

ANATOMY AND DRAWING BY VICTOR PERARD

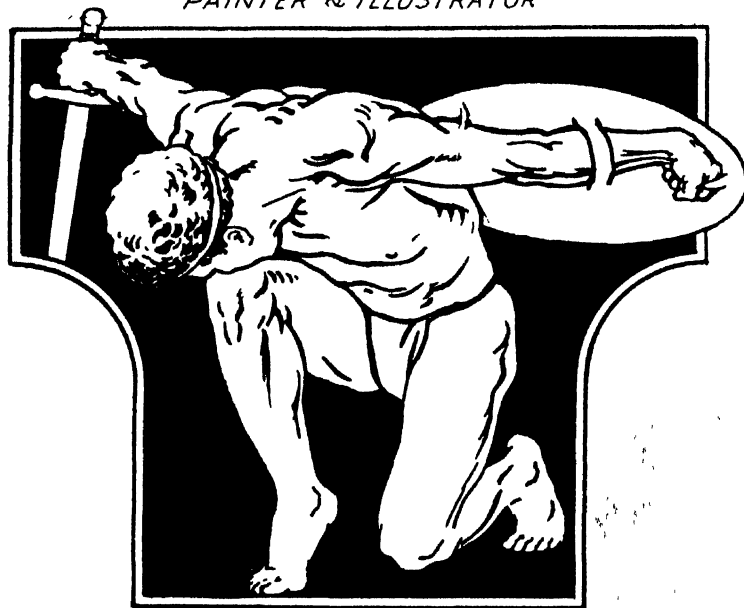
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DEDICATED TO
MY WIFE ERNESTINE PERARD

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OVER A THOUSAND ILLUSTRATIONS
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PROPORTION AND DRAWING
THE SKELETON
THE HEAD AND NECK
THE TORSO
THE ARM
THE HAND
THE LEG
THE FOOT



PREFACE

The purpose of this book is to present in a simple and direct manner the subject of anatomy as it is applied to Art. As little text as possible has been used, and much dependence has been placed on pictorial representations because the latter are a more direct means of impressing the artist with construction and form. For this reason this work has been copiously illustrated, often showing various views of the same structures and actions.

To the beginner the study of anatomy is too often dull, prosaic and difficult and this is due, in large part, to the fact that many text books on the subject contain insufficient descriptive drawings. Even though the student plows through many pages of text, he often fails to visualize the subject properly. Therefore it has been endeavored to substitute illus-

trations for descriptive text whenever practical. The drawings have been arranged in groups for the purpose of comparison, and in this way the eye becomes accustomed to observe much which otherwise might escape attention.

To express outward form correctly requires a knowledge of the internal structure, that is, of the bones which compose the framework and define its proportions and of the muscles and tendons which direct its action.

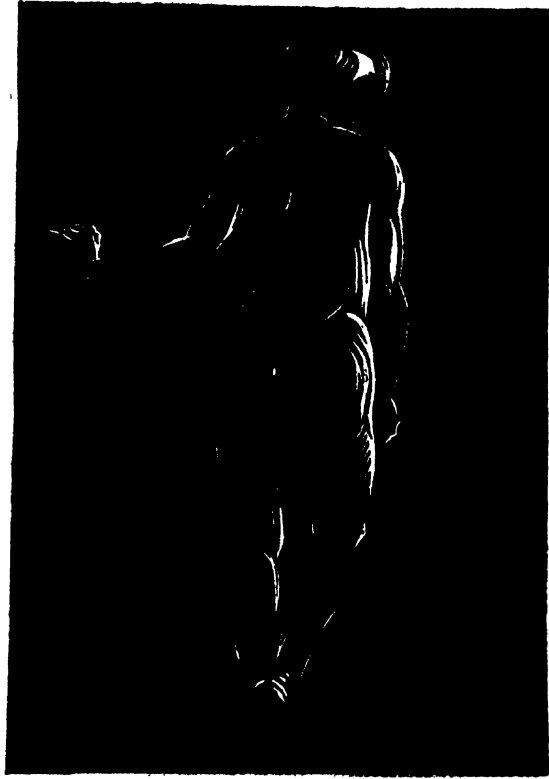
Every figure artist finds sooner or later, as he advances in his artistic career, that his work needs strengthening through a well grounded knowledge of anatomy. The great masters of the past realized this and their grasp on the fundamentals of anatomy is reflected not only in their finished works, but in such of their preliminary sketches as are still preserved.

The ability to construct figures correctly from the imagination rather than to depend entirely on models is a distinct aid to the draftsman and to the sculptor. The student of anatomy should therefore test his skill by making memory drawings and by applying his knowledge to compositions of his own fancy.

When working from living models, the artist will find that his knowledge of anatomy will enable him to analyze and interpret the forms before him in a more understanding way than he could without such information. It will develop in him greater powers of observation. An understanding of

anatomy is an instrument in the mechanics of Art: a means to be employed to assist but never allowed to dominate. The artist must learn properly to evaluate his anatomical information and to know the part it is to play in the development of his art. The studies he makes will then be done more intelligently and with better draftsmanship as an inevitable result.

VICTOR PERARD



NOTES ON PROPORTION

Since proportion is the comparative relation of one thing to another, some standard or unit of measure must arbitrarily be established. In Art, this unit is known as the "head" which is the distance from the top of the skull to the tip of the chin. The illustrations in this book are based on the proportion of seven and a half "heads" to the height of an erect figure. The use of this standard will obviate much de-

scriptive text. It is well, however, to bear in mind that this standard of proportion is modified by such elements as race, sex, age and physical differences peculiar to the individual. For this reason the following notes on proportion are grouped under the heads: Male, Female, Children and General Observations.

Proportions of the Male. The greatest width of the male figure is at the deltoids, a little below the shoulders and the width here is about two heads.

The width between the hips should equal one and one half heads, and the width between the nipples one head.

The height of the figure, seven and one-half heads, should approximate one "head" for the head, two and three-quarter heads for the neck and trunk, and three and three-quarter heads for the lower extremities.

From the finger tips to the elbow should measure two heads.

Proportions of the Female. The bones of the female are shorter and have less rough surfaces than those of the male. The sternum or breast bone is shorter and more curved and the pelvis is broader and shallower which gives a greater width to the hips. The sacrum is wider and projects at an angle backward.

The posterior superior iliac spines and the anterior iliac

spines are further apart than those of the male. The distance from the rib cage to the pelvis is greater due to the shallower and broader pelvis.

There is less distance from the crest of the iliacs to the great trochanters of the hips, because the anterior iliac spines are spread out and lower, and further apart. In the female figure the Poupart's ligaments and the furrow of the groin are more horizontal.

The shoulders are narrower and the collar bones (clavicles) straighter and shorter thus giving a more graceful and longer neck and more sloping shoulders in comparison with the square shoulders of the male.

The arms are shorter in proportion to the trunk which is due to the shorter humerus bone of the female, and because the humerus bone is shorter, the elbow is higher.

Variations in the length of the female leg are more frequent than those of the trunk and so it is more difficult to judge the height of the female figure when seated. But the length of the torso is proportionately longer than in the other sex. The legs are shorter and the skull smaller.

The center of the female figure is above the pubic bone while in the male, the center is about at the pubic bone. The width of the female hips is about the width of the chest wall plus that of one arm and is greater than that of the male of the same height. The fact that the female sacrum is at a

greater angle than that of the male and that there is more fat on the buttocks gives these a greater diameter.

The female abdomen, is more rounded and the thighs are thicker from the back to the front than in the other sex.

Proportions of Children. The child of three is about one half the height of the adult, and at ten, about three-quarters the height of the adult. As the child grows older the relative sizes of the head and the trunk change. At twenty-five the figure is full grown.

At birth the center of the figure is a little above the navel, at two years at the navel and at three years the center is level with the iliac bone.

With advancing age this point gradually lowers depending to a great extent on the length of the legs.

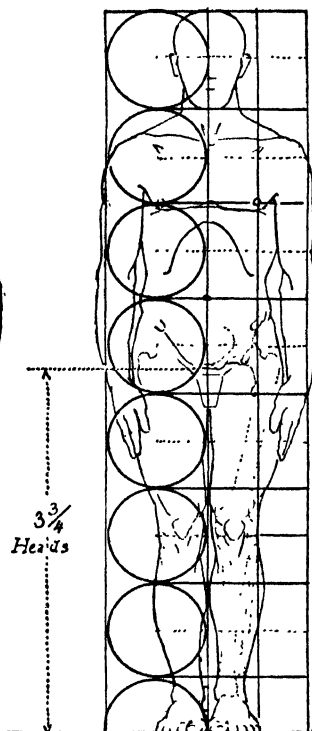
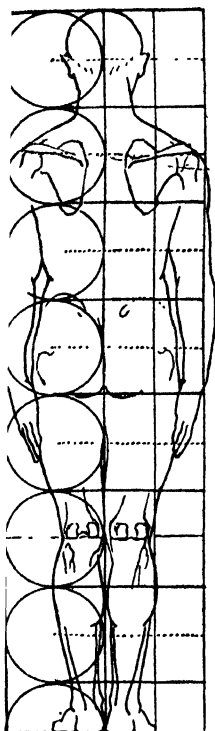
General Observations. The clavicle bone continues to grow for a considerable period after the other bones of the body have attained their full development and therefore the shoulders are said to broaden.

Only very tall people have a height of eight heads. Short people are seven heads or less. The muscles of the adult account for about one half the weight of the body.

The skeleton always provides the proportions of the figure with slight allowances for the padding between the joints, between each vertebra, and under the heel and foot. In old age the figure shortens due to the hardening and shrinking of the cartilages between the bones.

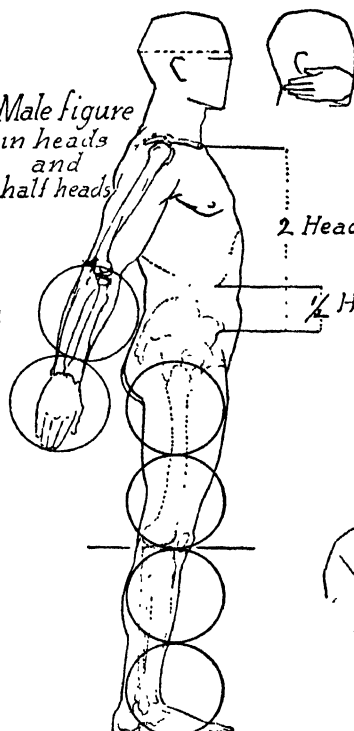


PART I
PROPORTION
AND
DRAWING



$3\frac{3}{4}$ Heads

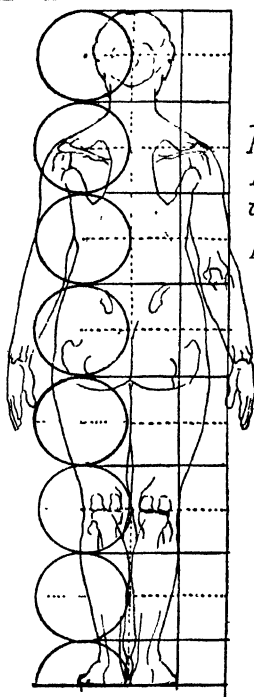
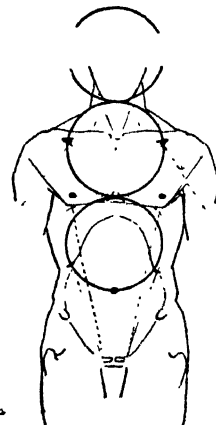
Male figure
in heads
and
half heads



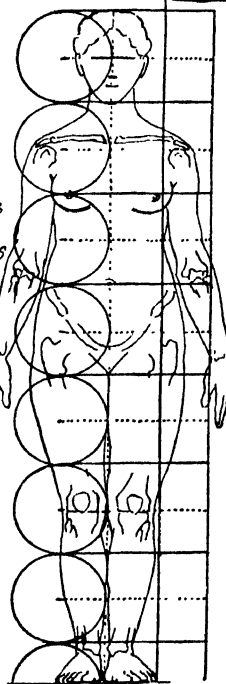
2 Heads

$\frac{1}{4}$ Head

Humerus



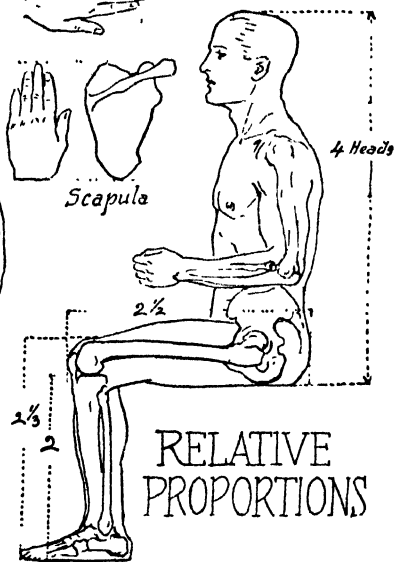
Female
figure
in heads
and
half heads



Clavicle



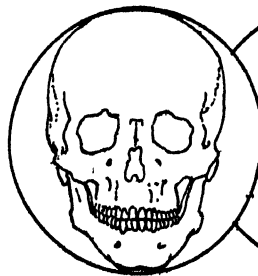
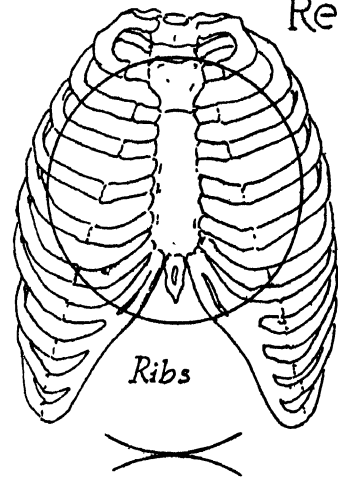
Scapula



