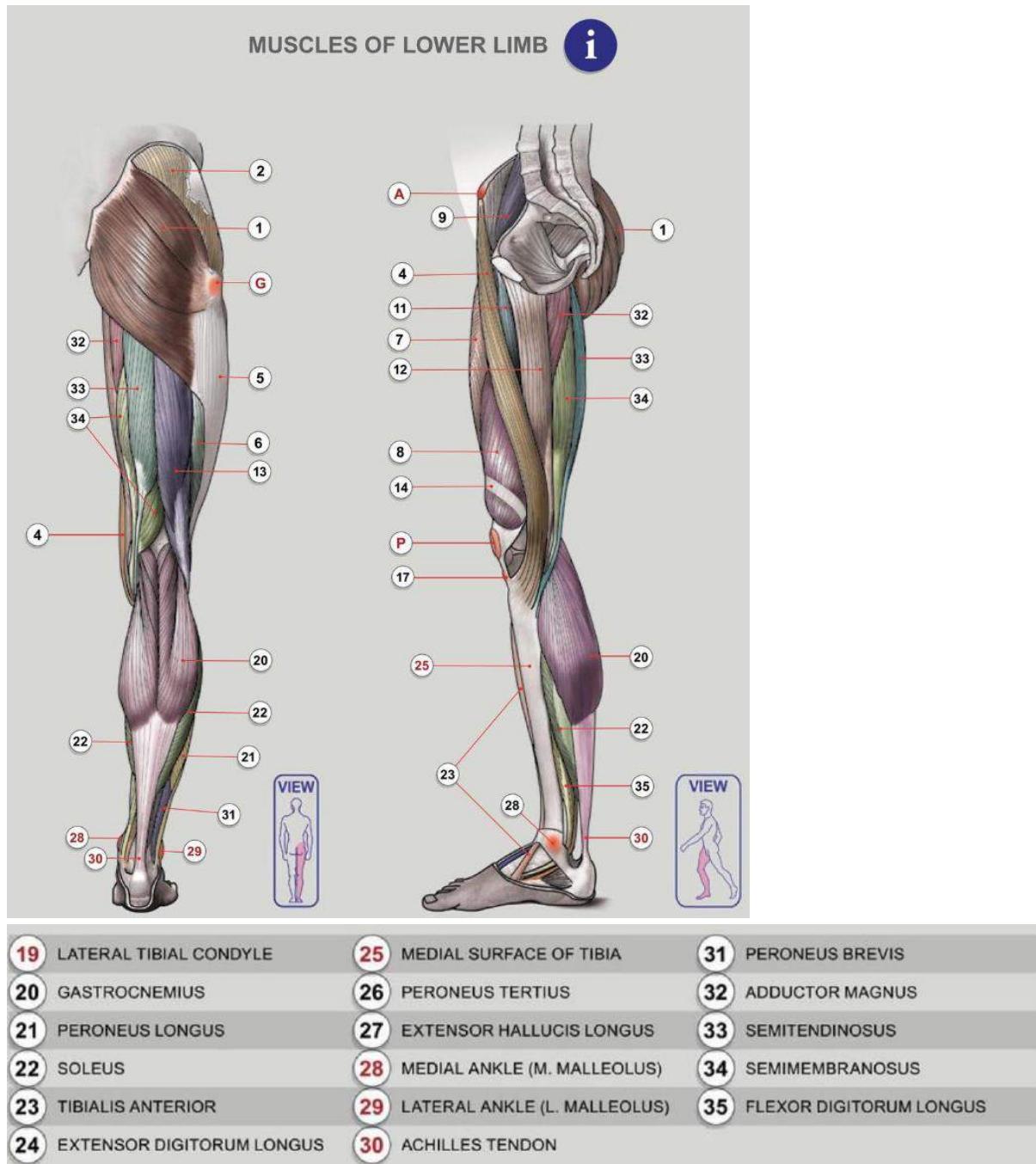
1 DISTAL PHALANGES	5 CUBOID	9 MEDIAL CUNEIFORM
2 MIDDLE PHALANGES	6 LATERAL CUNEIFORM	10 TALUS
3 PROXIMAL PHALANGES	7 NAVICULAR	11 HEEL BONE (calcaneus)
4 METATARSAL BONES	8 INTERMEDIATE CUNEIFORM	

**ASIS(Anterior superior iliac spine)** is a bony projection of the [iliac bone](#), and an important landmark of [surface anatomy](#). It refers to the anterior extremity of the [iliac crest](#) of the [pelvis](#). It provides attachment for the [inguinal ligament](#), and the [sartorius muscle](#).<sup>[1]</sup> The [tensor fasciae latae muscle](#) attaches to the lateral aspect of the superior anterior iliac spine, and also about 5 cm away at the [iliac tubercle](#).

## Muscles of Lower Limb :



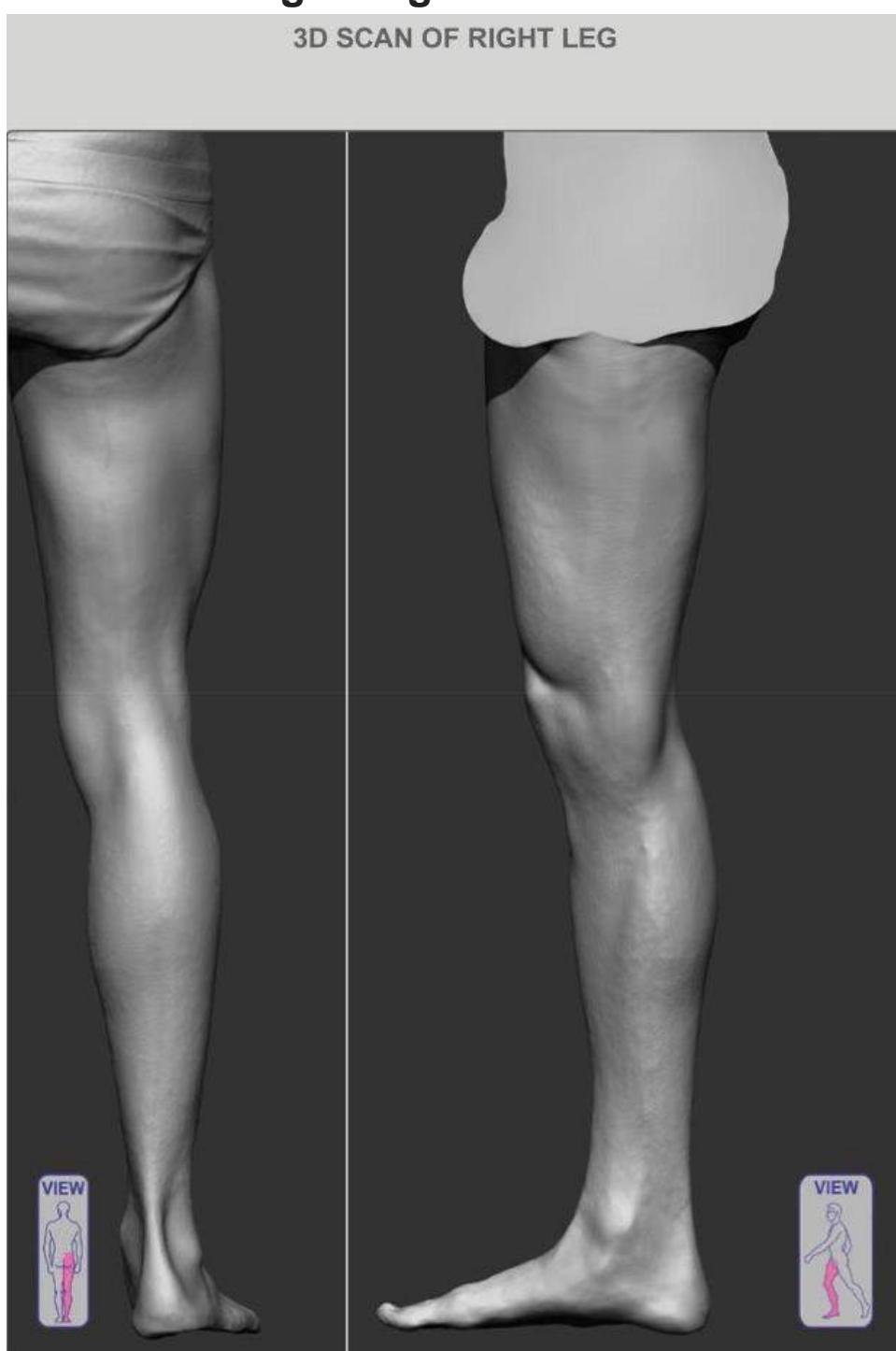
## Muscles of Lower Limb :



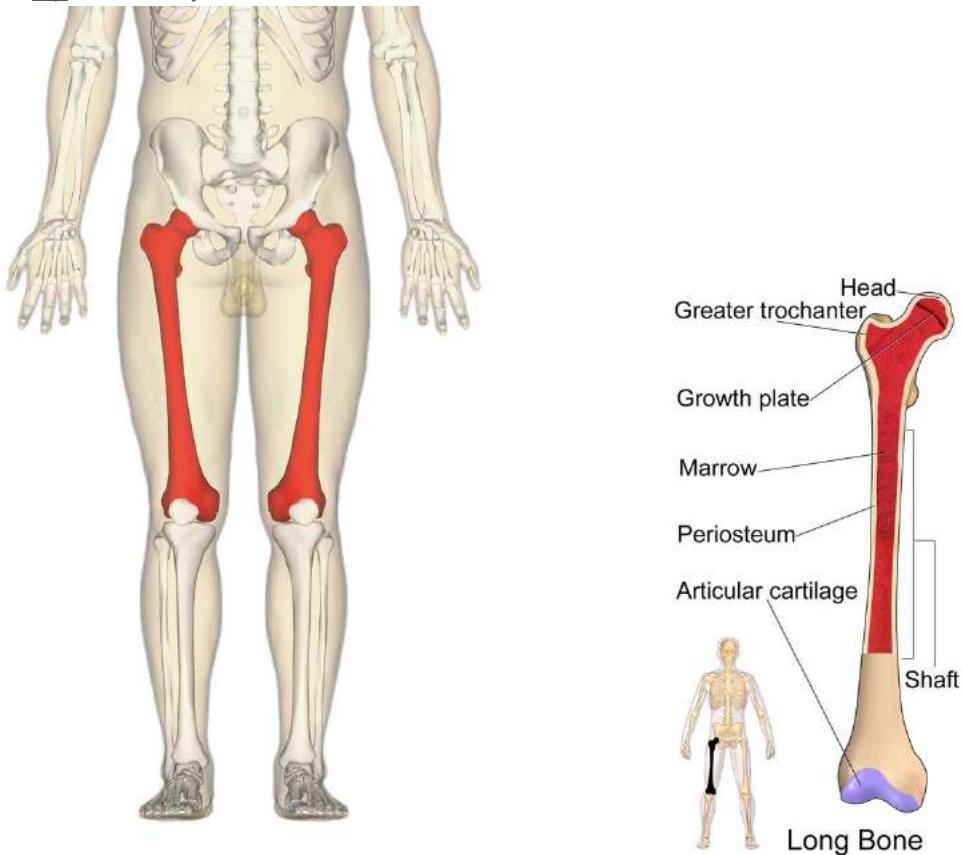
## 3D Scan of Right Leg :



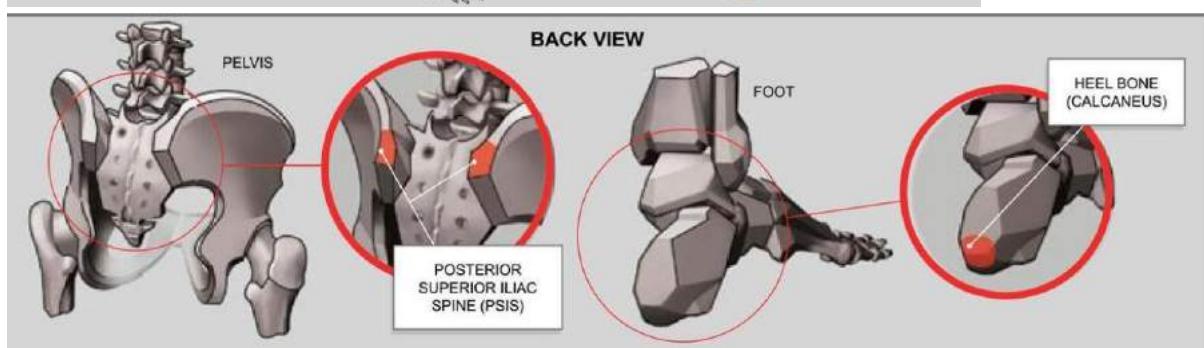
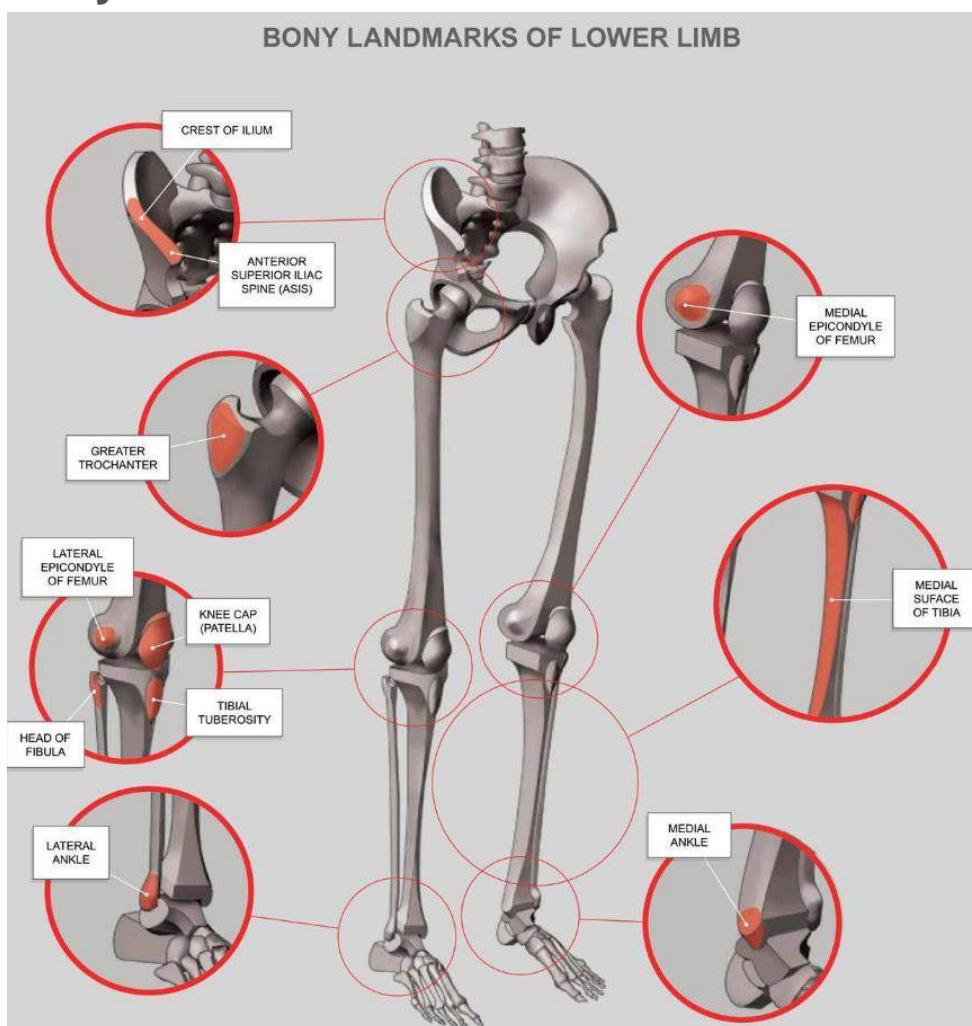
## 3D Scan of Right Leg :



**Femur bone** is the strongest and longest bone in the body, occupying the space of the lower limb, between the hip and knee joints.

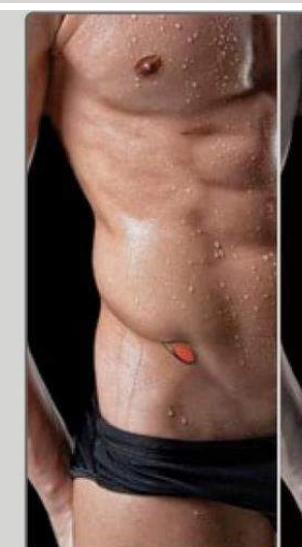
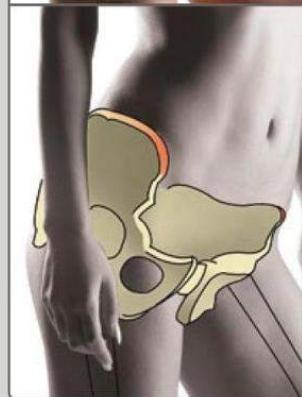


## Bony Landmarks of Lower Limb :



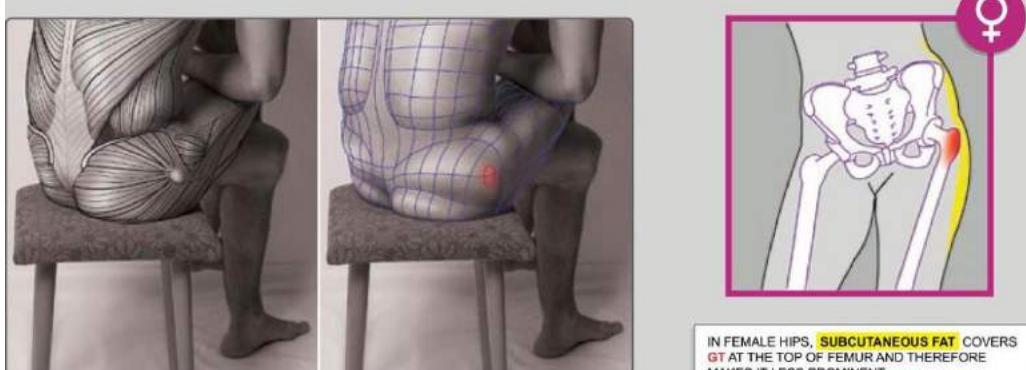
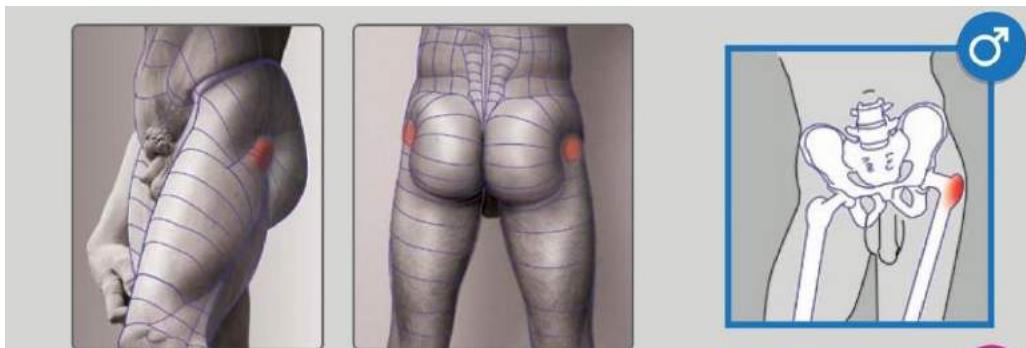
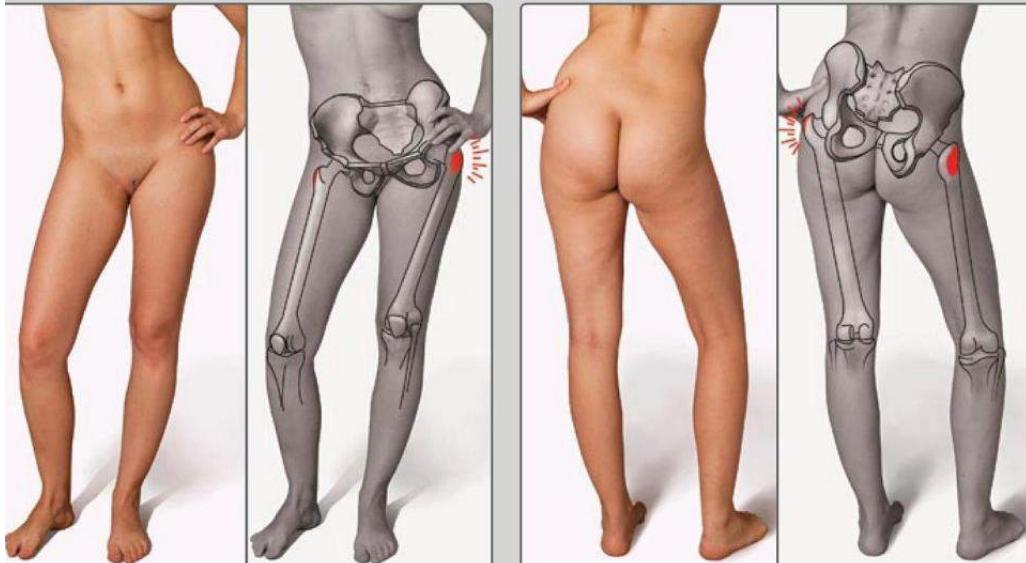
## Bony Landmarks of Pelvis :

BONY LANDMARKS OF PELVIS



## Bony Landmarks of Lower Limb - Greater Trochanter :

### BONY LANDMARKS OF LOWER LIMB GREATER TROCHANTER



IN FEMALE HIPS, SUBCUTANEOUS FAT COVERS GT AT THE TOP OF FEMUR AND THEREFORE MAKES IT LESS PROMINENT.

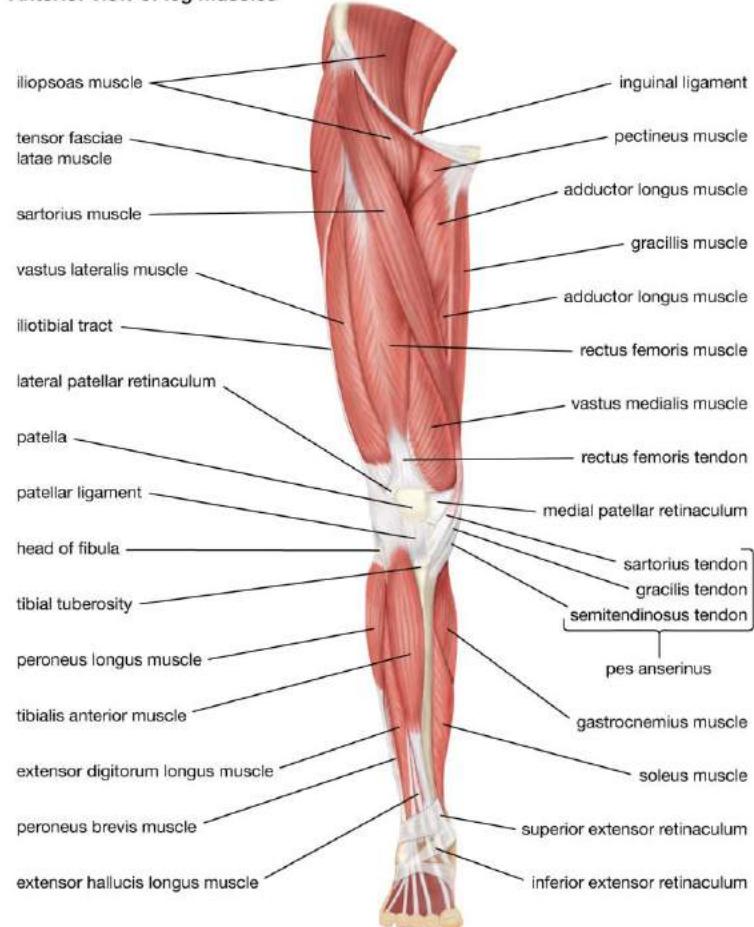
## Male Leg Shapes :