4 Heads

RELATIVE
PROPORTIONS

Relative proportion of bones by heads



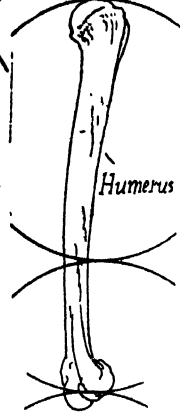
Skull



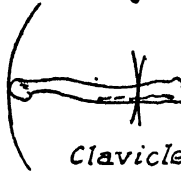
Ulna



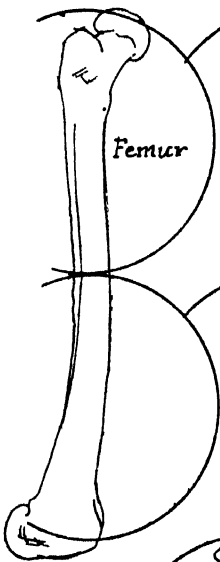
Radius



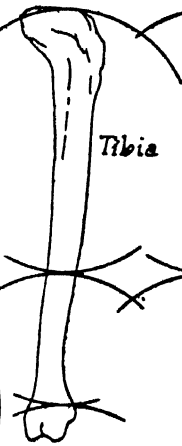
Humerus



Clavicle



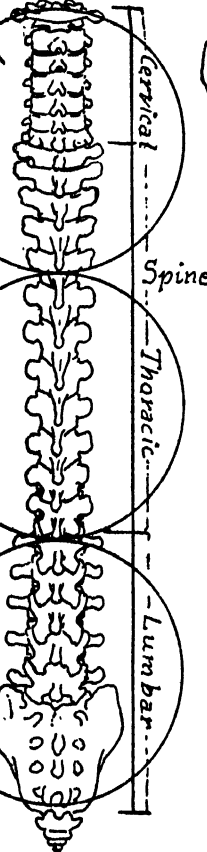
Femur



Tibia



Fibula

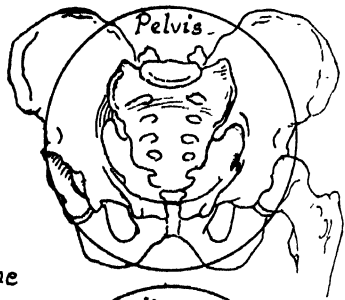


Cervical

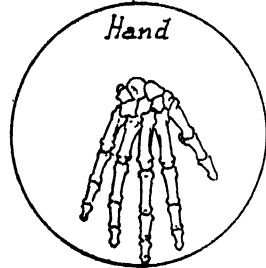
Spine

Thoracic

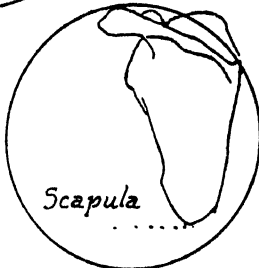
Lumbar



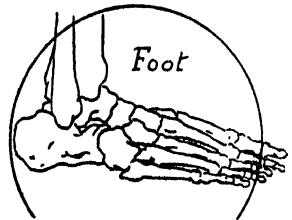
Pelvis



Hand

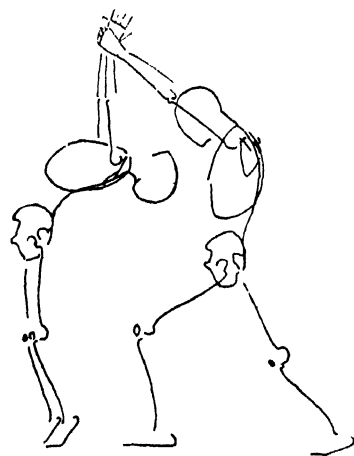
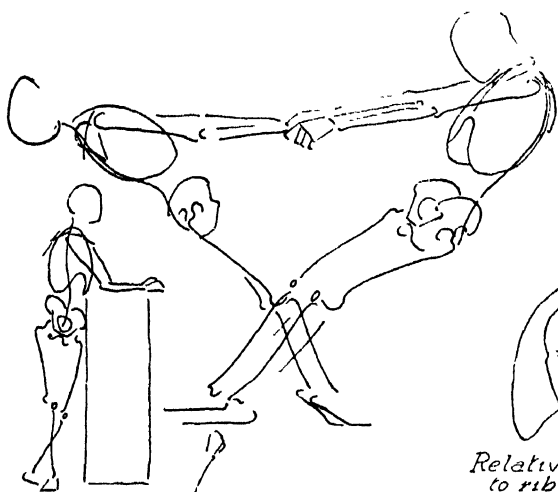


Scapula



Foot

Victor Brand

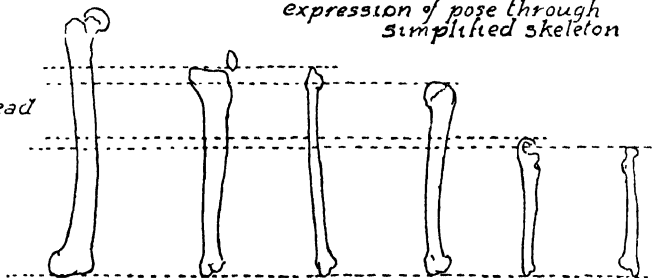


Relative size of head to rib cage

Method for expression of pose through simplified skeleton

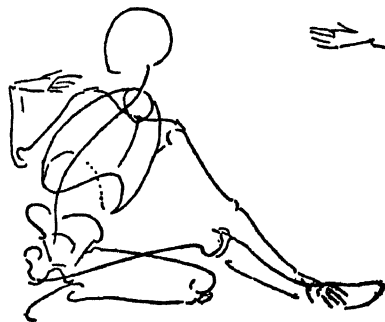
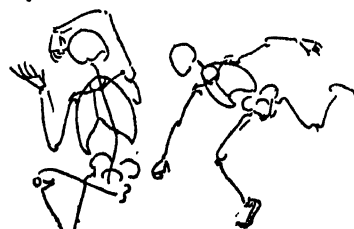
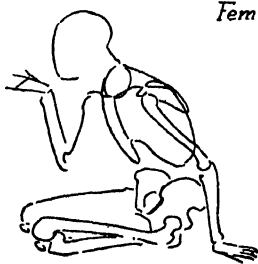


Relative size of head to pelvic bone



Femur Tibia Fibula Humerus ulna

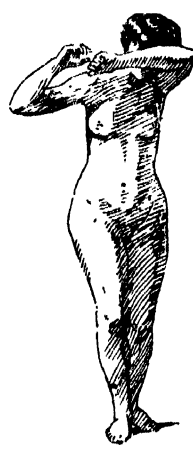
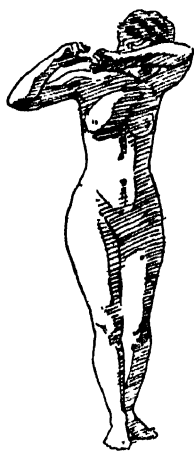
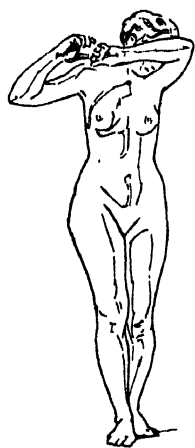
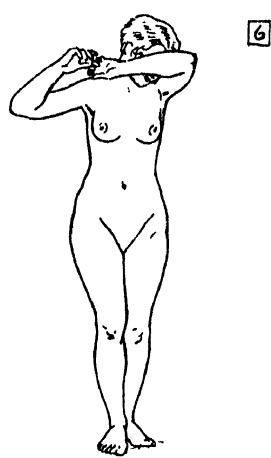
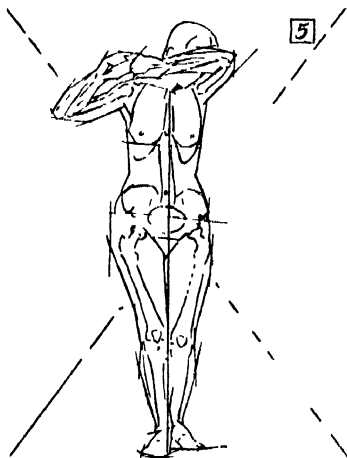
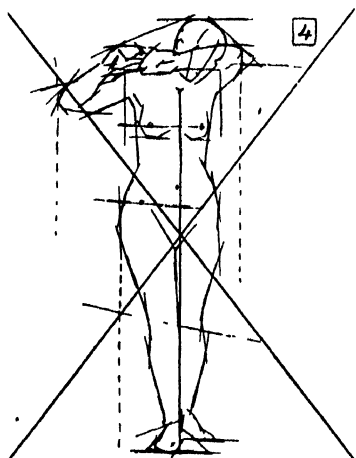
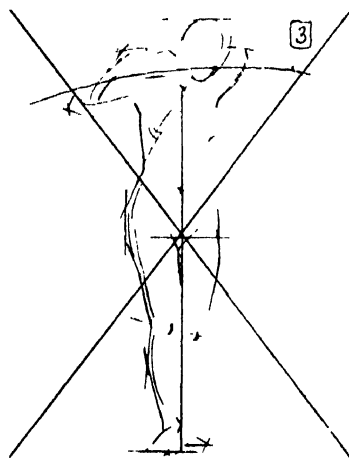
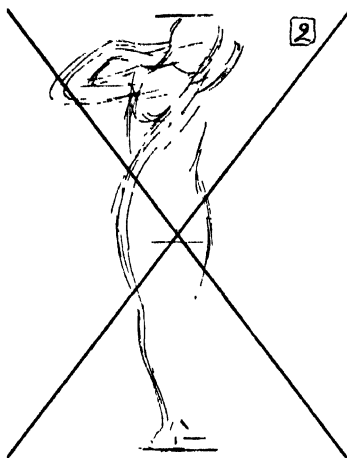
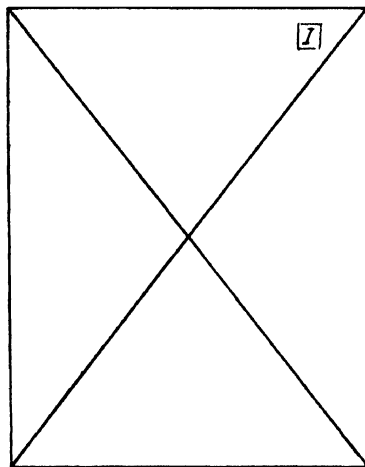
Relative size of

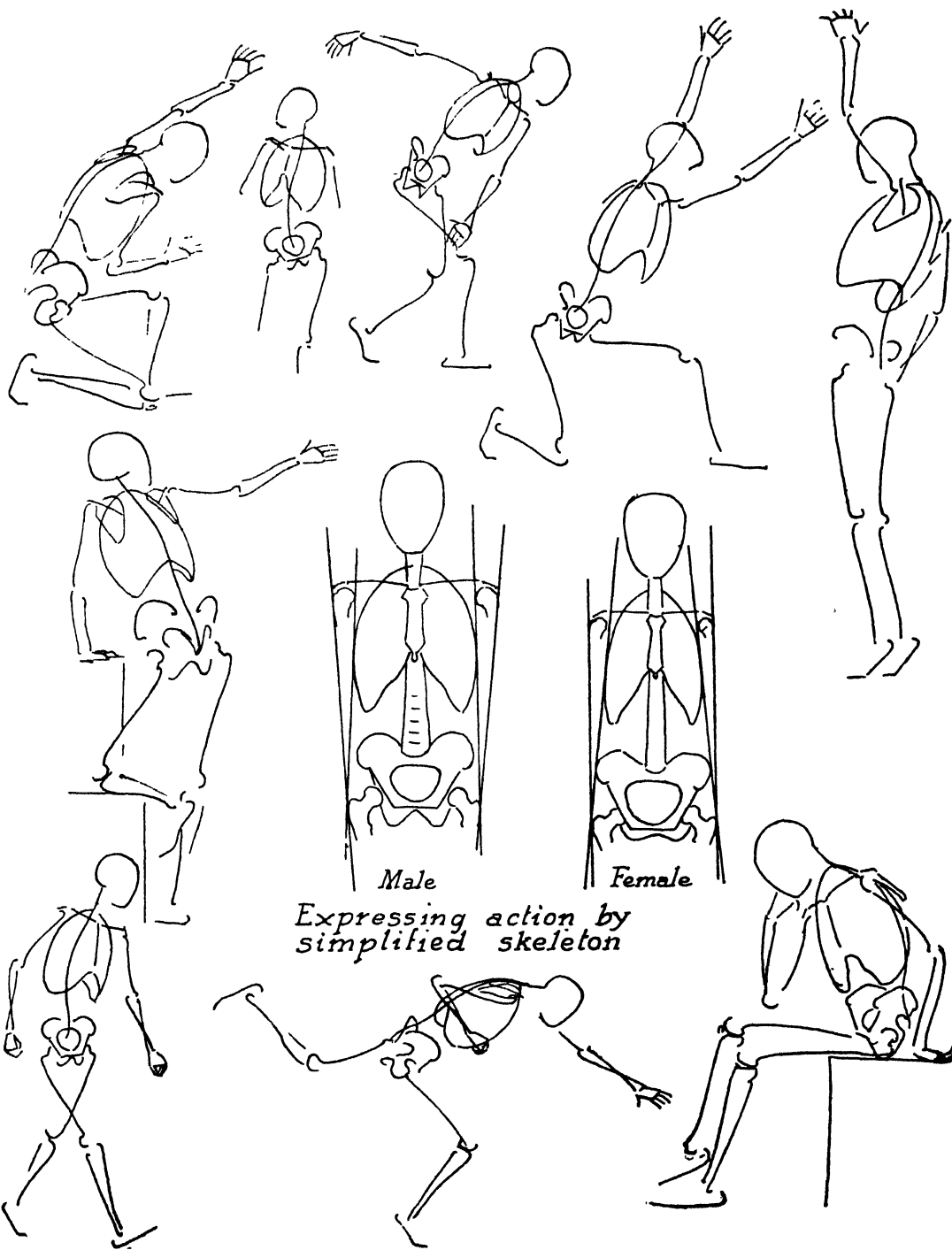


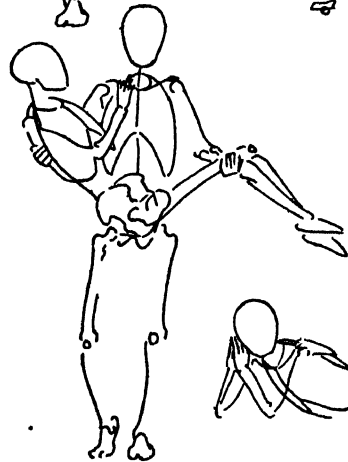
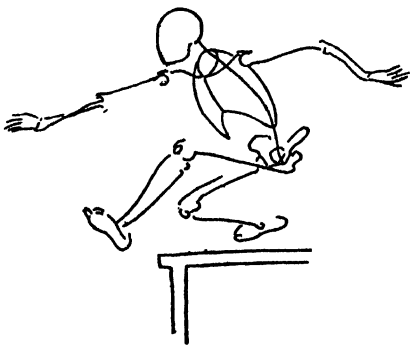
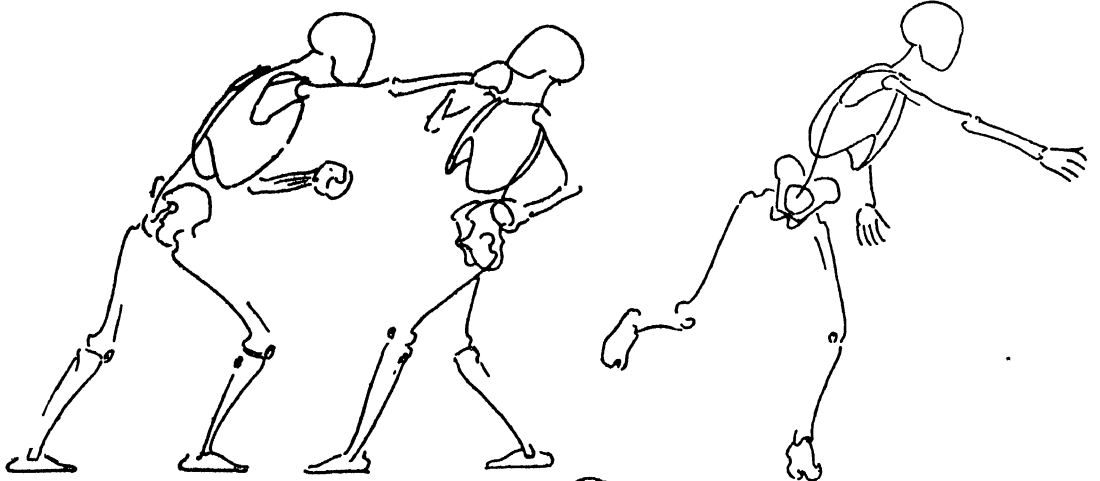
METHOD OF DRAWING