MALE LEG SHAPES



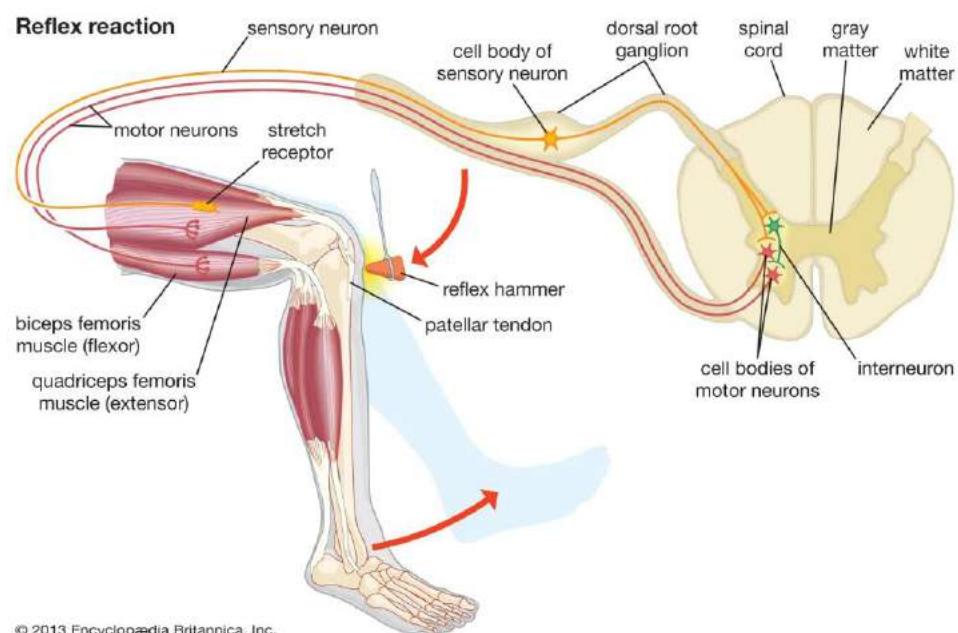
**quadriceps femoris** muscle, large fleshy [muscle](#) group covering the front and sides of the [thigh](#). It has four parts: rectus [femoris](#), vastus lateralis, vastus medialis, and vastus intermedius. They originate at the ilium (upper part of the [pelvis](#), or hipbone) and [femur](#) (thighbone), come together in a [tendon](#) surrounding the patella (kneecap), and insert at (are attached to) the [tibia](#) (shinbone). These muscles extend the legs at the [knee](#) and are important for standing, walking, and almost all activities involving the [legs](#). They originate at the ilium (upper part of the pelvis, or hipbone) and femur (thighbone), come together in a tendon surrounding the patella (kneecap), and insert at (are attached to) the tibia (shinbone).

Anterior view of leg muscles

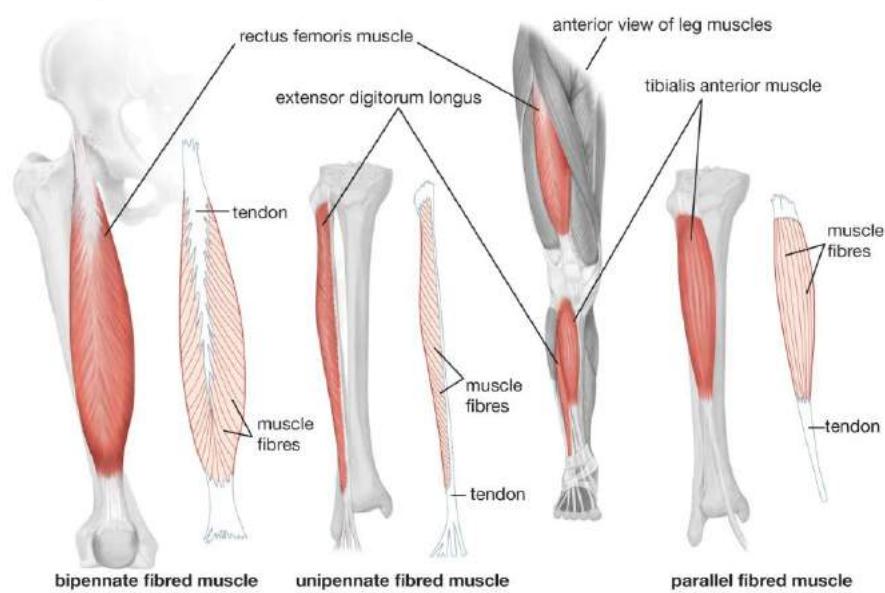


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## quadriceps femoris :

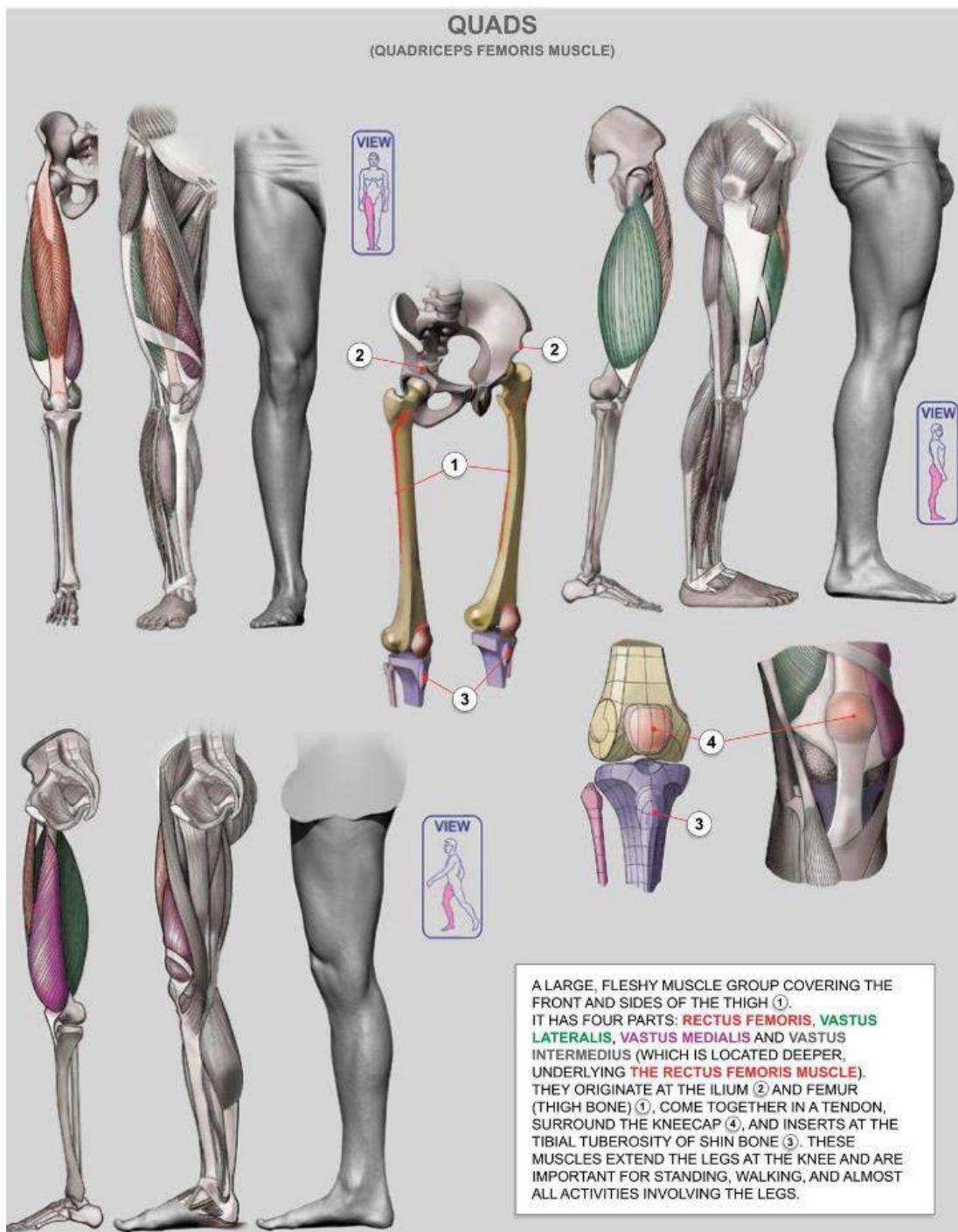


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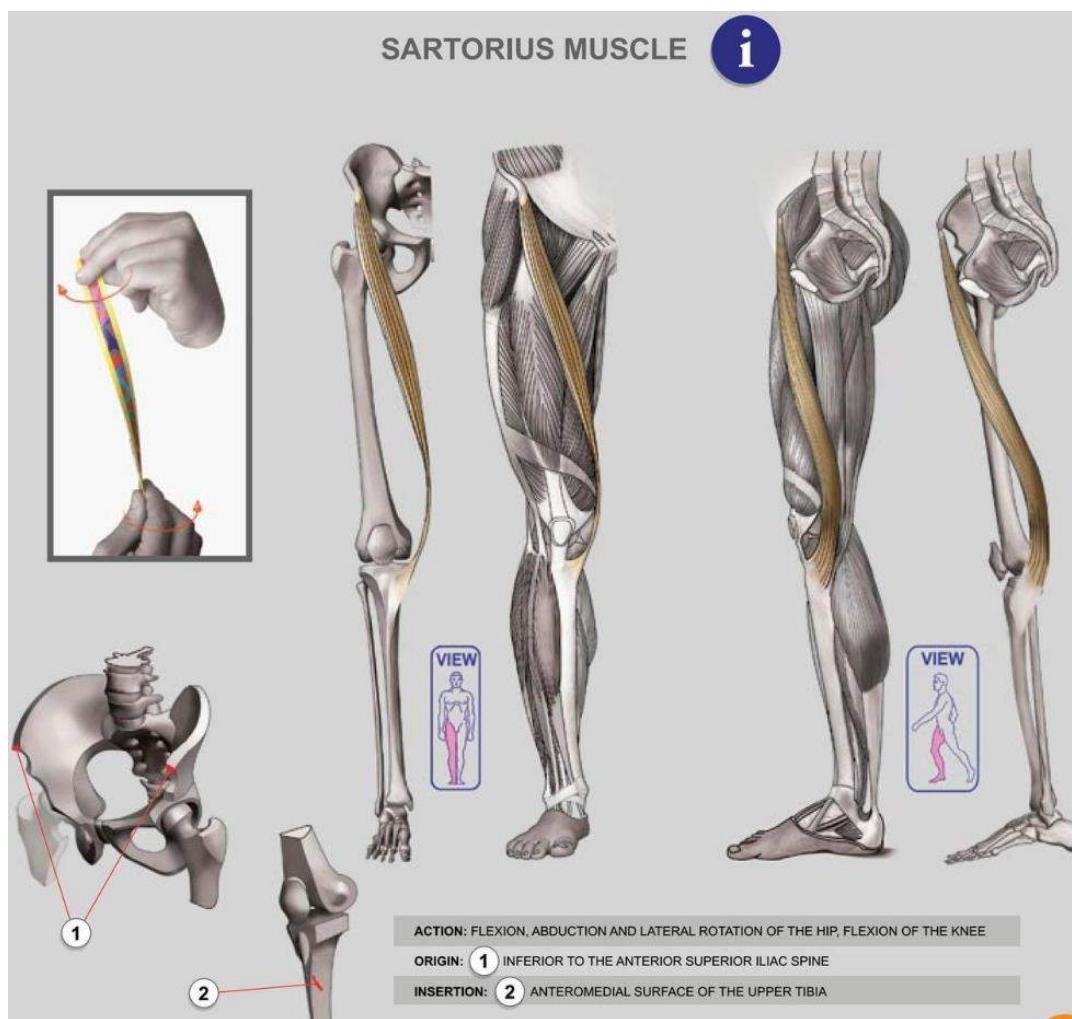