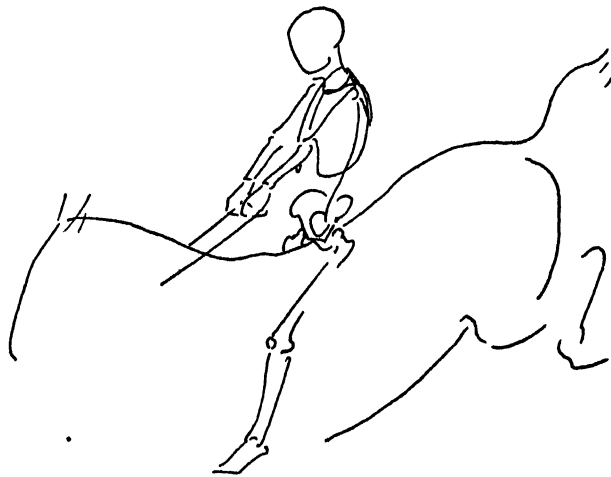
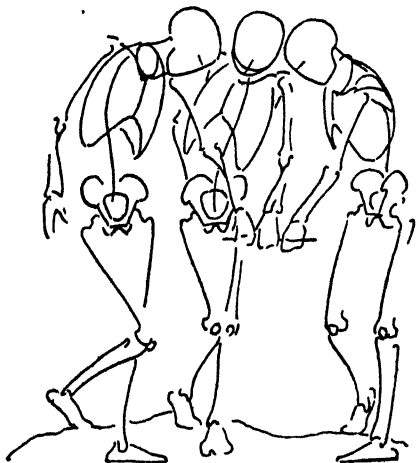
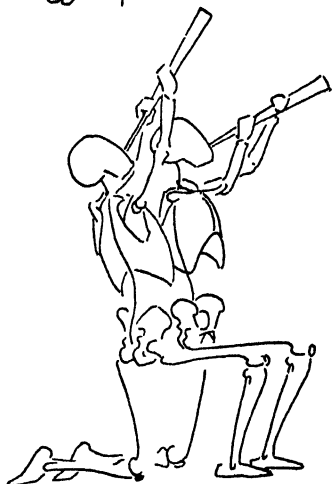
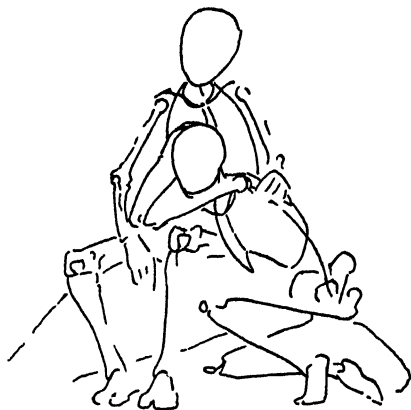
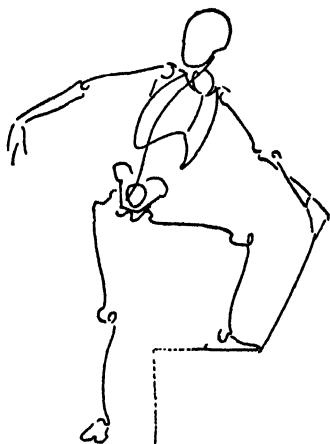
From Life or from the Cast

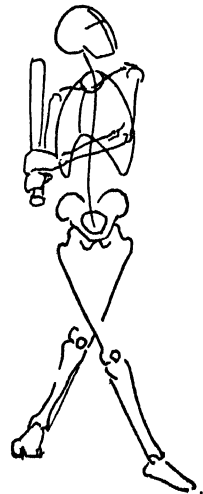
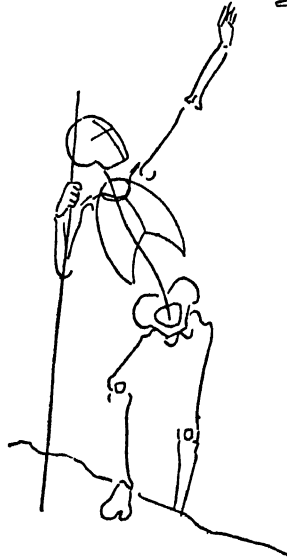
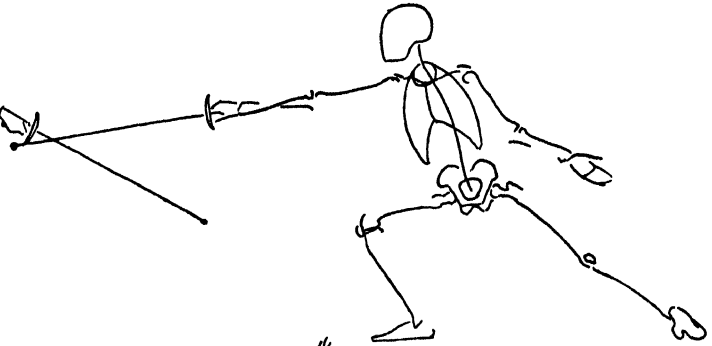
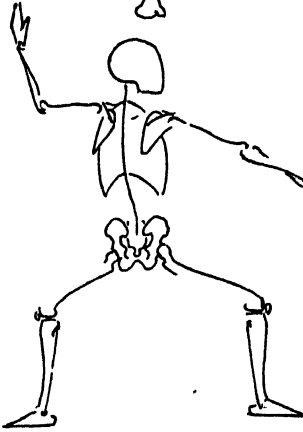
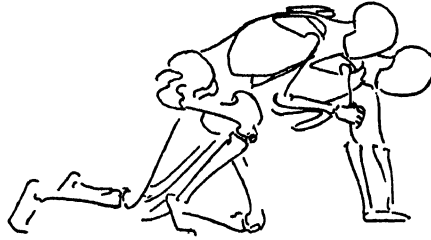
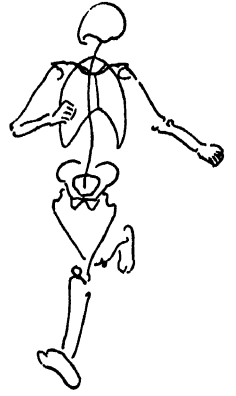
1. Find the center of the paper by drawing lines from corner to corner. This is done to help center the study.
2. Measure with the eye or pencil to find the center of the subject and make a line at that point as related to the center of the paper. Draw a line at the head and another at the feet. With free lines search for the rhythm of the pose, to help visualize the figure and to place it on the paper the size intended. Draw lightly so that the mental impression of the figure is not obliterated by a heavy drawing, and corrections can be easily made.
3. Decide where the pit of the neck should be placed and draw a perpendicular line from this point (if a front view) to the feet. If a back view, draw the perpendicular line from the seventh cervical vertebra to the feet. Find the line of the shoulders, giving the angle of their positions. If a standing figure, first draw the leg on which there is most weight, to obtain the proper balance of the figure.
4. Give the line showing the angle of the position of the pelvis. Indicate a line through the knee-caps. Draw the torso, indicating its bulk, marking the width of shoulders, hips, neck and head. Block with straight lines going beyond the intersections to obtain a better idea of the direction of line and to avoid a cramped feeling.
5. Sketch within the lines a simplified skeleton, to check up on position of joints and bulk of chest. (Refer to pages on proportion.) See that the pit of the neck, the pubic bone, the navel, the pelvis, the knee-caps and the inner ankles are in proper relation to each other. Compare relative sizes of head to bulk of torso, hands to face, feet to hands, arms to legs, and thickness of the neck to that of the head, leg and arm.
6. Go over the outline, perfecting it, searching for character and for grace of line.
7. Indicate the outline of the planes and of the principal shadows.
8. Fill in the planes in large surfaces, and connect the shadows as much as possible.
9. Without losing their mass, model the planes keeping well in mind the direction of light. In drawing the head, decide on the bulk and draw in the planes of the face (see Part III), then the eyes, the mouth and the nose last. It is easier to fit a head on a figure, than to fit a figure to a head.

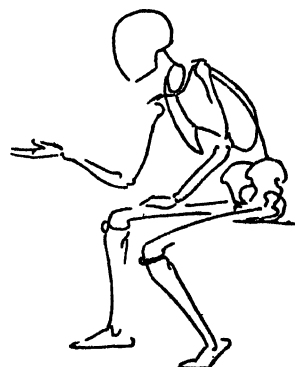
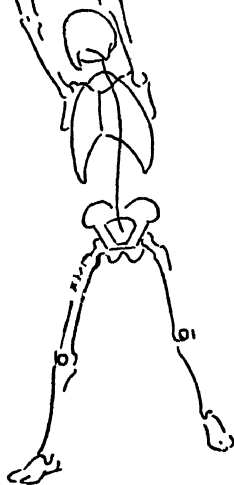
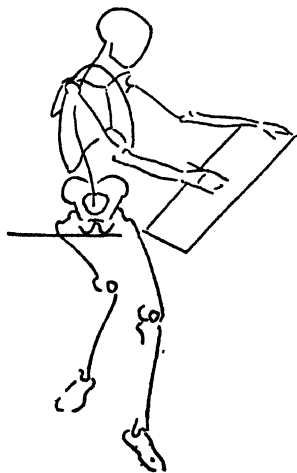
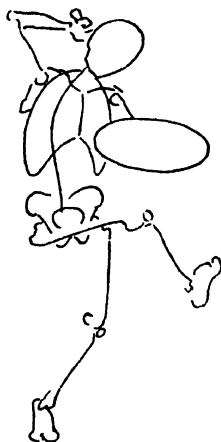
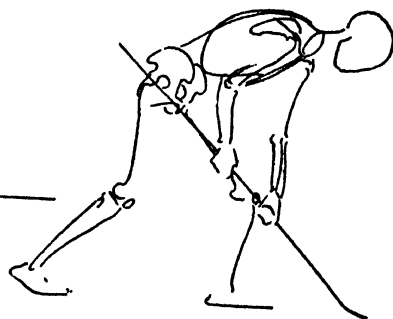


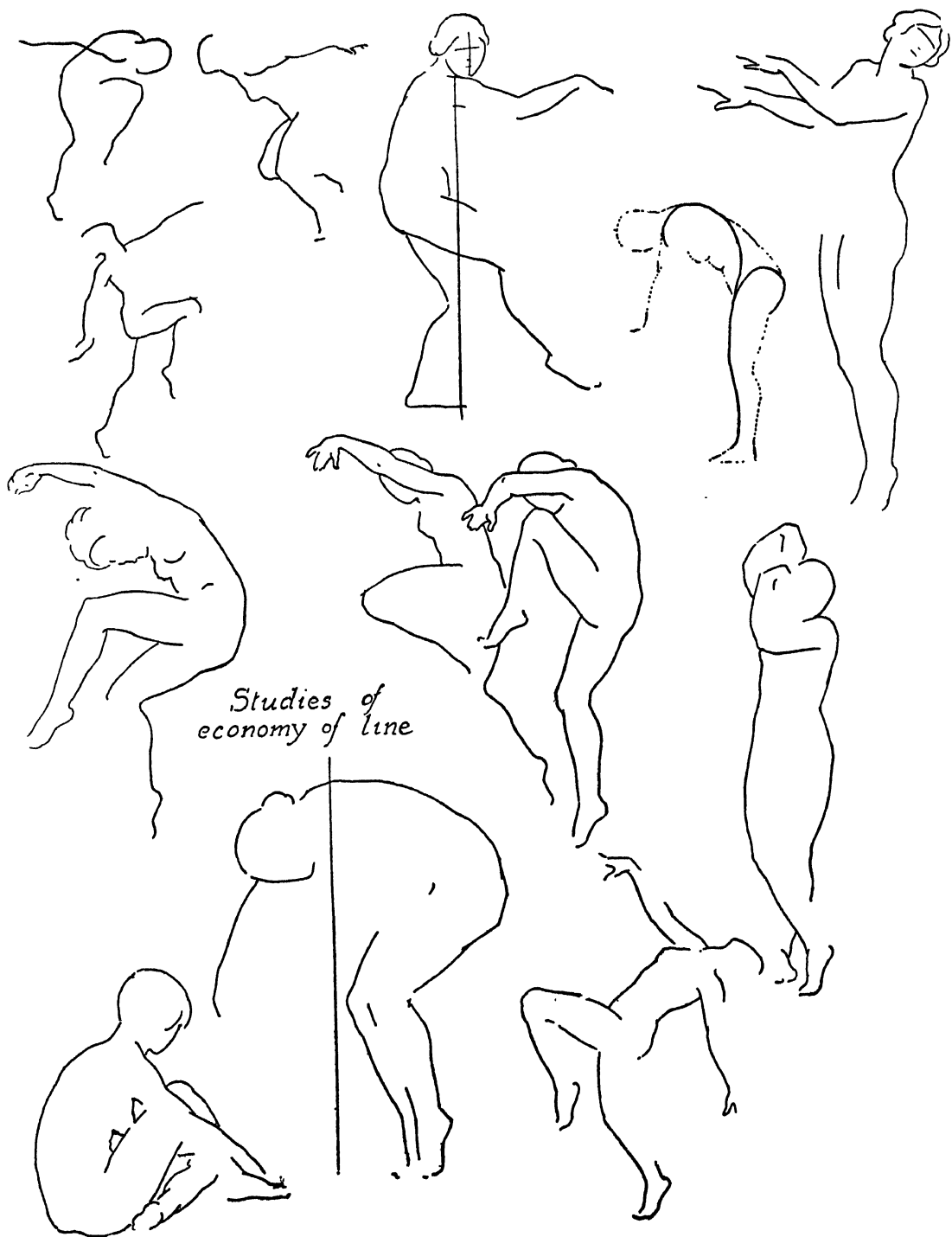




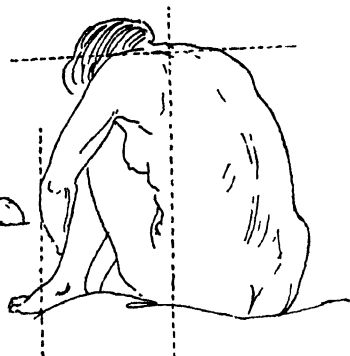
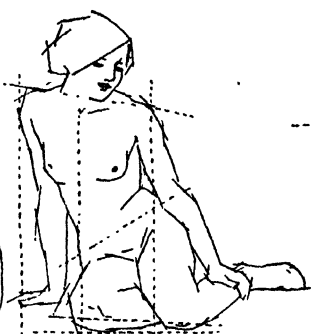
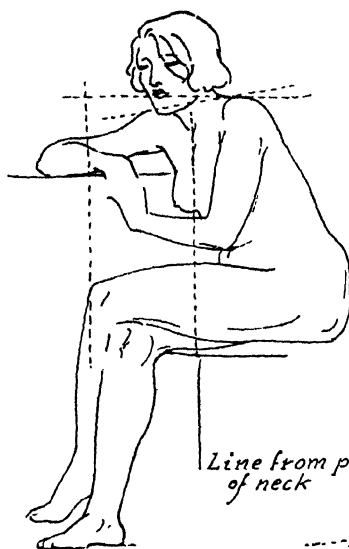








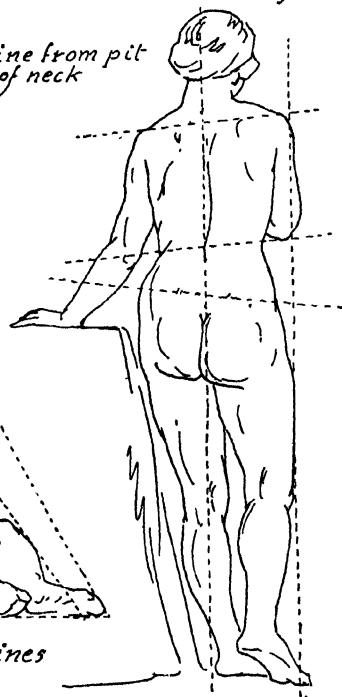
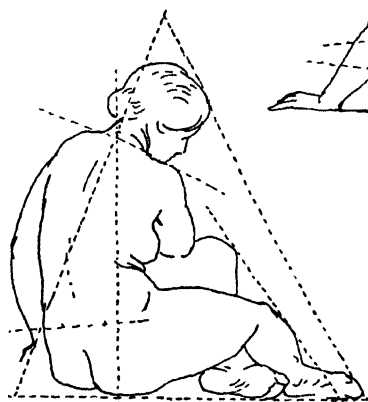
*Studies of
economy of line*



Blocking

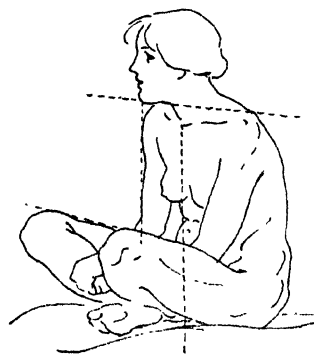
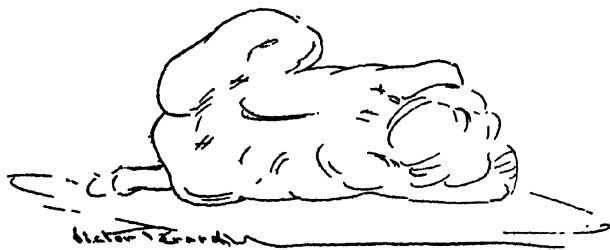
*Line from pit
of neck*

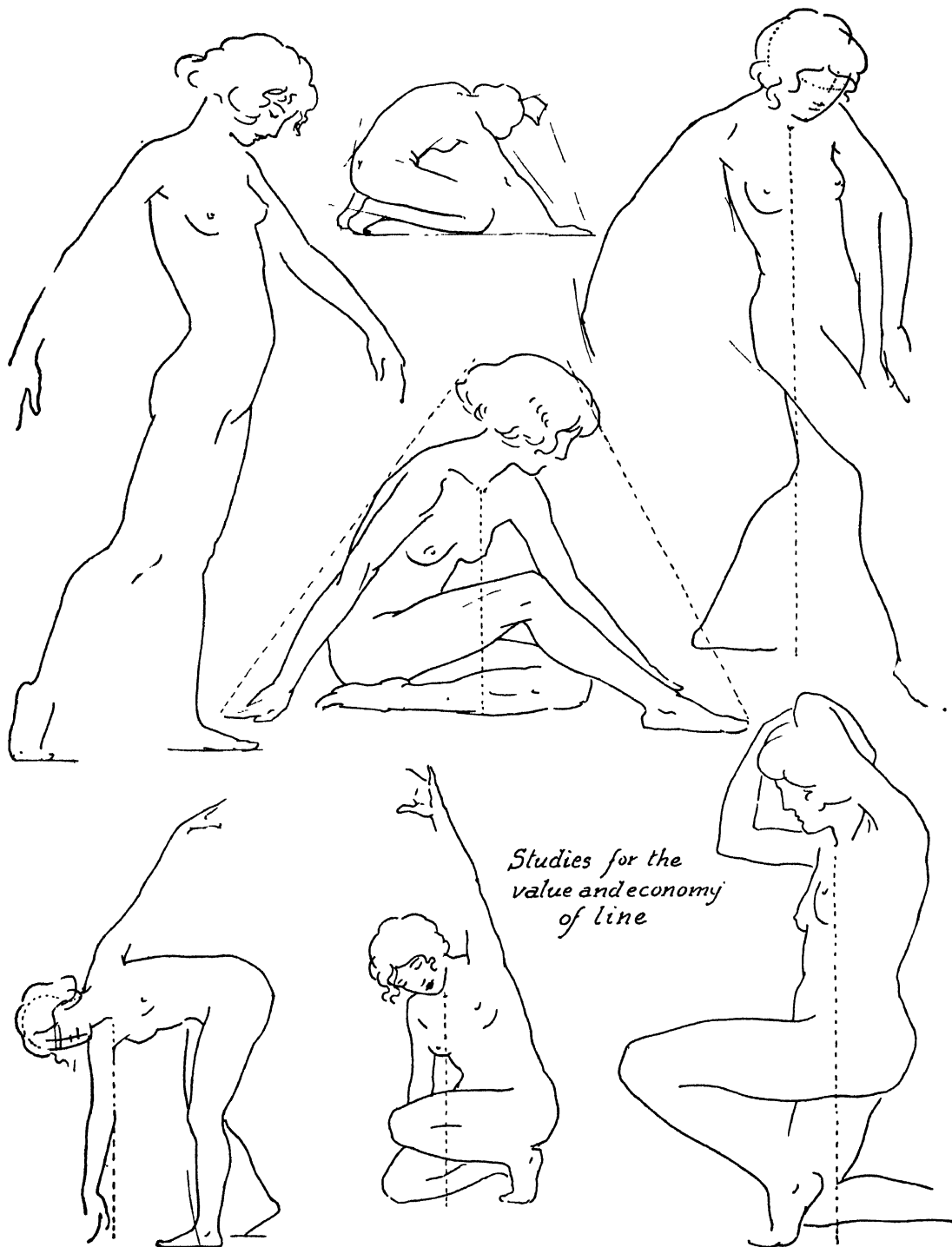
*Line from
seventh
cervical vertebra*



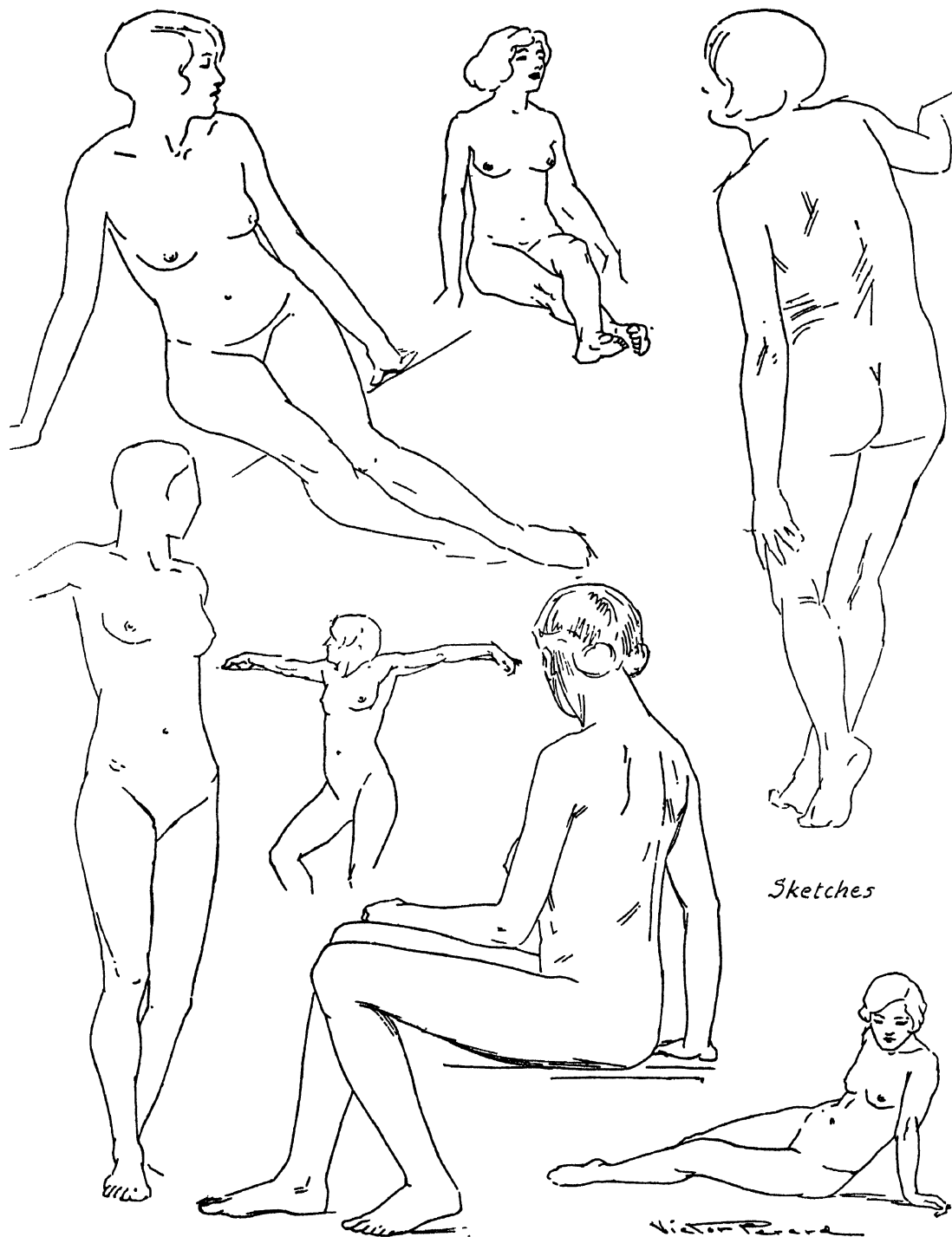
Impression

*Use of imaginary lines
to obtain spaces*



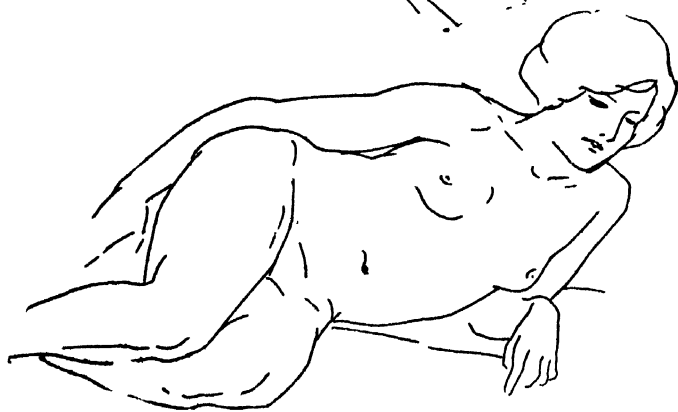
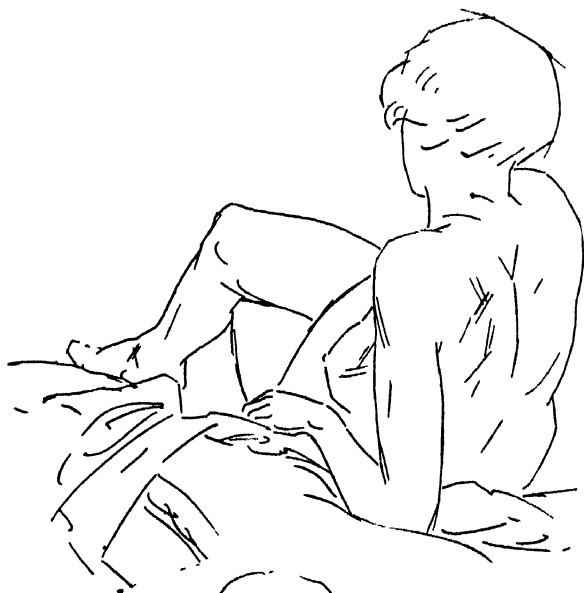
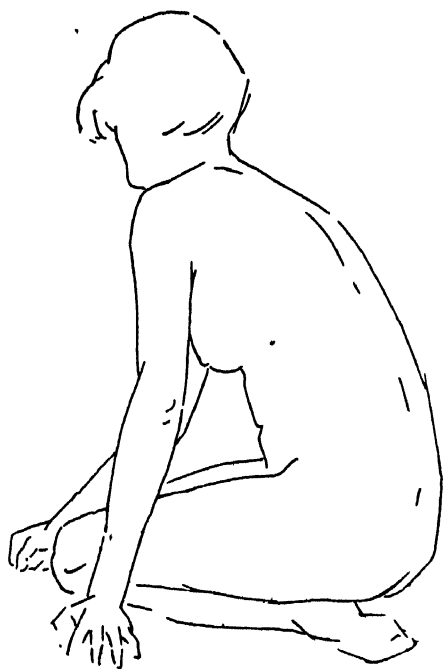


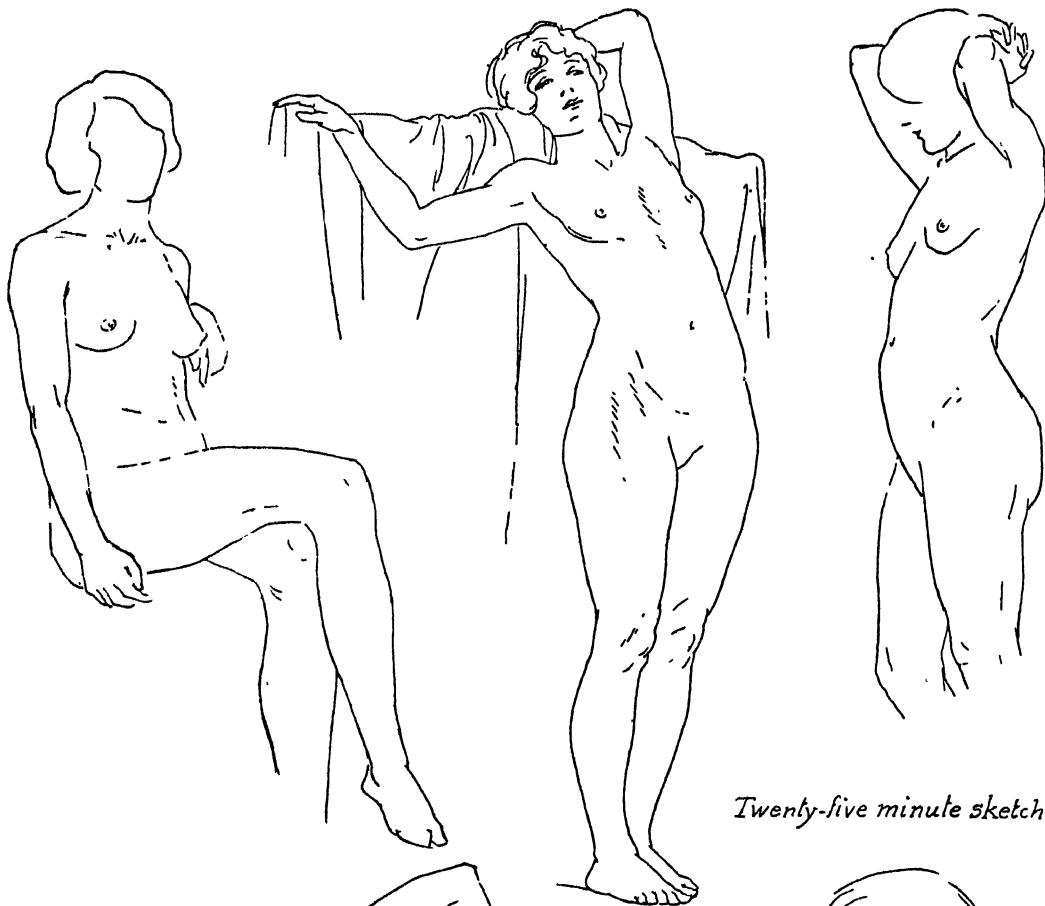
*Studies for the
value and economy
of line*