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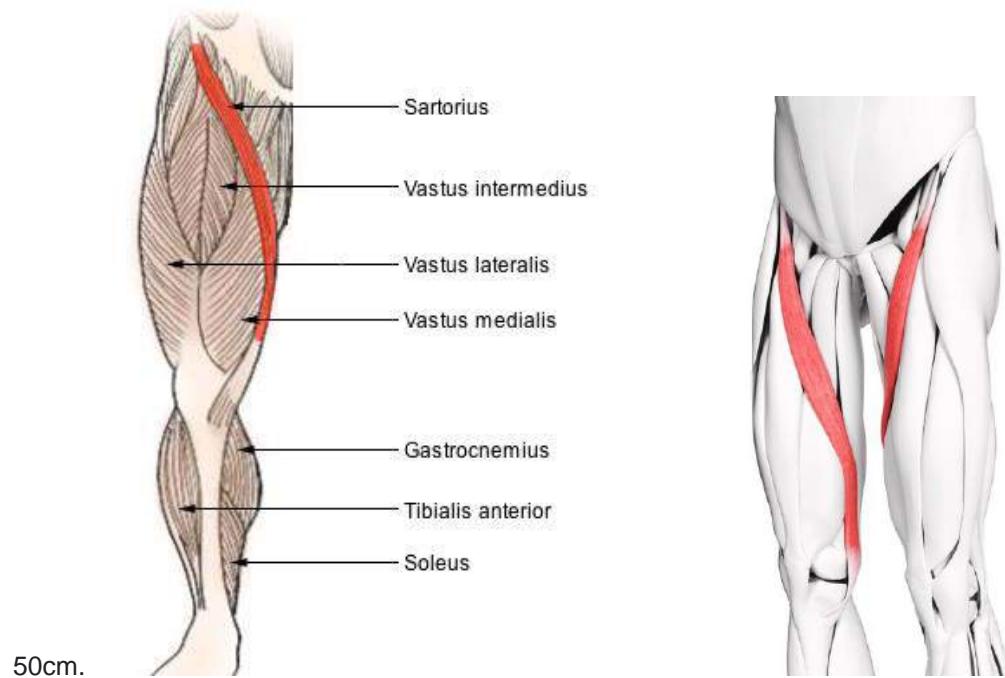
## QUADS(Quadriceps Femoris) :



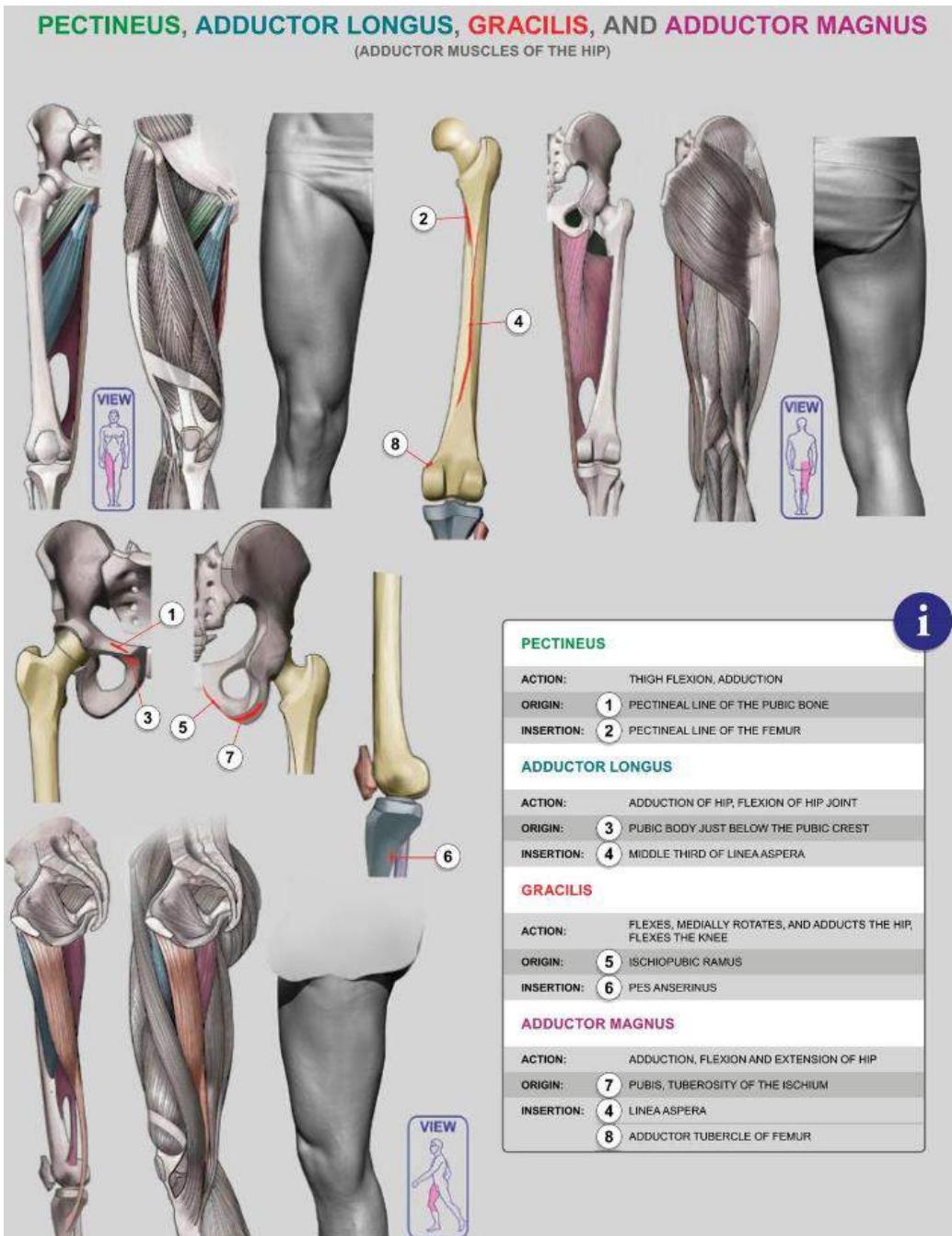
## Sartorius Muscle :



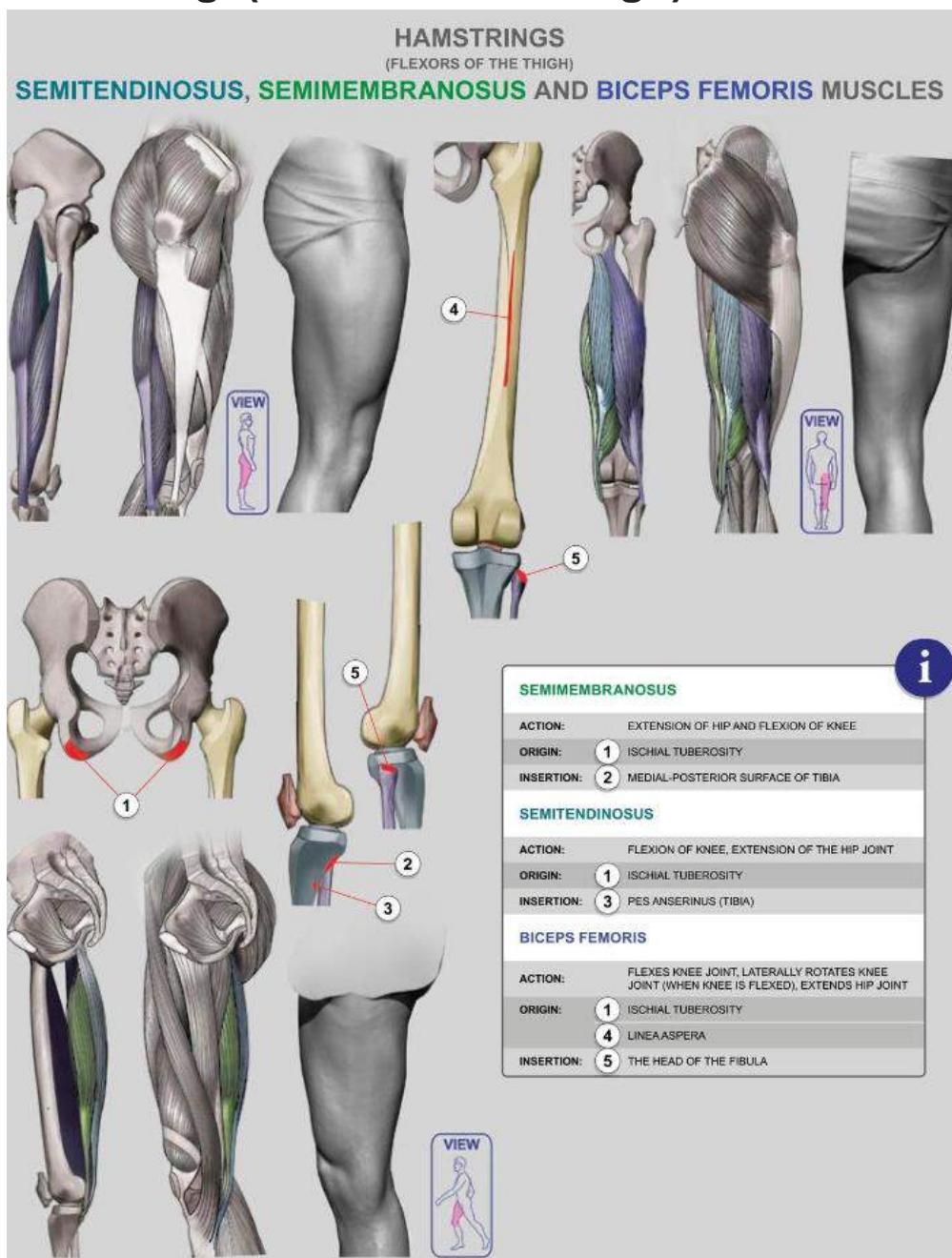
**Sartorius Muscle -** Sartorius muscle is a thin, long, superficial muscle in the anterior compartment of the thigh. It runs down the length of the thigh, runs over 2 joints—hip and knee joints and is the longest muscle in the human body. An exceptional length of this muscle often exceeds



# Pectineus , Adductor Longus , Gracilis & Adductor Magnus :



## Hamstrings(Flexors of the Thigh) :

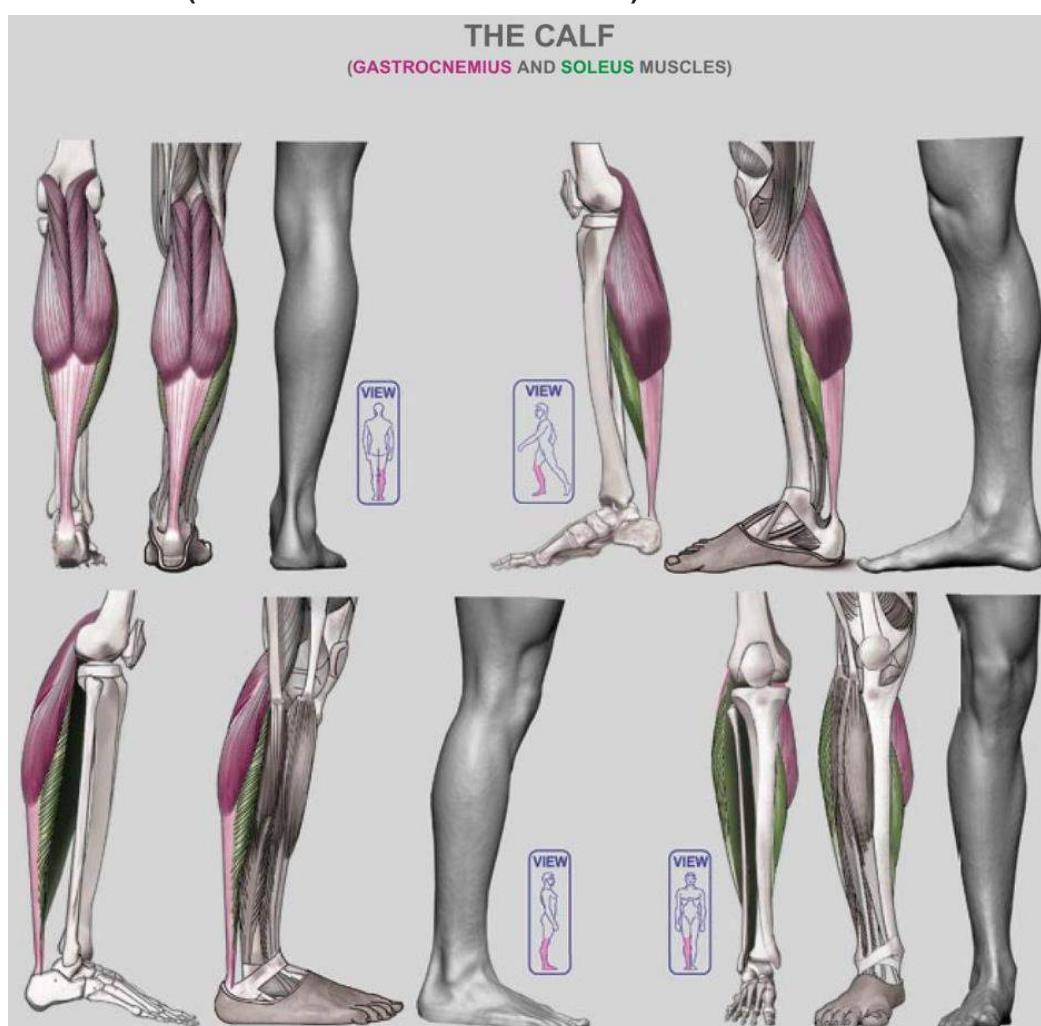


## **Calves :**

CALVES



## The Calf (Gastrocnemius & Soleus Muscles) :



GASTROCNEMIUS MUSCLE IS THE LARGER CALF MUSCLE, FORMING A BULGE VISIBLE BENEATH THE SKIN. THE GASTROCNEMIUS HAS TWO PARTS OR "HEADS", WHICH TOGETHER CREATE ITS DIAMOND SHAPE. THE SOLEUS IS A SMALLER, FLAT MUSCLE THAT LIES UNDERNEATH THE GASTROCNEMIUS MUSCLE. CONNECTIVE TISSUE AT THE BOTTOM OF THE CALF MUSCLE MERGES WITH THE ACHILLES TENDON. THE ACHILLES TENDON INSERTS INTO THE HEEL BONE (CALCANEUS).