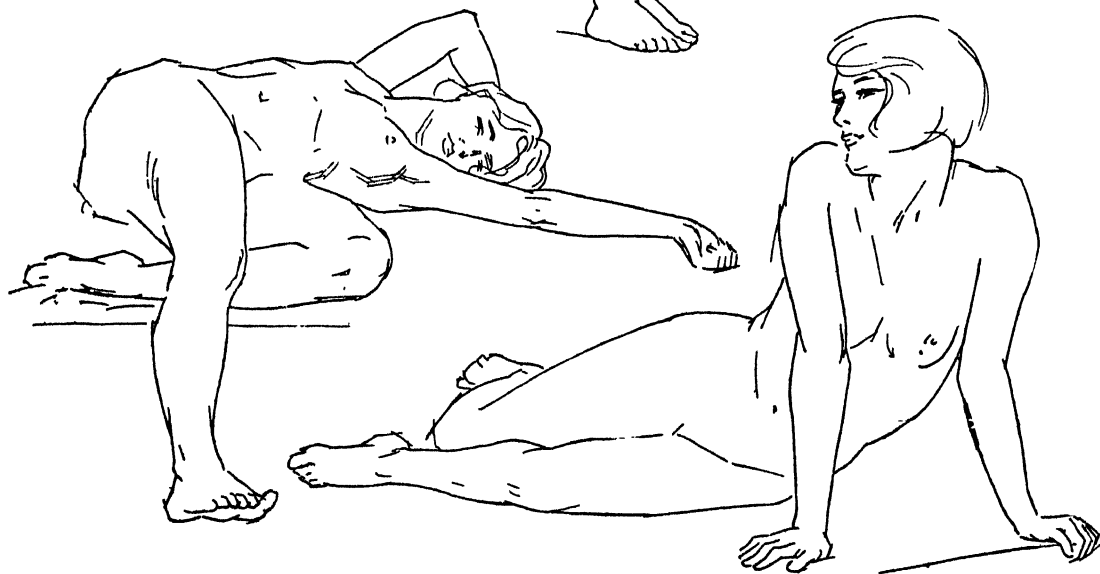
Sketches

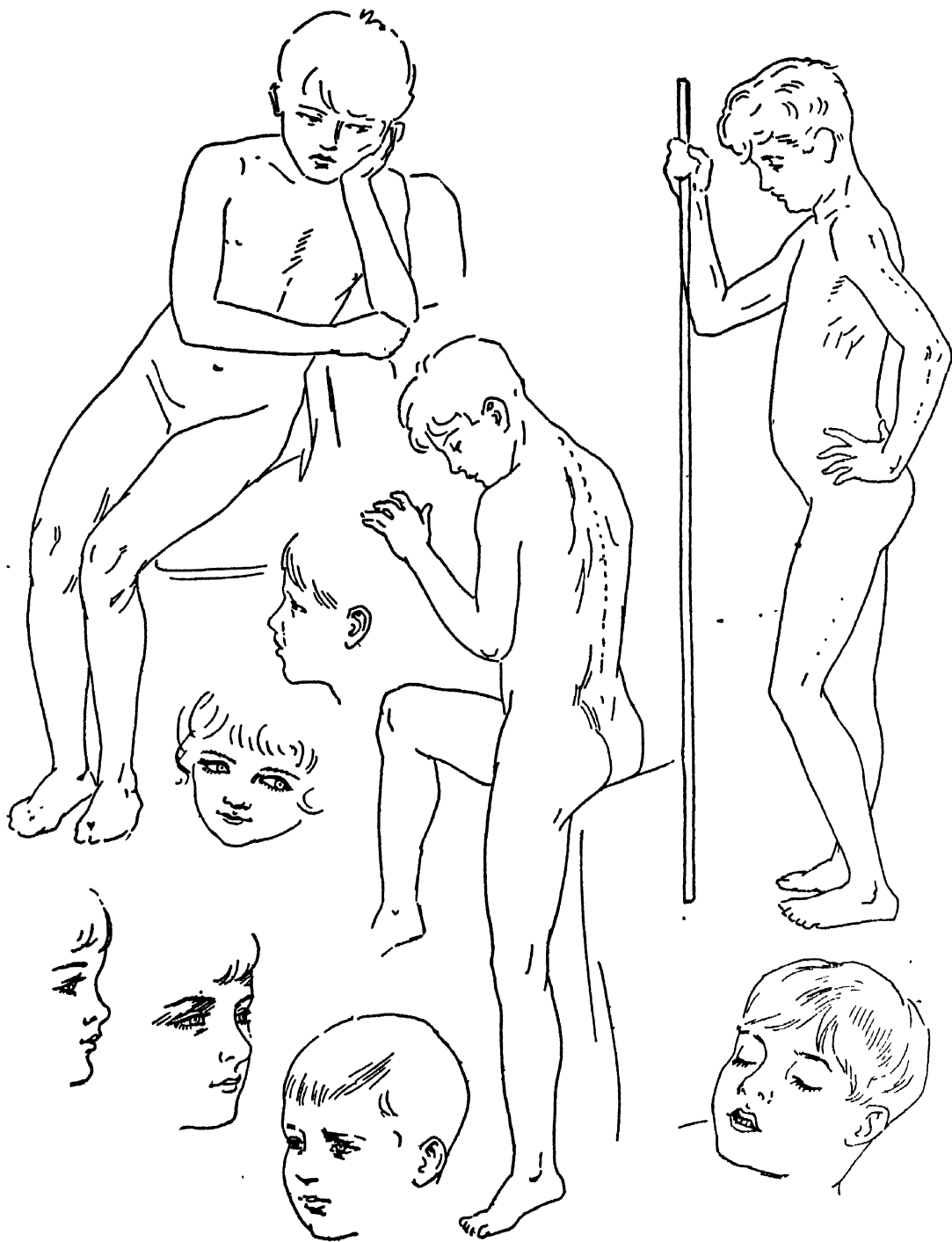
Victor Perera

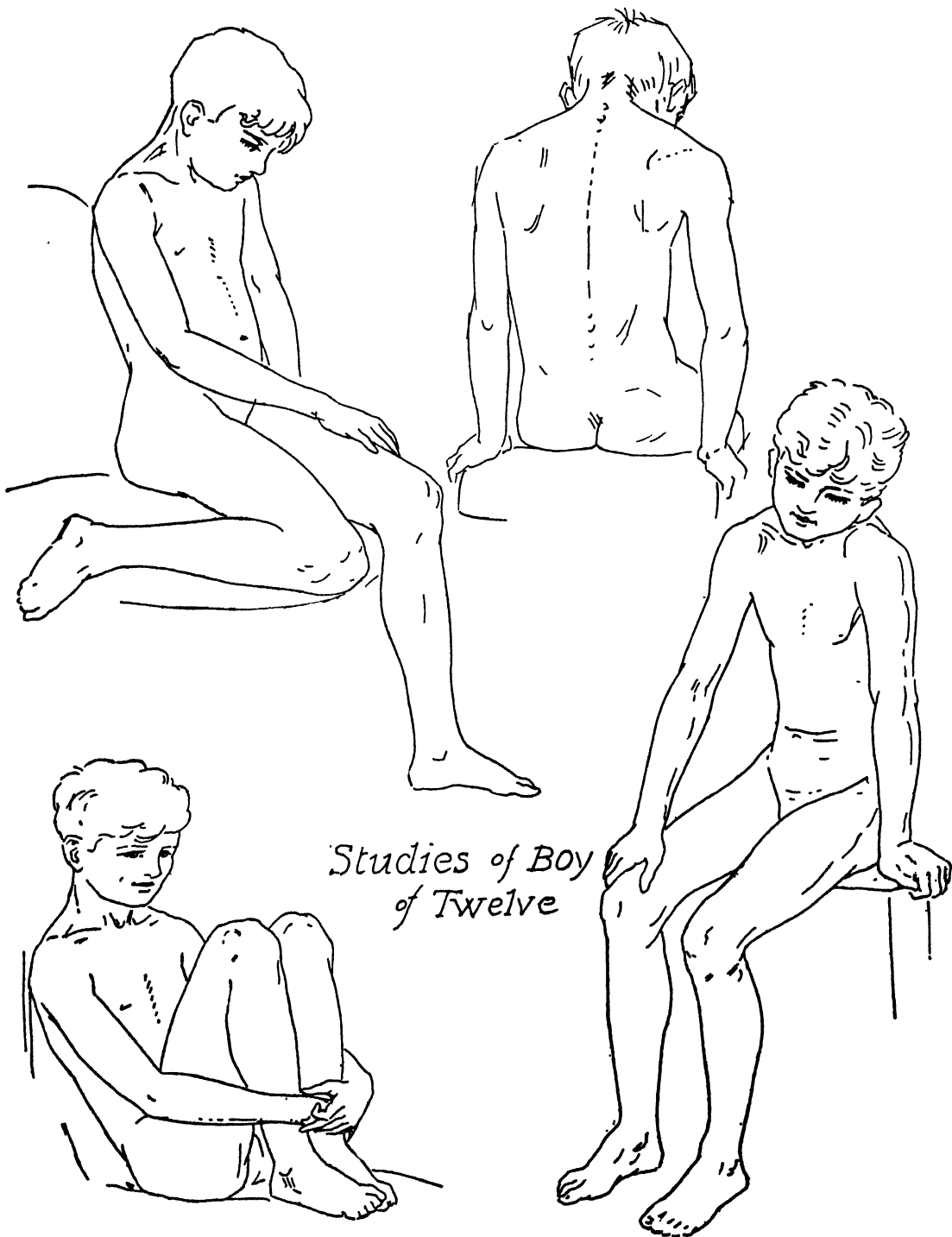




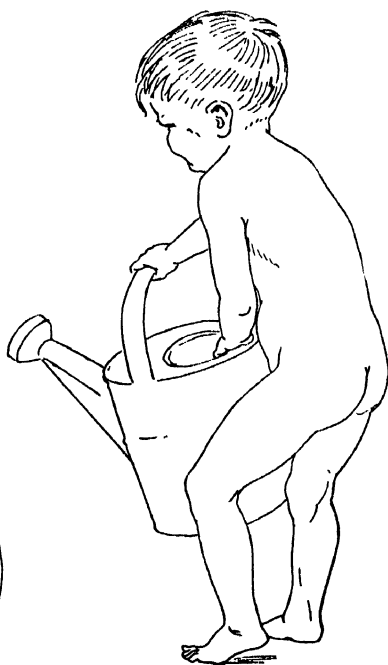
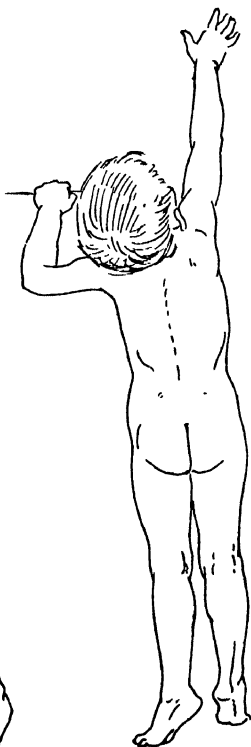
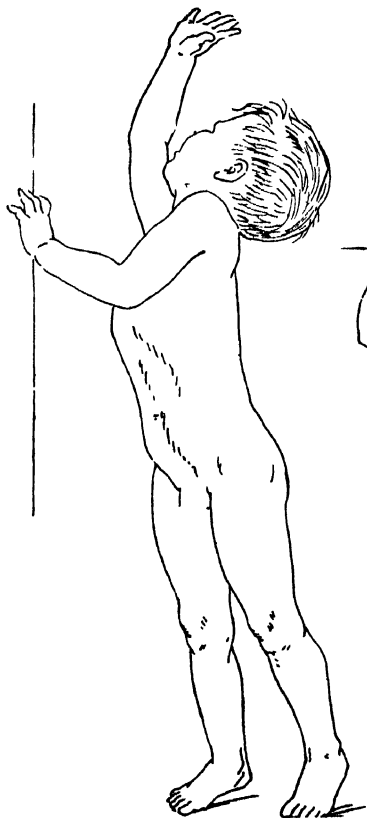
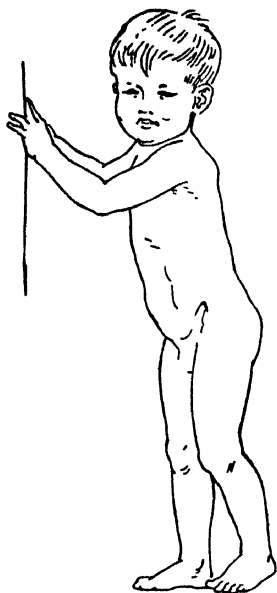
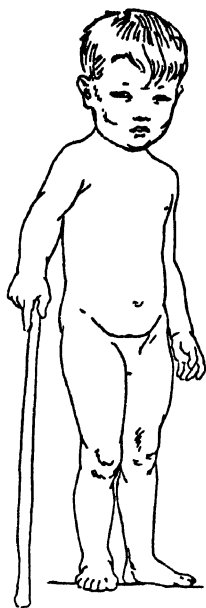
Twenty-five minute sketches