# Extensor Digitorum Longus & Tibialis Anterior Muscles

**EXTENSOR DIGITORUM LONGUS AND TIBIALIS ANTERIOR MUSCLES**

The diagram illustrates the Extensor Digitorum Longus and Tibialis Anterior muscles through various anatomical views:

- Top Left:** Lateral view of the right leg showing the Extensor Digitorum Longus (red) and Tibialis Anterior (brown) muscles.
- Top Right:** Medial view of the right leg showing the Extensor Digitorum Longus and Tibialis Anterior muscles.
- Middle Left:** Lateral view of the right leg with a red line tracing the Extensor Digitorum Longus muscle.
- Middle Right:** Medial view of the right leg with a red line tracing the Tibialis Anterior muscle.
- Bottom Left:** A detailed view of the right leg's posterior side showing the Extensor Digitorum Longus muscle.
- Bottom Right:** A detailed view of the right foot and ankle showing the insertion points of the Extensor Digitorum Longus (labeled 3) and Tibialis Anterior (labeled 4).
- Inset:** A small inset shows a hand icon with the word "VIEW" next to it, indicating a 3D view option.
- Foot Anatomy:** A separate diagram shows the bones of the right foot with a red line labeled 3 pointing to the middle phalanges of digits 2, 3, 4, and 5.
- Foot Position:** A diagram of a right foot in dorsiflexion and inversion shows three circular markers: one red circle with a cross (incorrect), one green circle with a checkmark (correct), and one green circle with a question mark (uncertain).

**EXTENSOR DIGITORUM LONGUS**

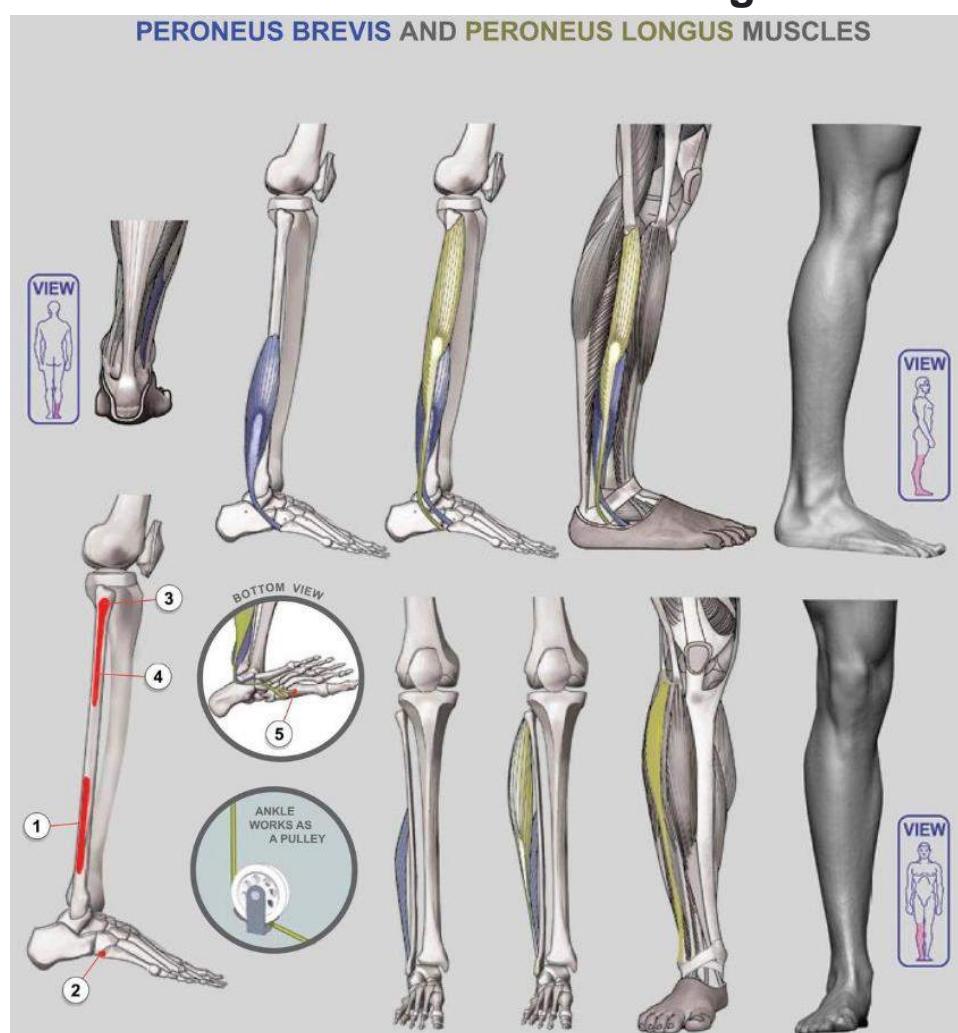
ACTION:	EXTENSION OF TOES AND DORSIFLEXION OF ANKLE
ORIGIN:	① ANTERIOR LATERAL CONDYLE OF TIBIA ② ANTERIOR SHAFT OF FIBULA
INSERTION:	③ DORSAL SURFACE: MIDDLE AND DISTAL PHALANGES OF DIGITS 2, 3, 4, 5

**TIBIALIS ANTERIOR**

ACTION:	DORSIFLEXION AND INVERSION OF THE FOOT
ORIGIN:	④ BODY OF TIBIA
INSERTION:	⑤ MEDIAL CUNEIFORM AND FIRST METATARSAL

**i**

# Peroneus Brevis & Peroneus Longus Muscles :



## PERONEUS BREVIS

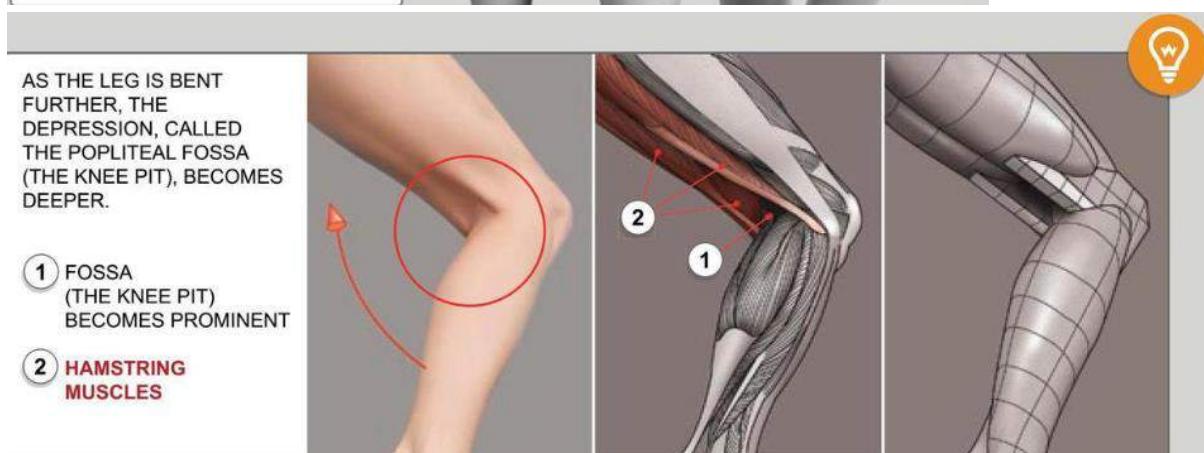
**ACTIONS:** EVERTS AND PLANTAR FLEXES THE FOOT  
**ORIGIN:** 1 LOWER 2/3 OF THE LATERAL FIBULA  
**INSERTION:** 2 ENLARGED BASE OF THE 5TH METATARSAL

## PERONEUS LONGUS

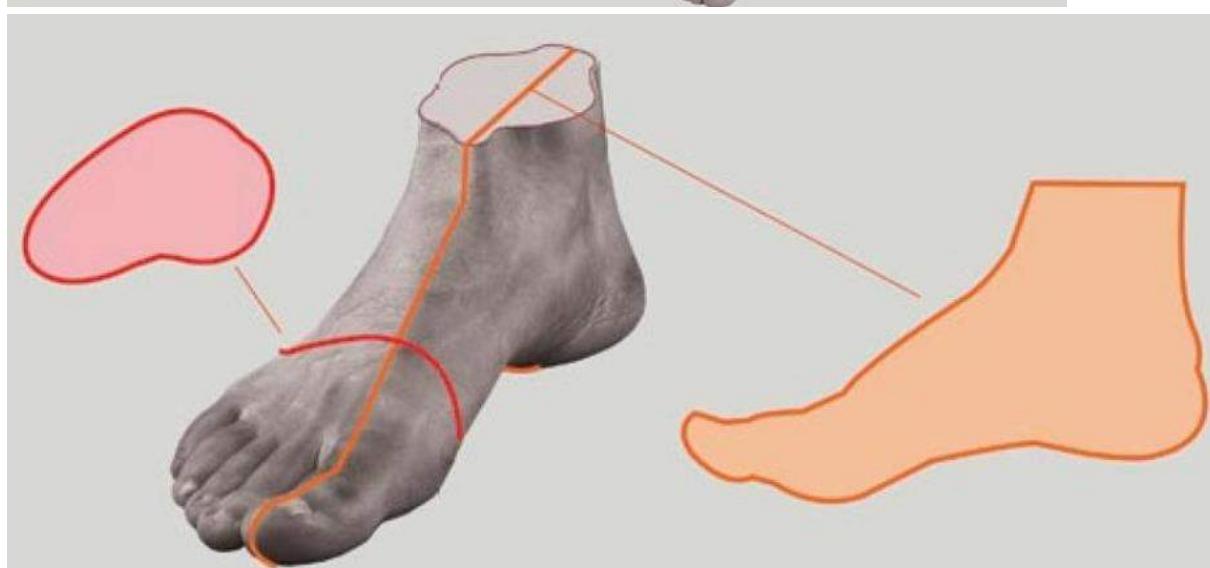
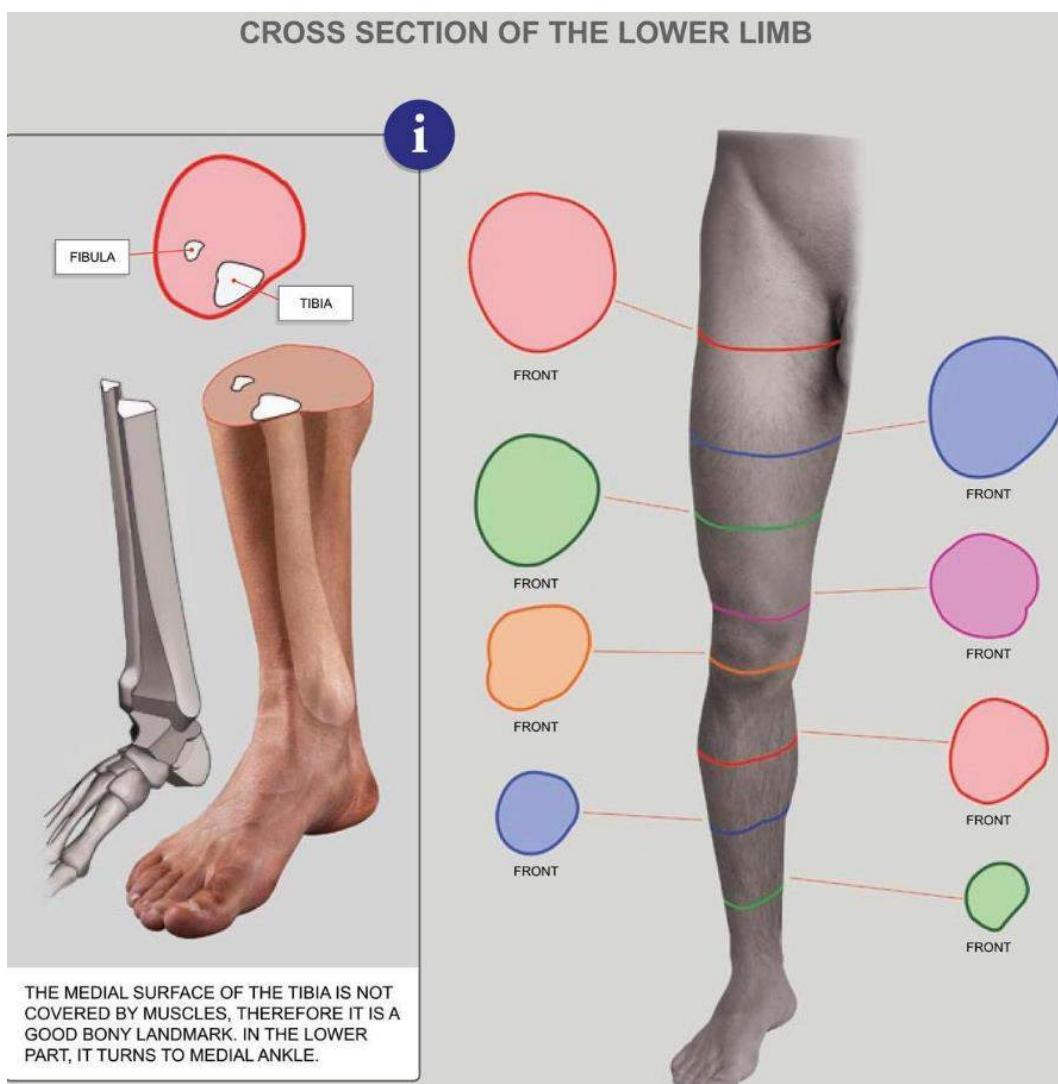
**ACTIONS:** EVERTS AND PLANTAR FLEXES THE FOOT, MAINTAINS THE ARCH OF THE FOOT  
**ORIGIN:** 3 HEAD OF FIBULA  
**4** UPPER 2/3 OF THE SHAFT OF FIBULA  
**INSERTION:** 5 UNDER THE FOOT INTO THE BASE OF THE 1st METATARSAL BONE, AND MEDIAL CUNEIFORM