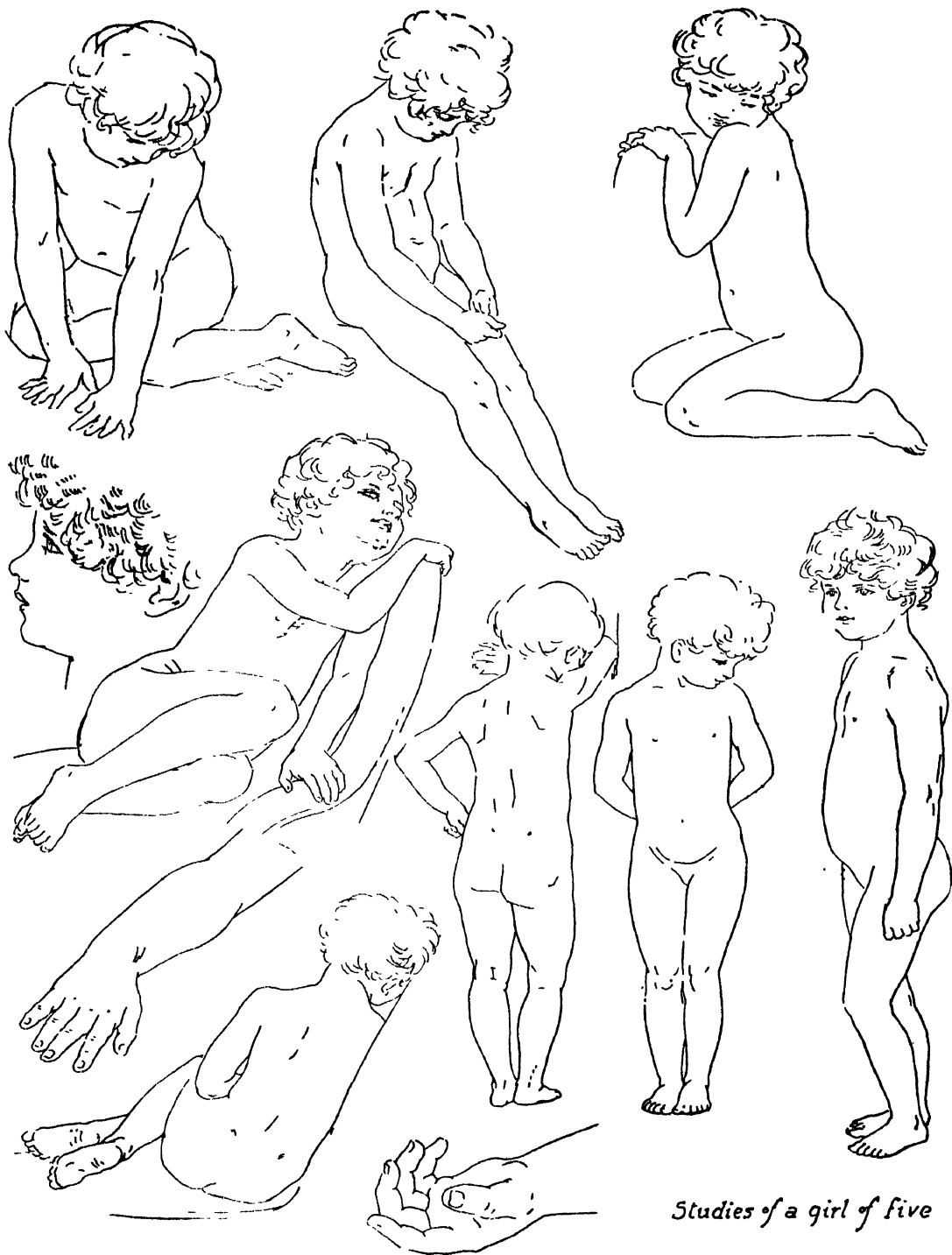




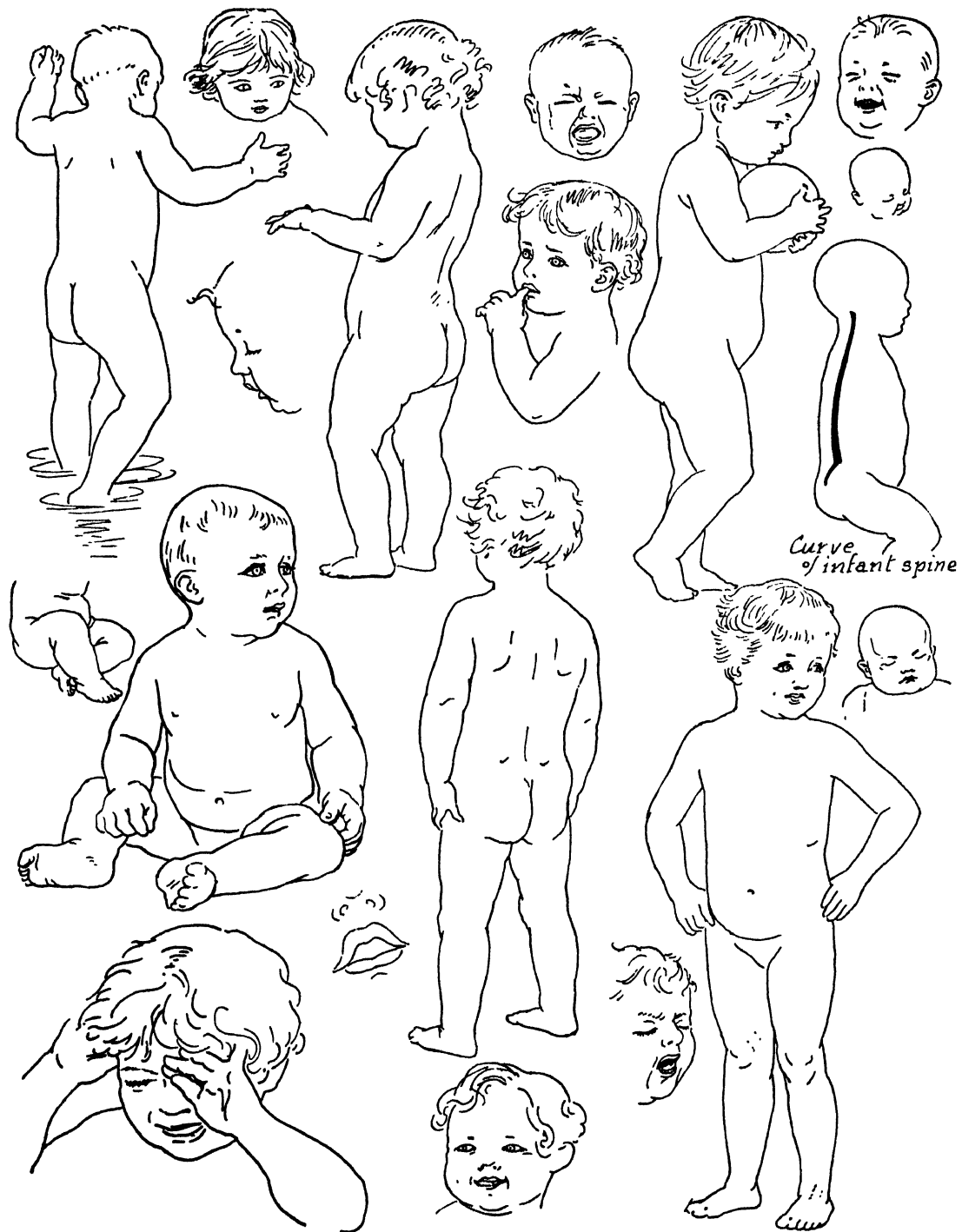
*Studies of Boy
of Twelve*



Sketches of boy three years old

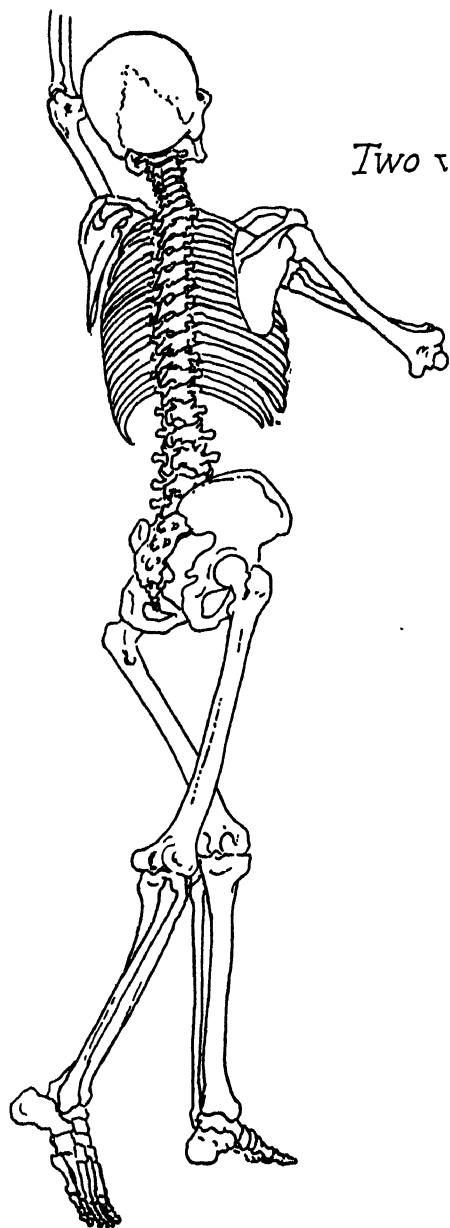


Studies of a girl of five

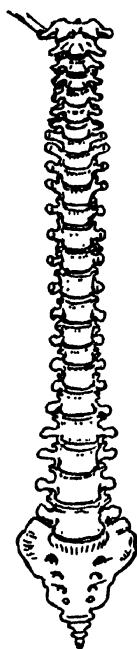
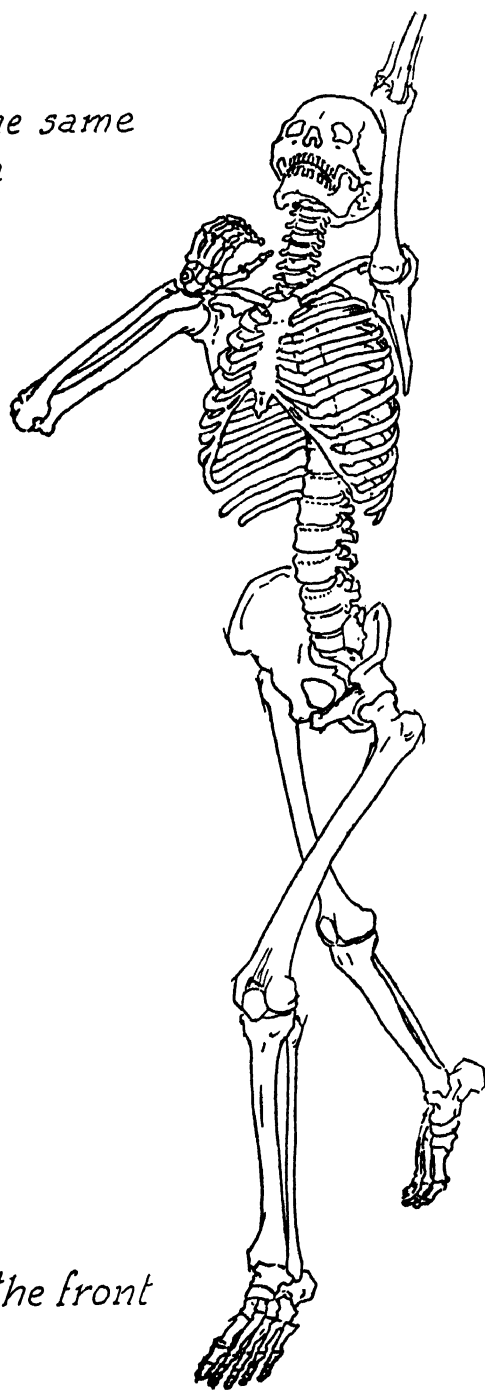




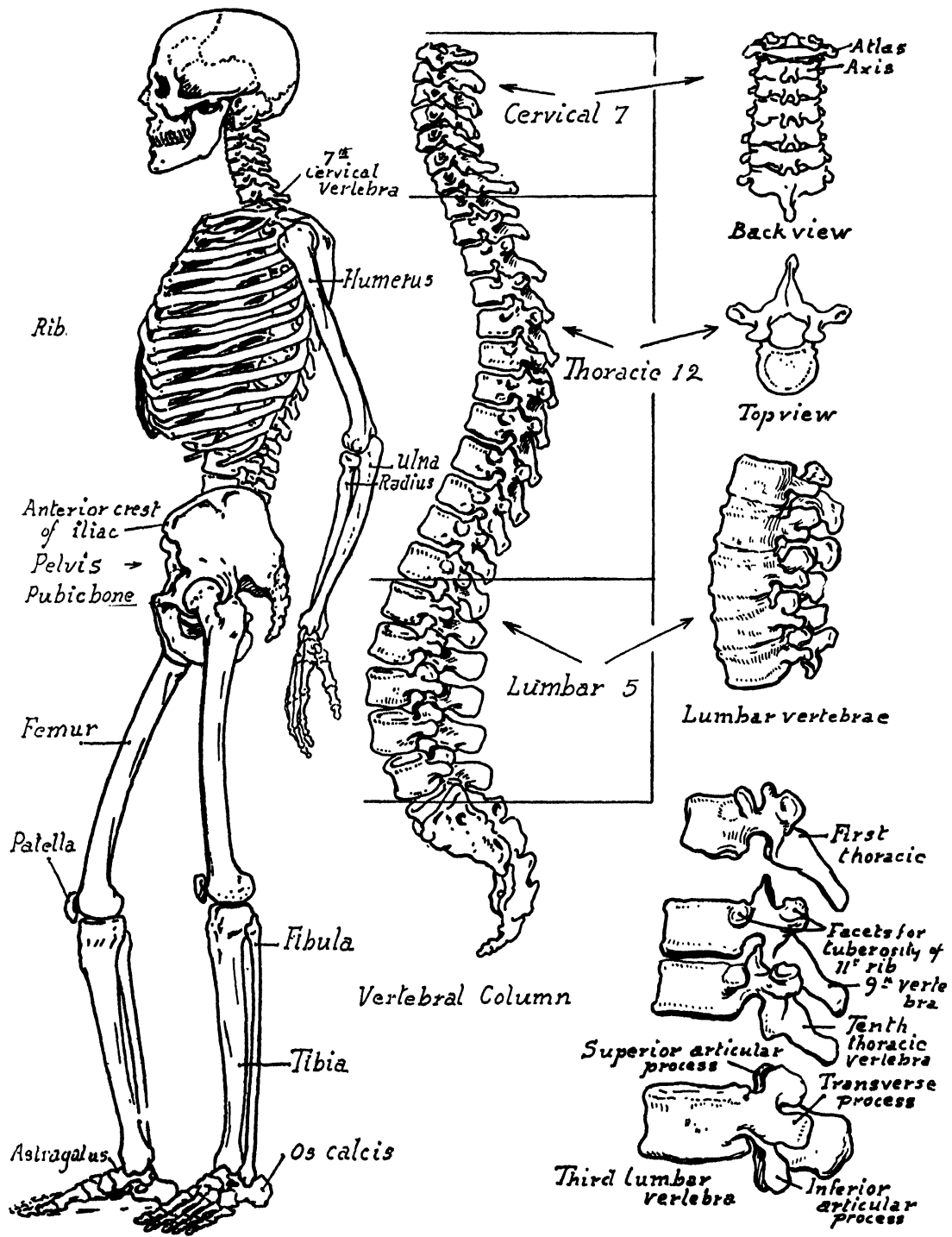
PART II
THE SKELETON

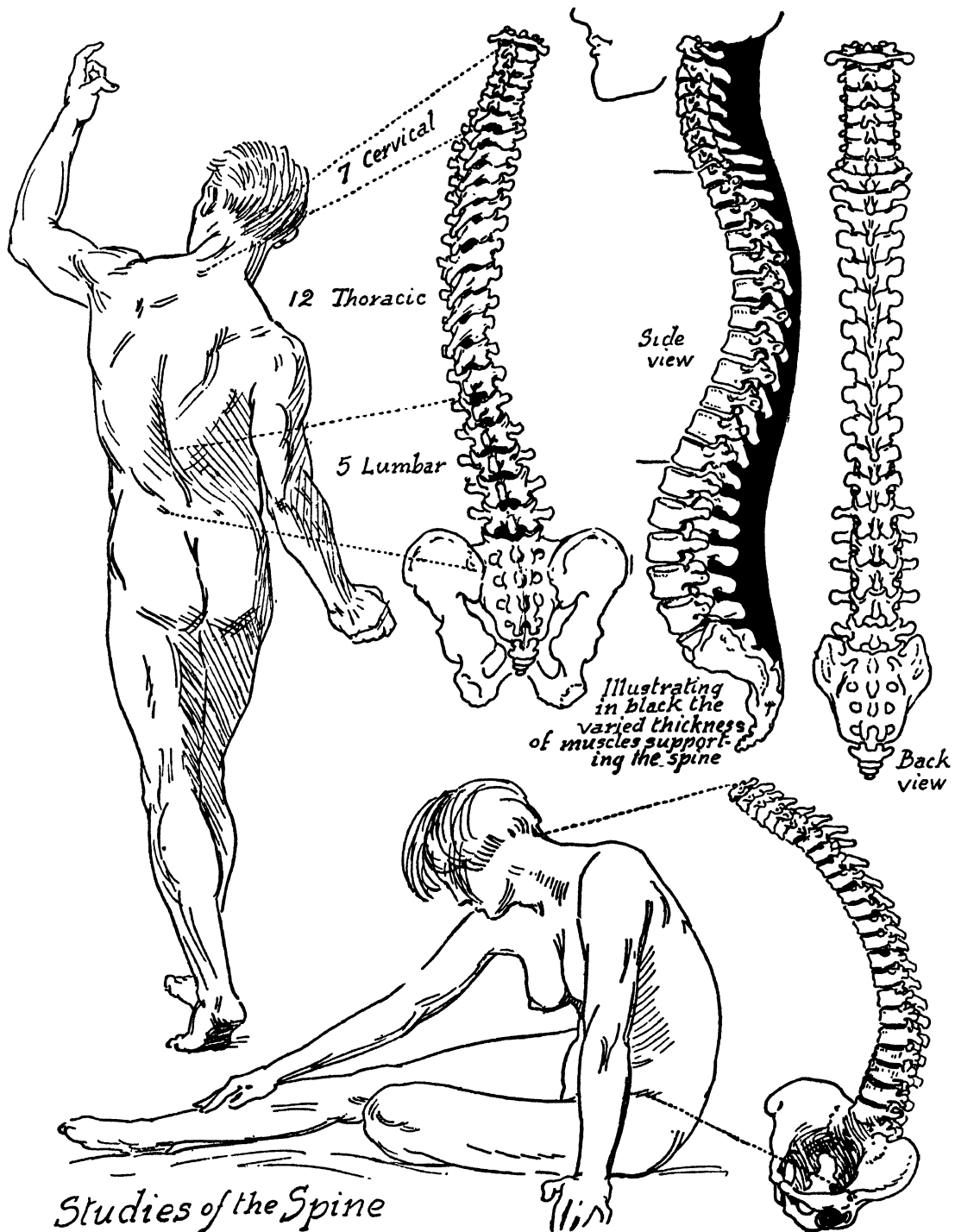


*Two views of the same
skeleton*

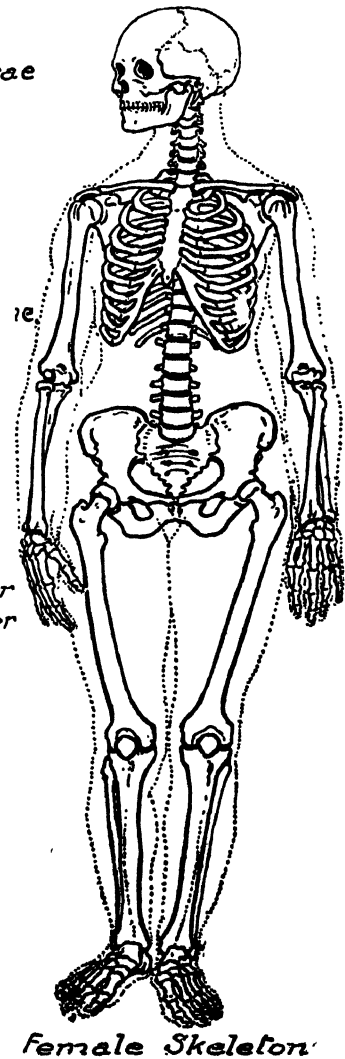
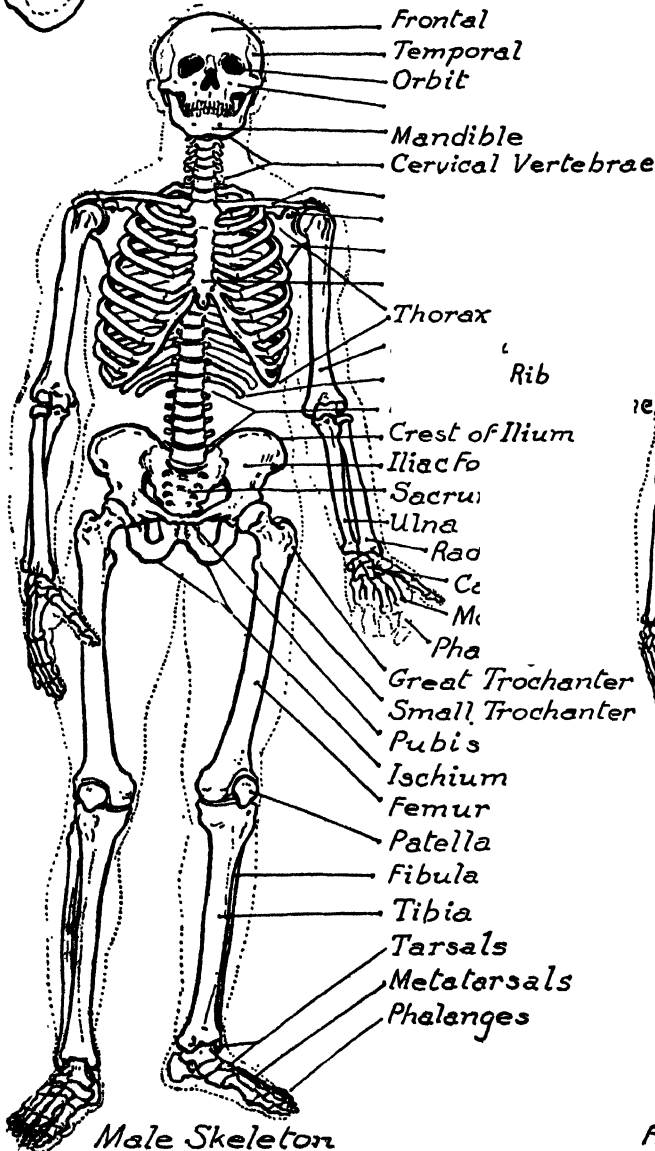
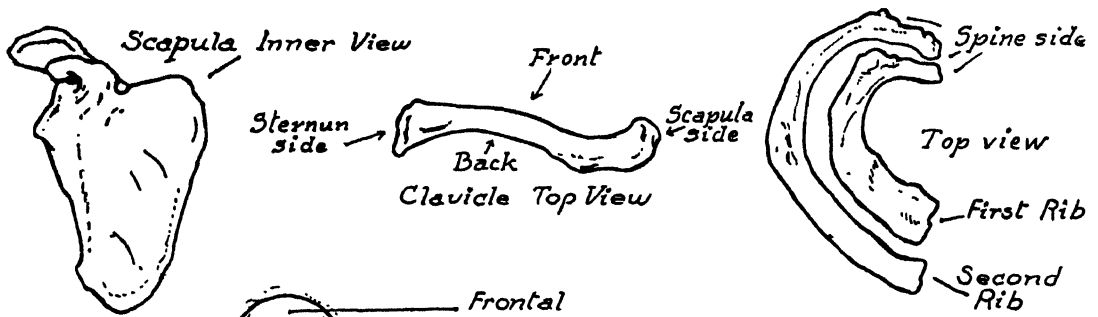