1

## Tips for Backside of Legs :

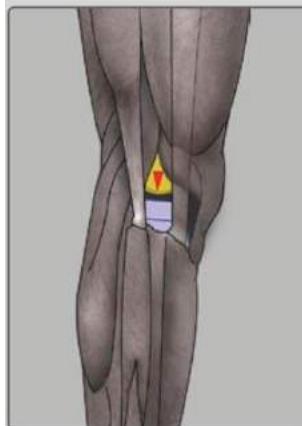
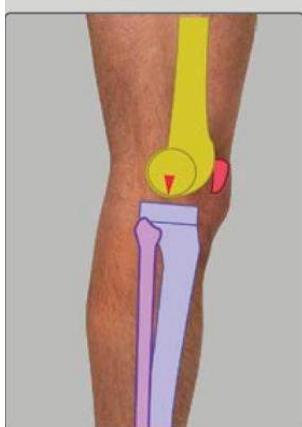


## Cross section of the Lower Limb :

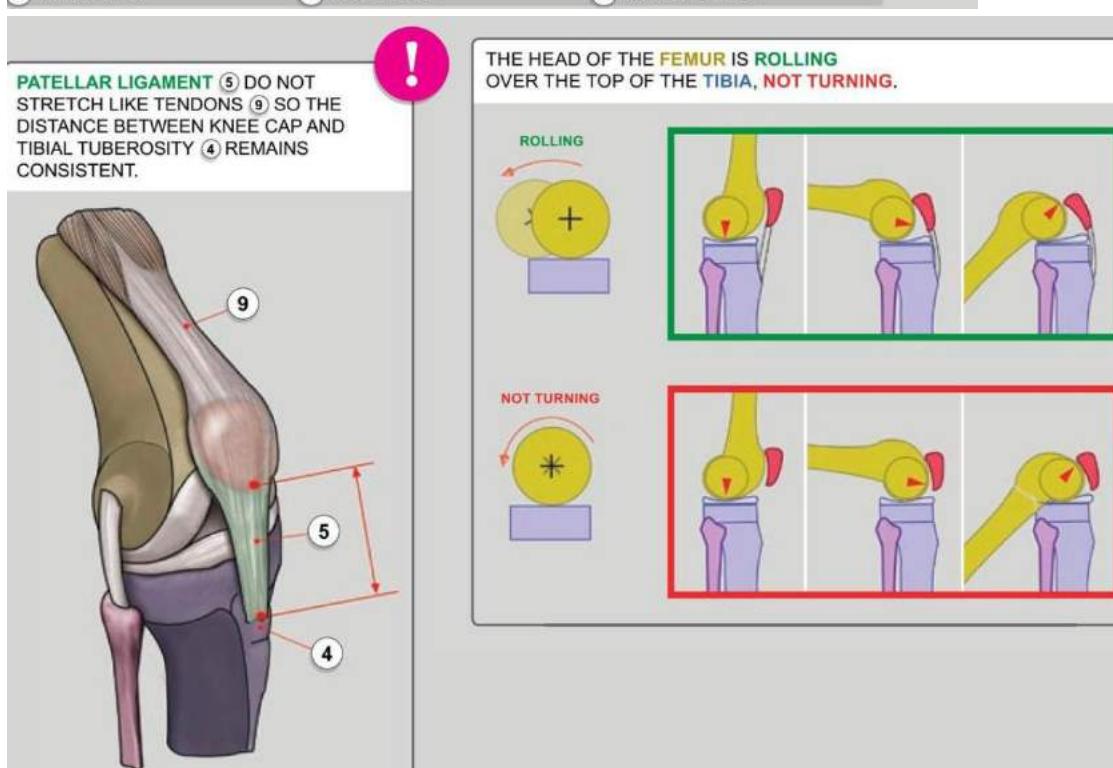
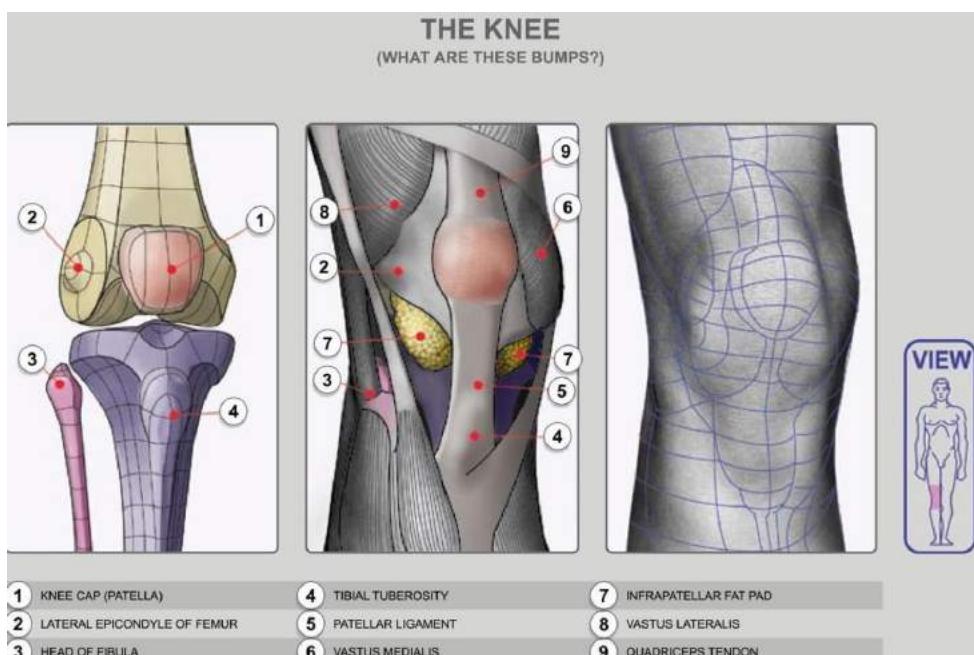


## Knee Mechanics :

KNEE MECHANICS



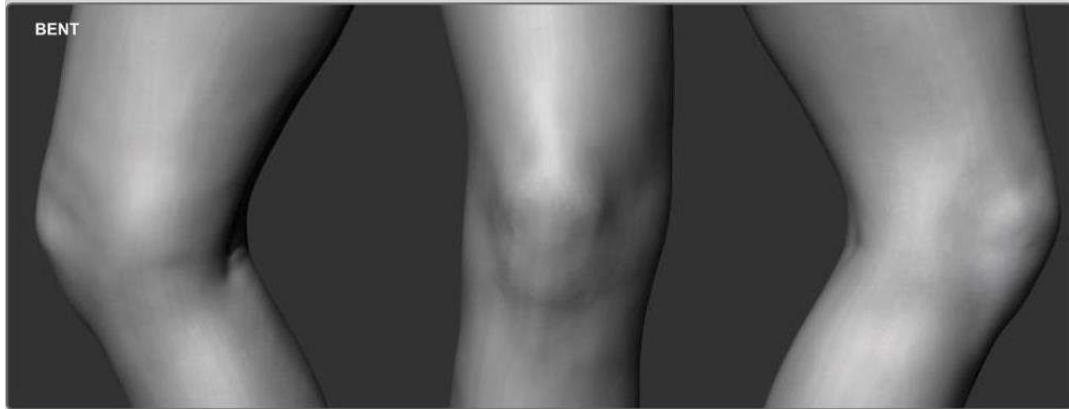
# The Knee :



## 3D Scan of Right Knee :

3D SCAN OF RIGHT KNEE

BENT



VIEW



VIEW



VIEW



STRAIGHTENED



## 3D Scan of Left Knee :

3D SCAN OF LEFT KNEE

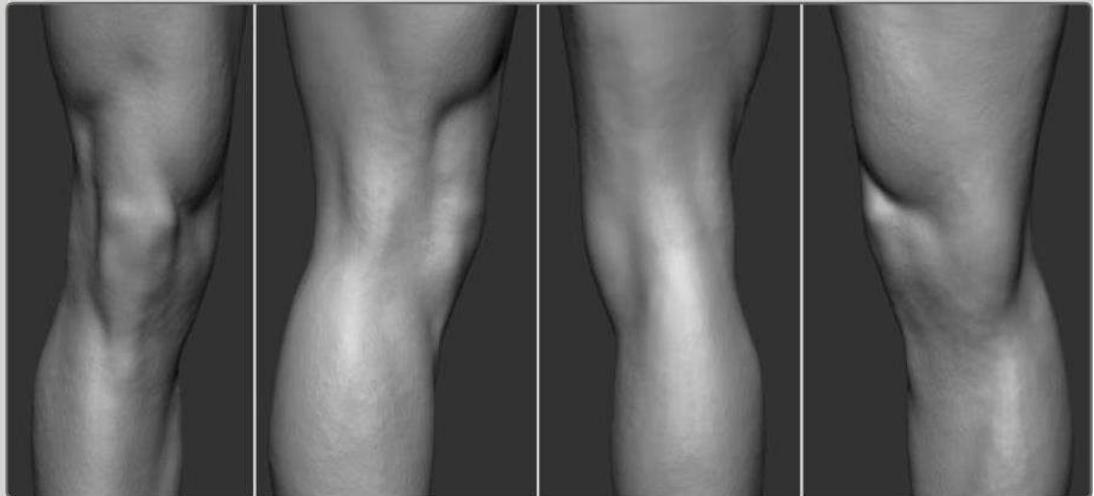
BENT



STRAIGHTENED

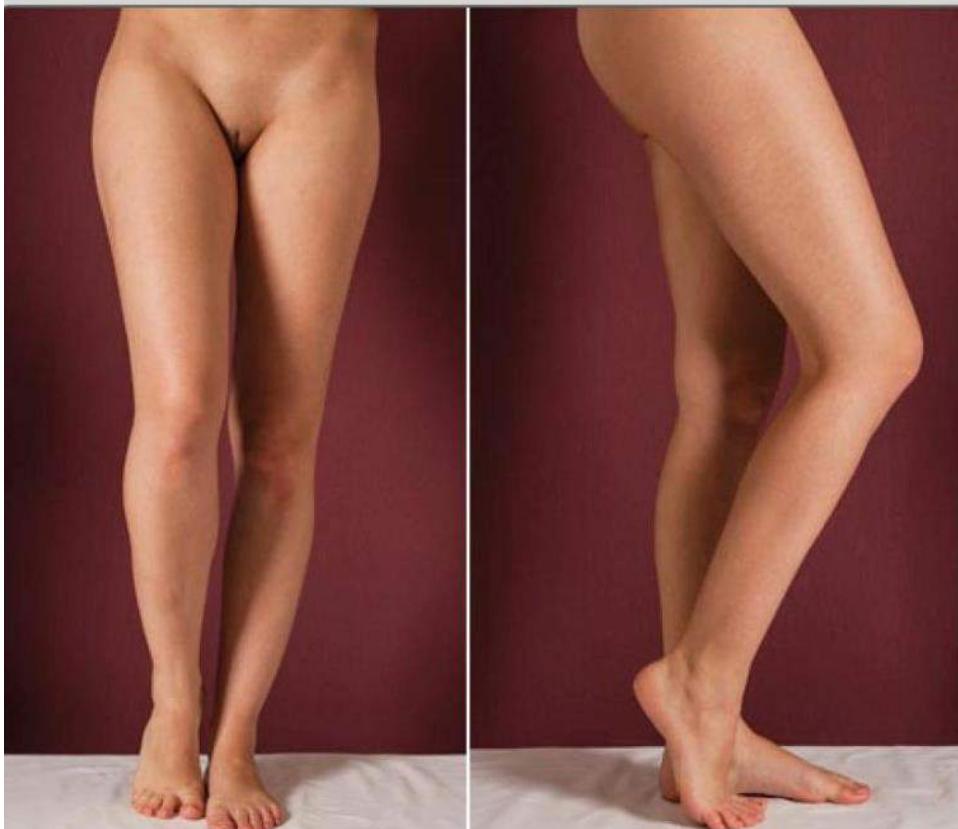
## 3D Scan of Left & Right Knees :

3D SCAN OF LEFT AND RIGHT KNEES



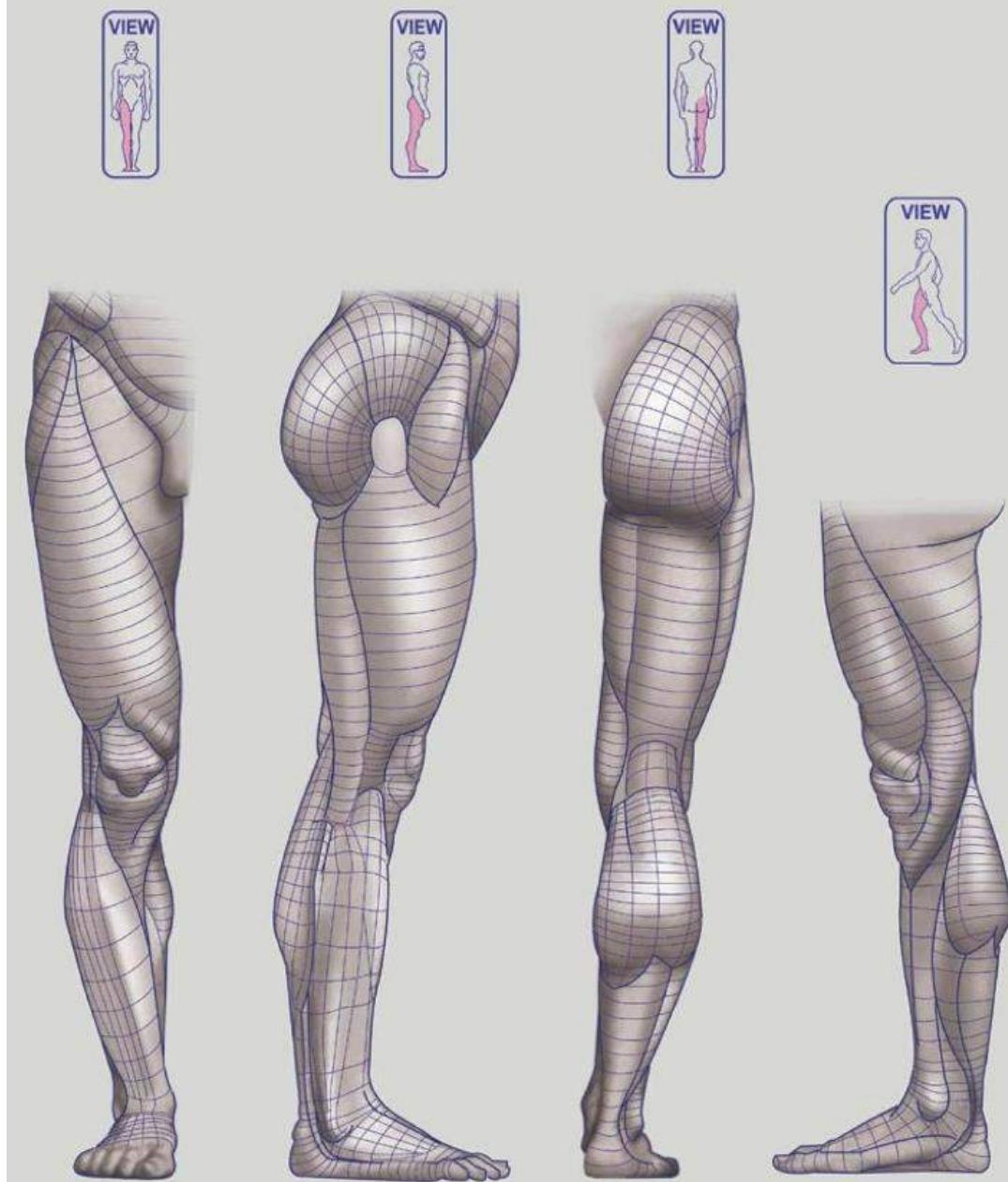
## Female Legs :

FEMALE LEGS



## Leg Shapes Viewed From all Sides :

LEG SHAPES VIEWED FROM ALL SIDES

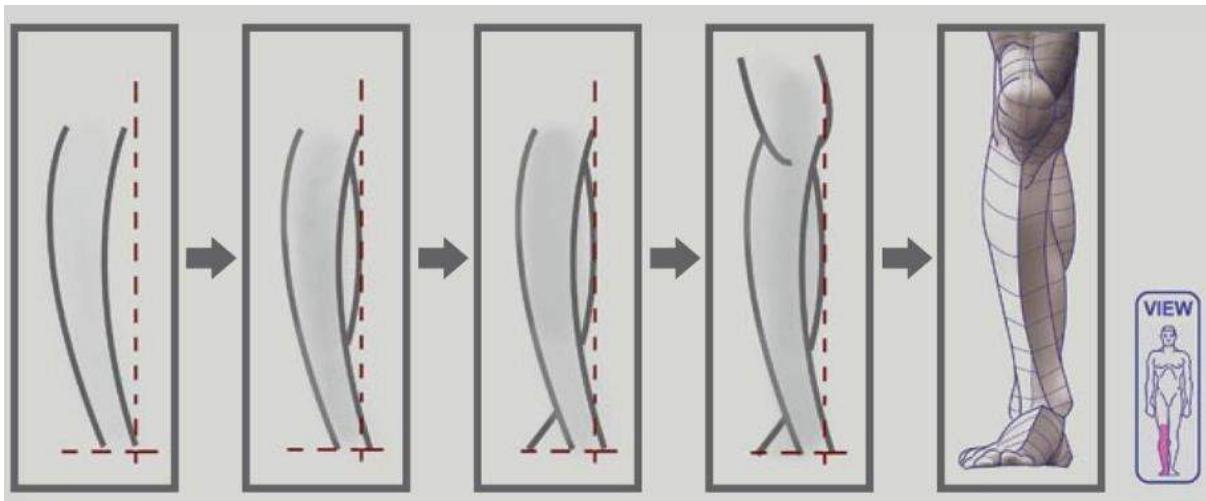
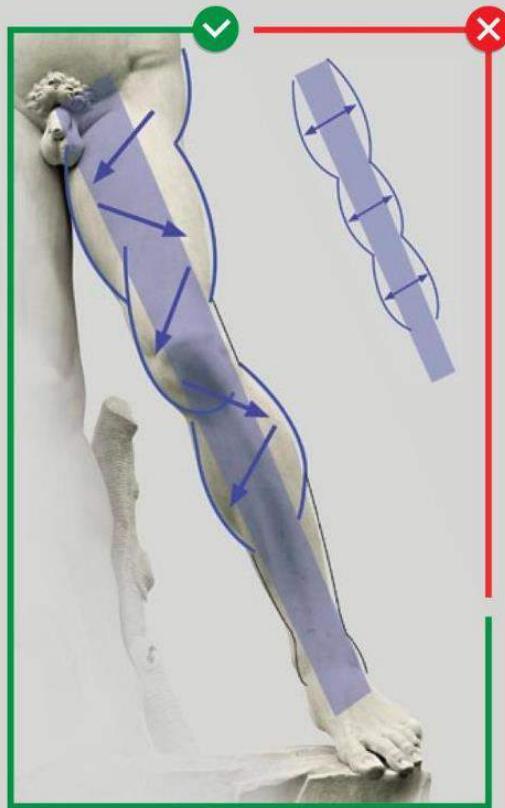


## 3D Scan of Lower Limb :



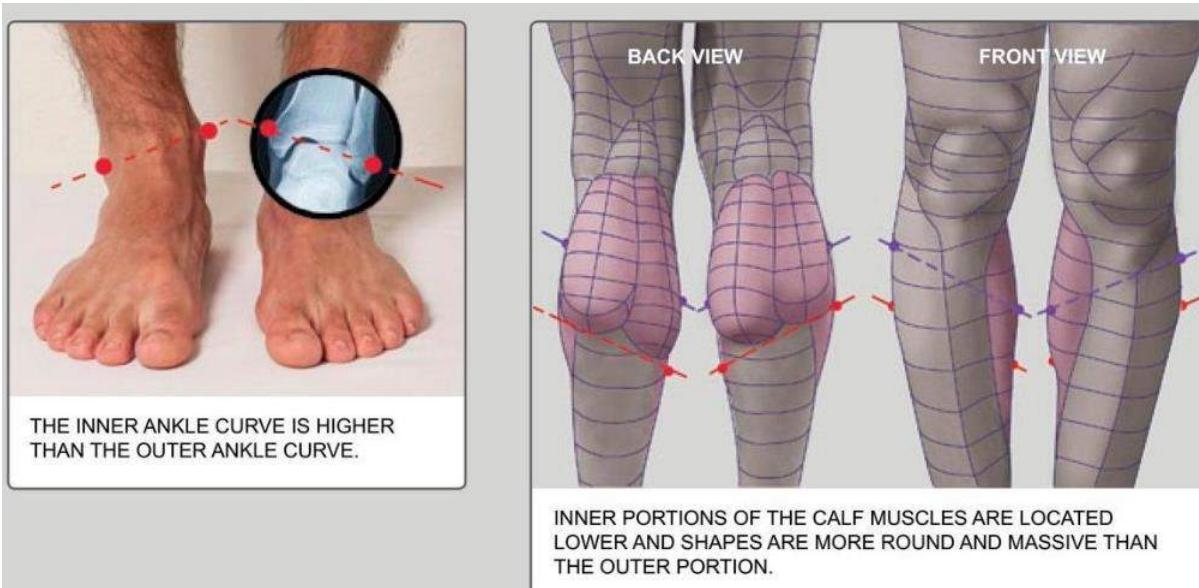
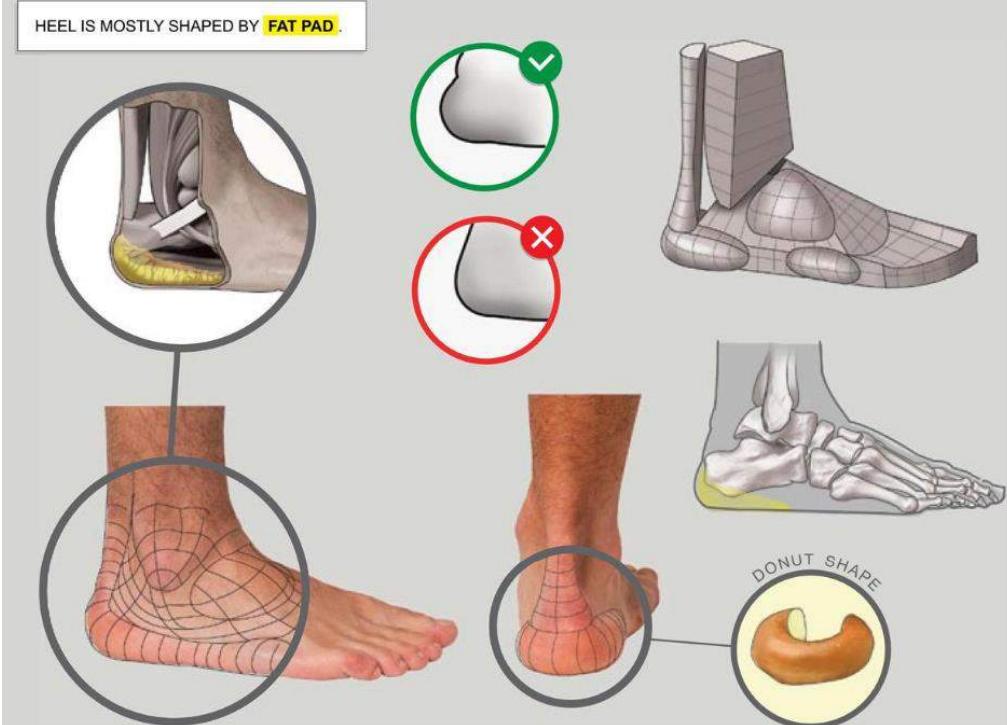
## Muscles Traversing Down the Lower Limb :

MUSCLES TRAVERSING DOWN THE LOWER LIMB

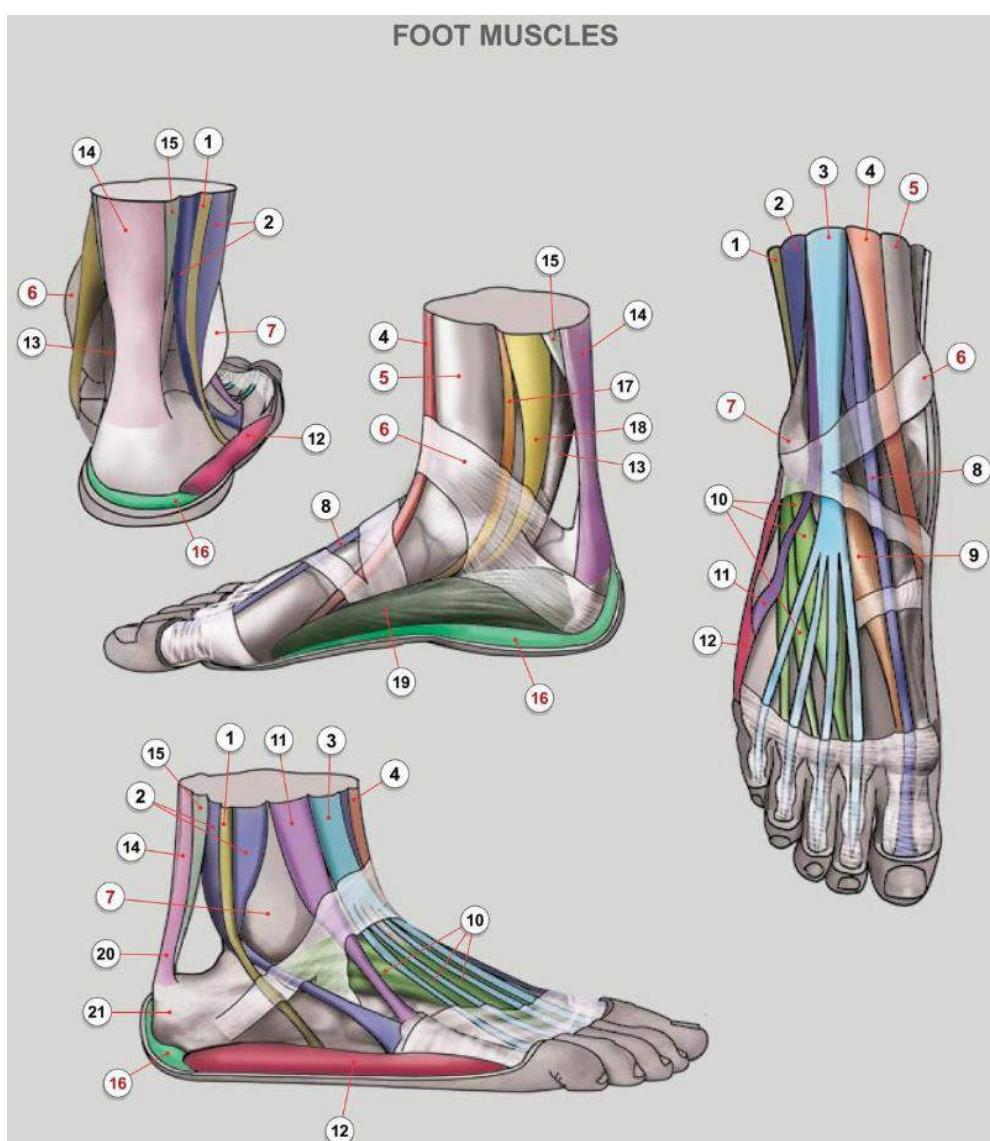


## Additional Shapes of the Leg and Foot :

### ADDITIONAL SHAPES OF THE LEG AND FOOT



## Foot Muscles :



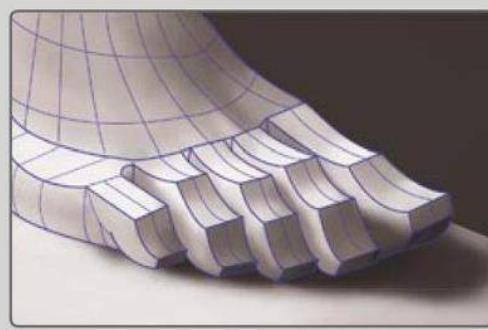
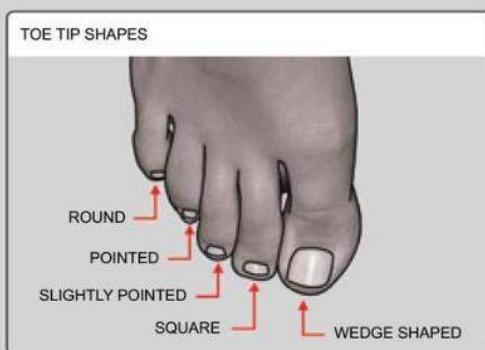
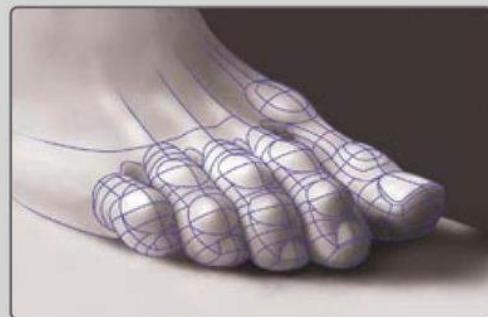
<b>1</b>	PERONEUS LONGUS	<b>8</b>	EXTENSOR HALLUCIS LONGUS	<b>15</b>	SOLEUS
<b>2</b>	PERONEUS BREVIS	<b>9</b>	EXTENSOR HALLUCIS BREVIS	<b>16</b>	FAT PAD
<b>3</b>	EXTENSOR DIGITORUM LONGUS	<b>10</b>	EXTENSOR DIGITORUM BREVIS	<b>17</b>	TIBIALIS POSTERIOR
<b>4</b>	TIBIALIS ANTERIOR	<b>11</b>	PERONEUS TERTIUS	<b>18</b>	FLEXOR DIGITORUM LONGUS
<b>5</b>	MEDIAL SURFACE OF TIBIA BONE	<b>12</b>	ABDUCTOR DIGITI MINIMI	<b>19</b>	ABDUCTOR HALLUCIS
<b>6</b>	MEDIAL ANKLE (M. MALLEOLUS)	<b>13</b>	FLEXOR HALLUCIS LONGUS	<b>20</b>	ACHILLES TENDON
<b>7</b>	LATERAL ANKLE (L. MALLEOLUS)	<b>14</b>	GASTROCNEMIUS	<b>21</b>	CALCANEUS BONE

## Foot Shapes :

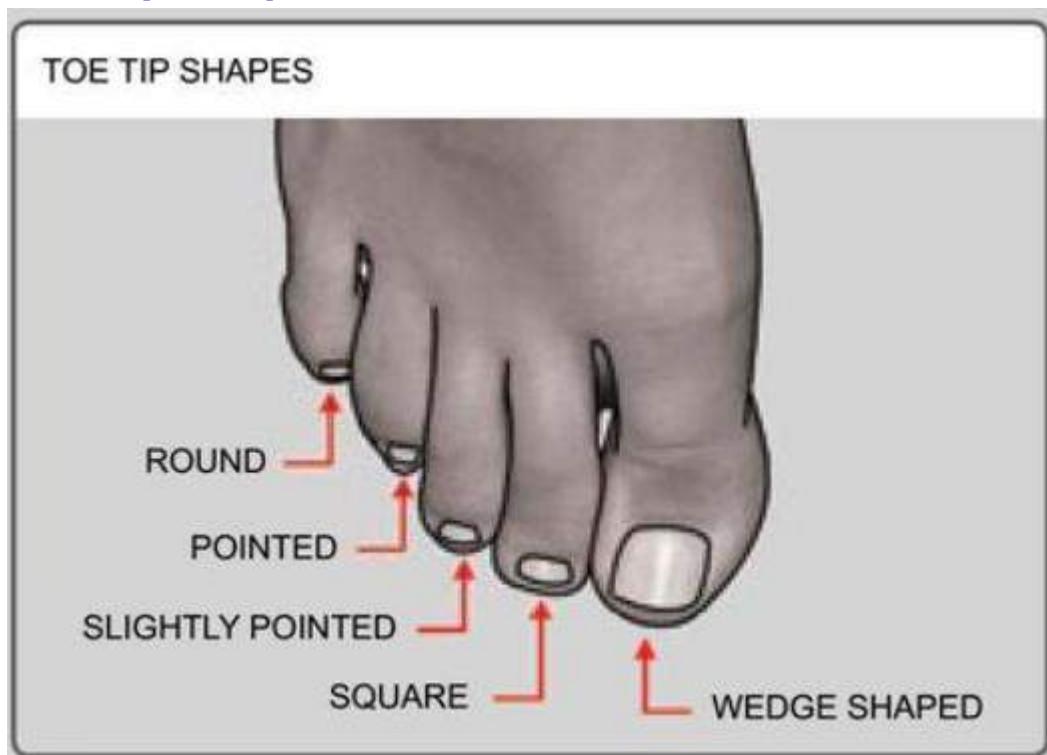


## Foot Shapes and Forming A Foot :

### FOOT SHAPES AND FORMING A FOOT



## Toe Tip Shapes :



## Blocking out a Foot :

BLOCKING OUT A FOOT



## **3D Scan of Right Foot :**

**3D SCAN OF RIGHT FOOT**



## 3D Scan of Left Foot :

3D SCAN OF LEFT FOOT



## Baby Feet :

BABY FEET