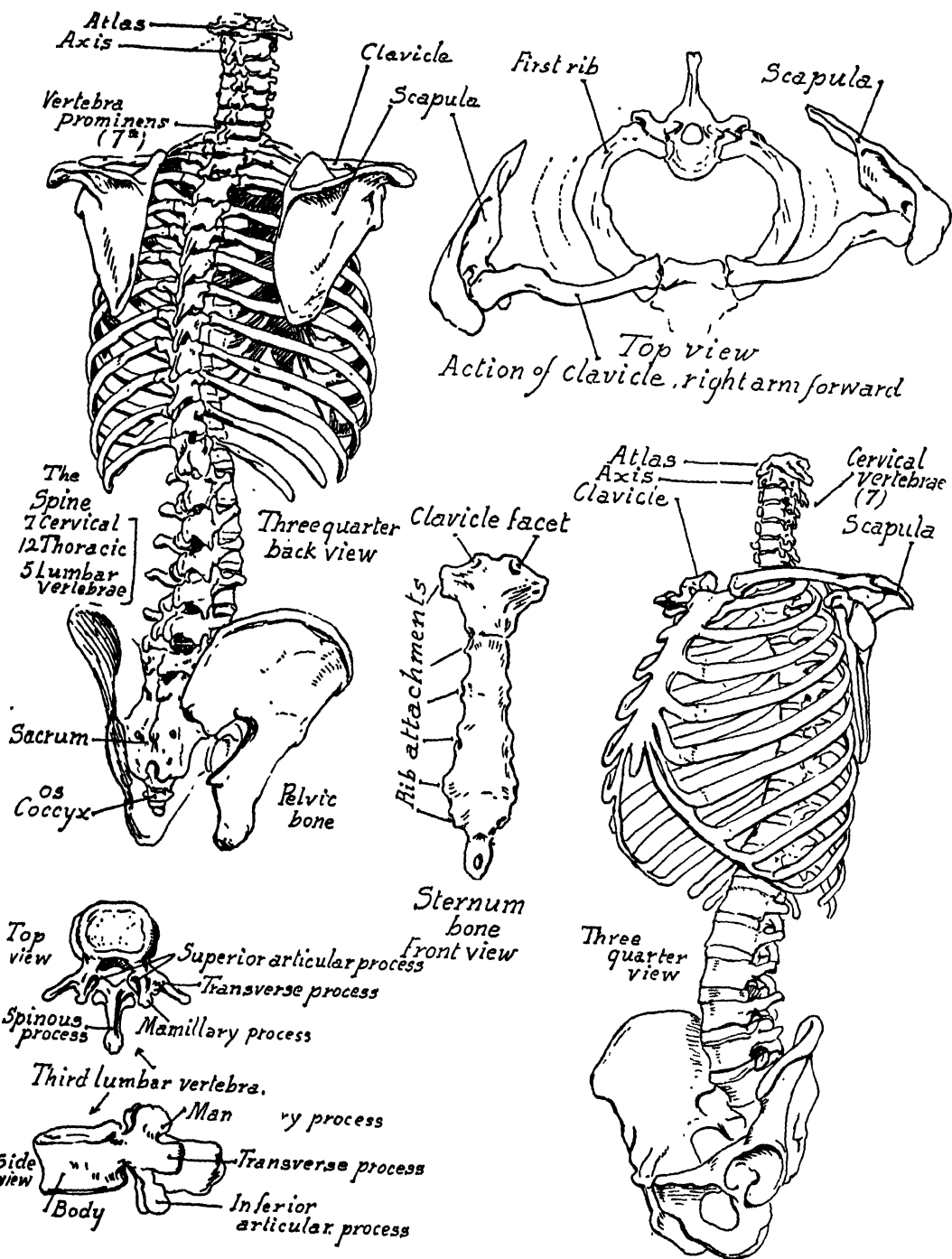
The spine from the front





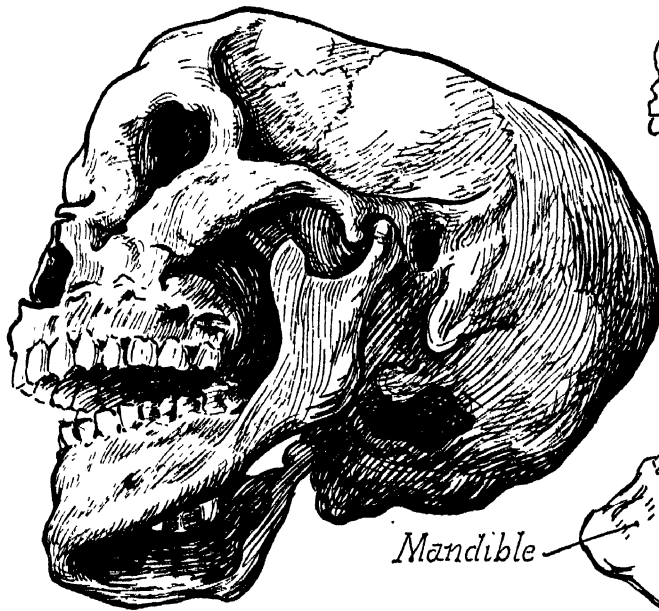
Studies of the Spine







PART III
THE HEAD AND NECK



Infant



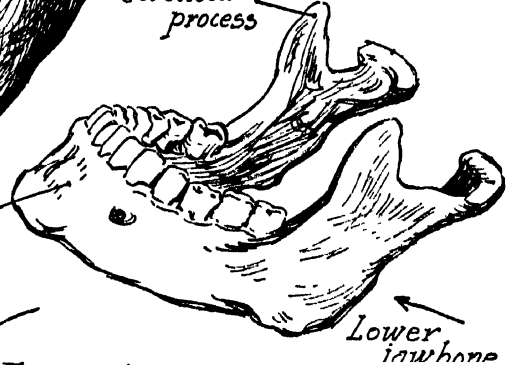
Adult



Old age

Coronoid process

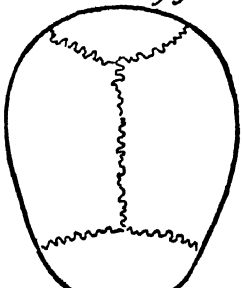
Mandible



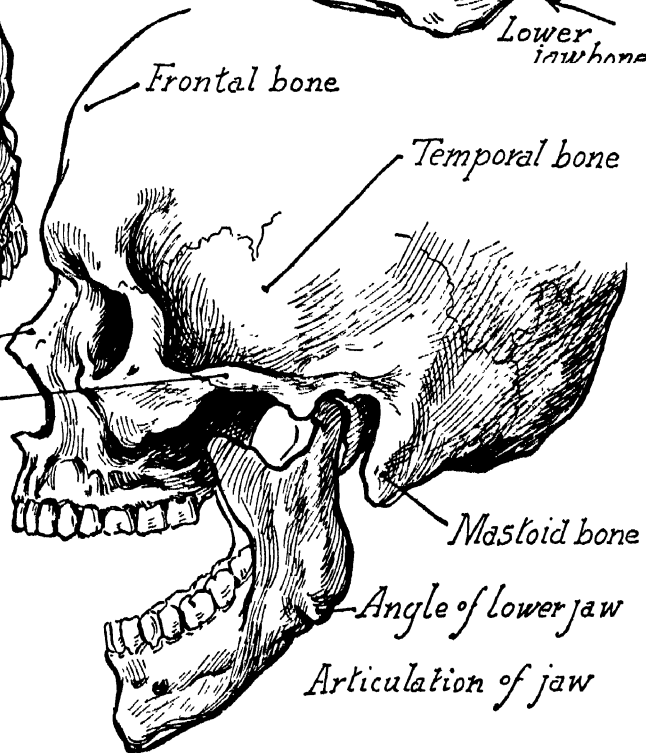
Lower jawbone



Nasal bone
Zygomatic arch



Top view



Frontal bone

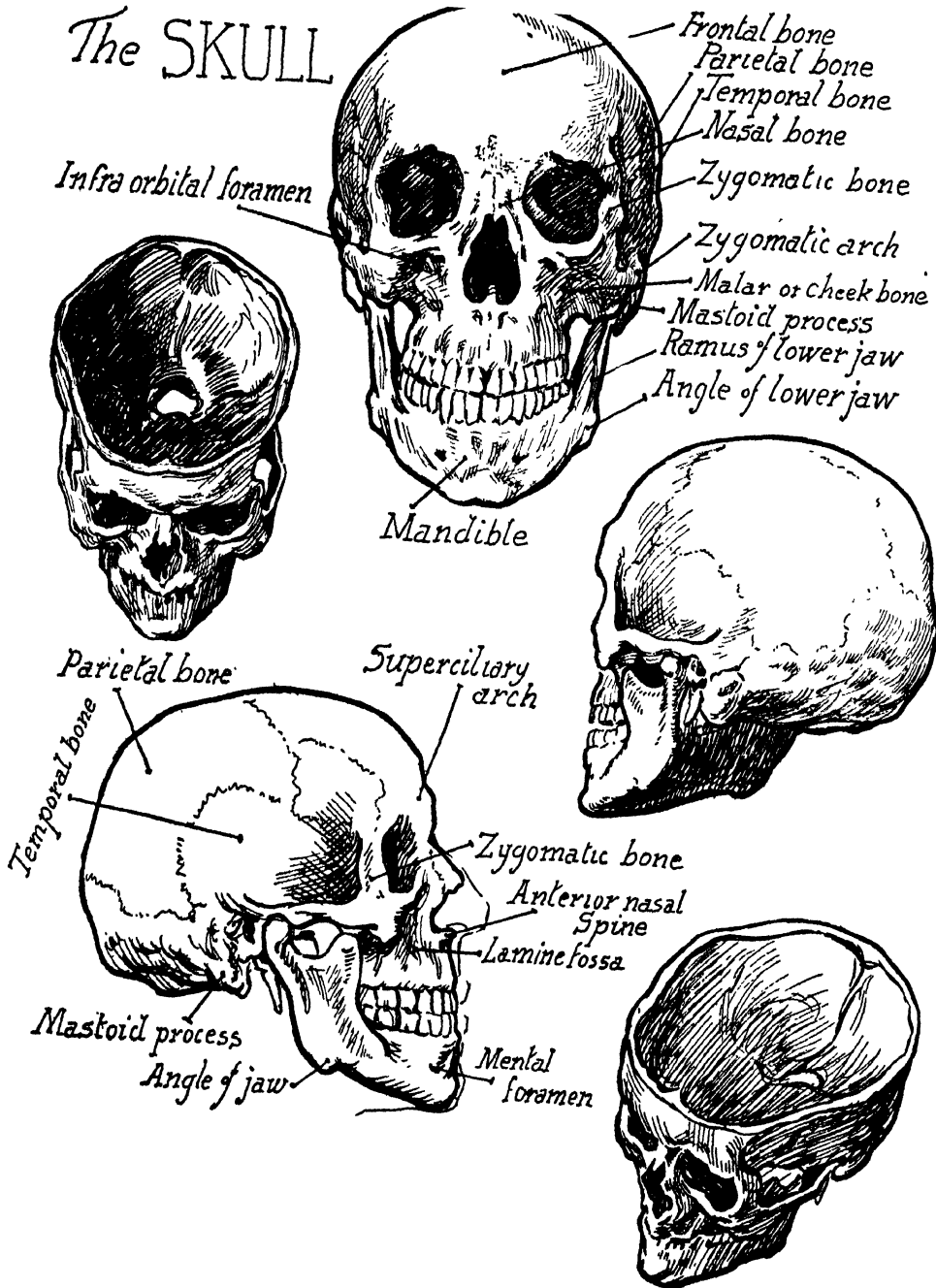
Temporal bone

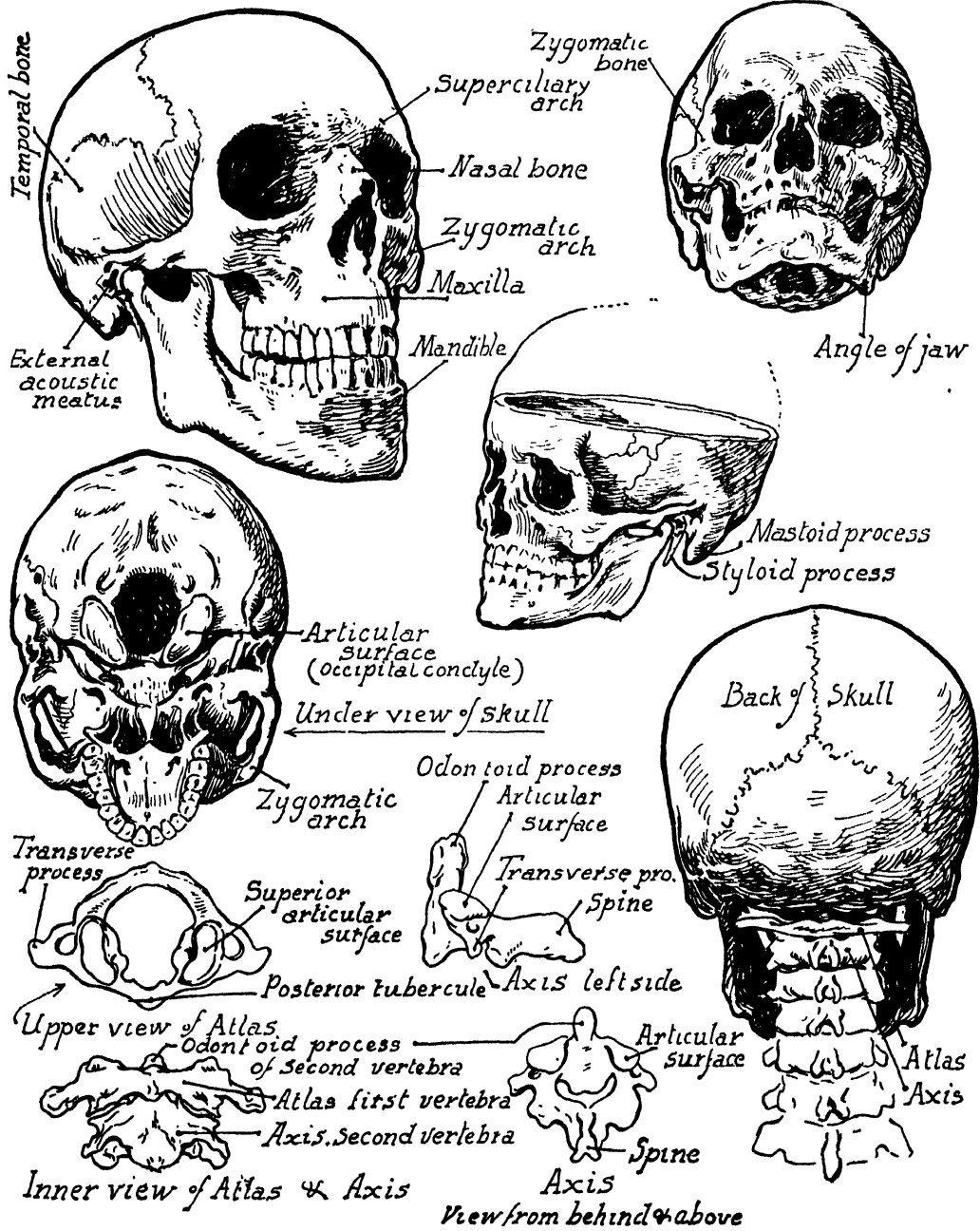
Mastoid bone

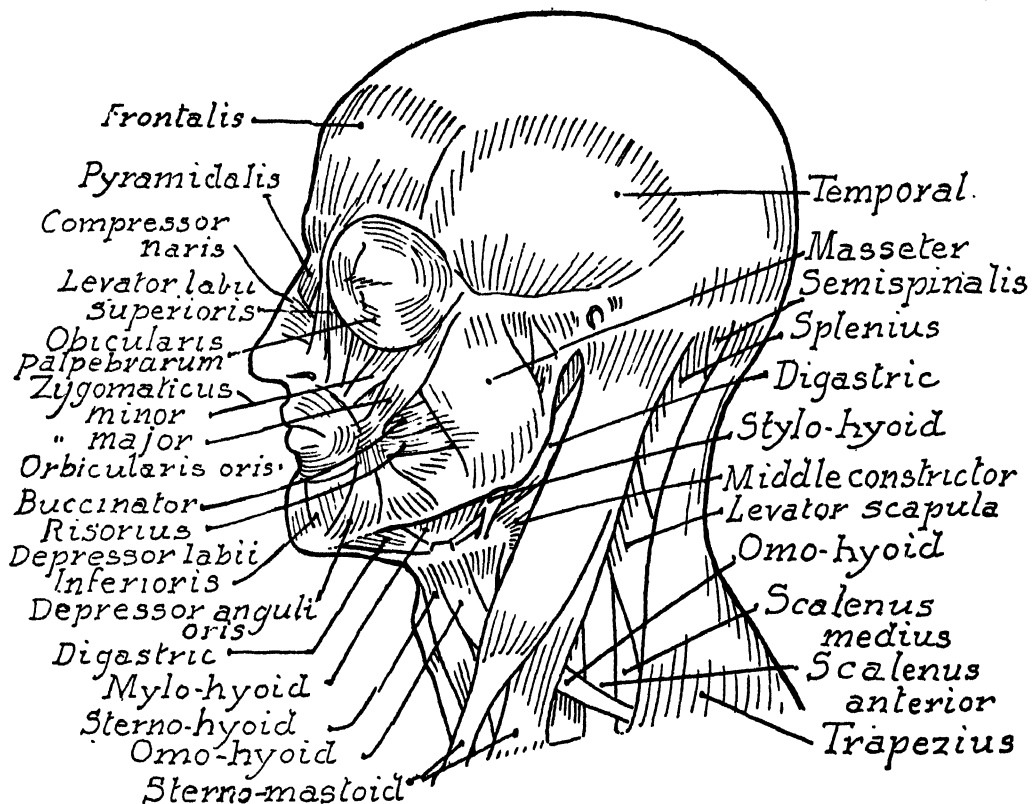
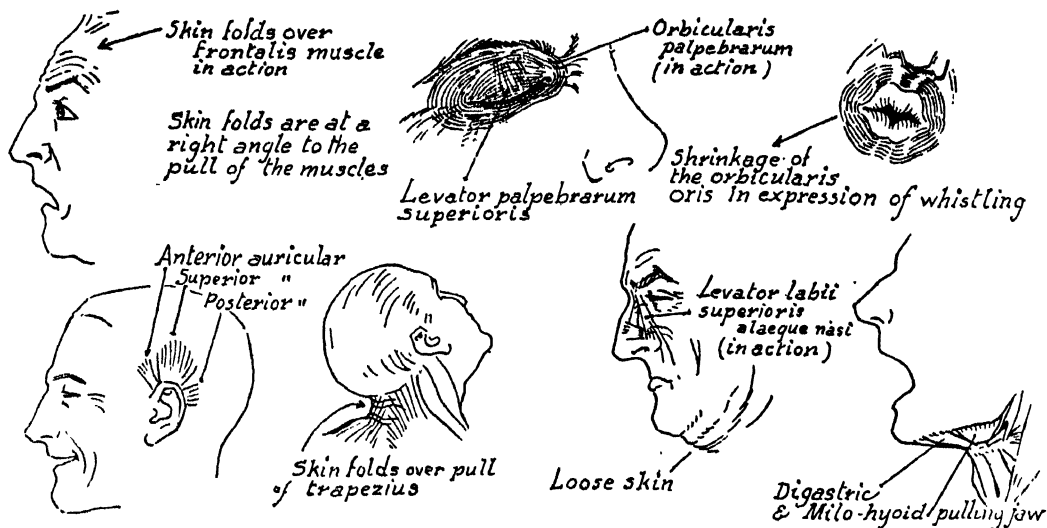
Angle of lower jaw

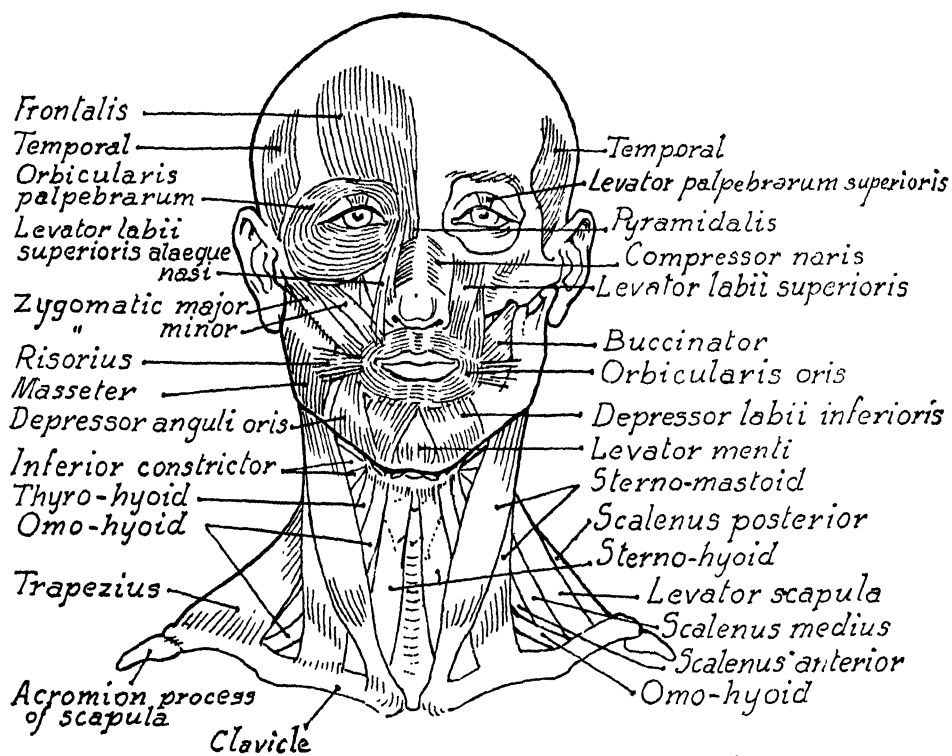
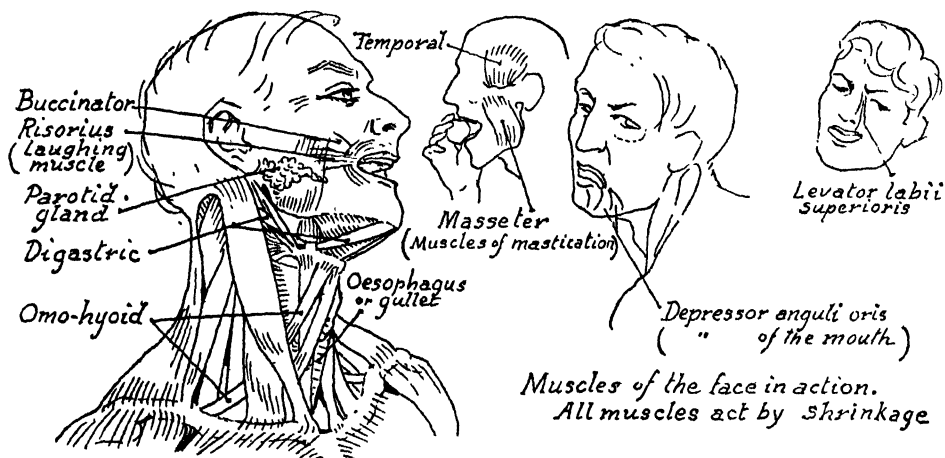
Articulation of jaw

The SKULL



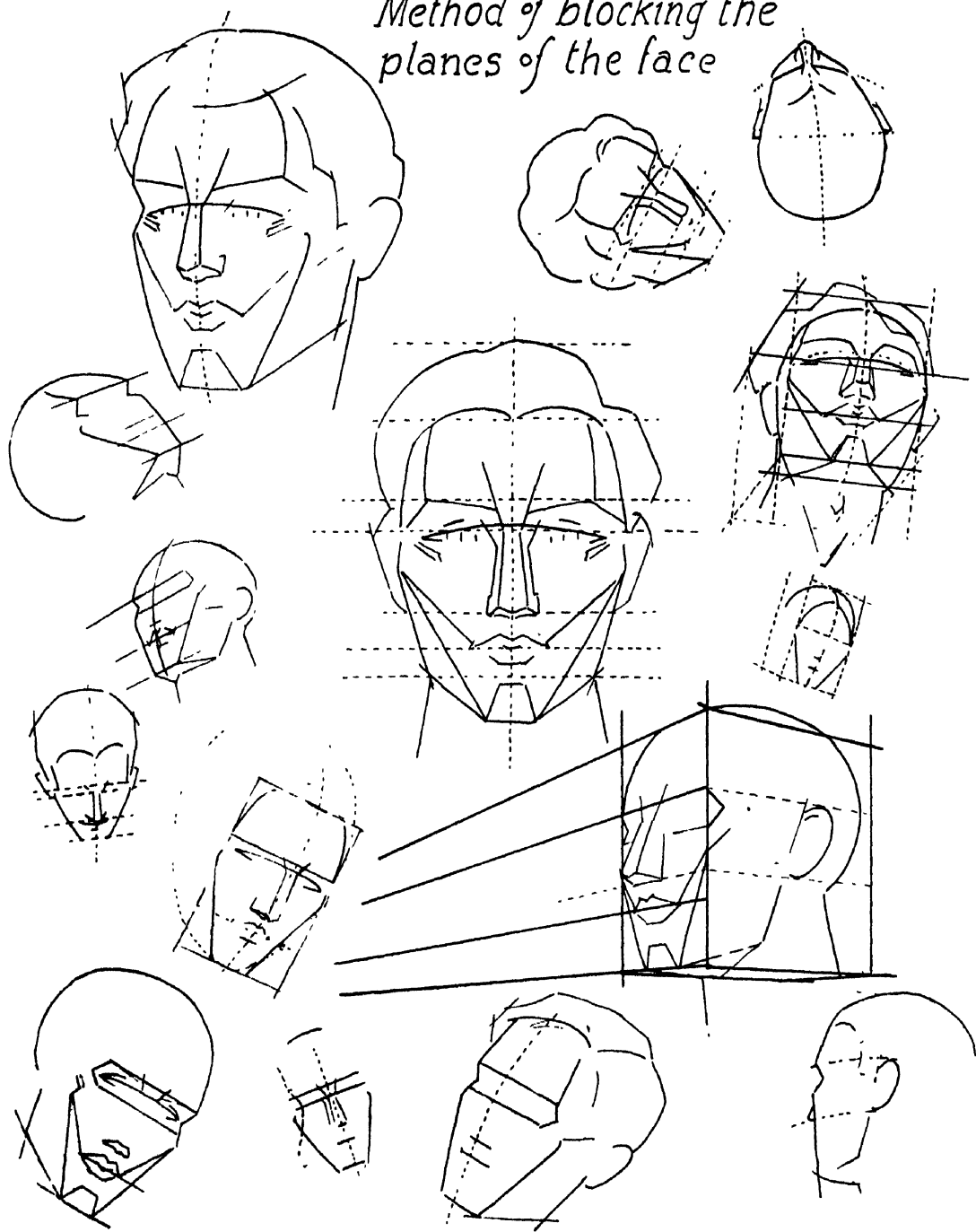


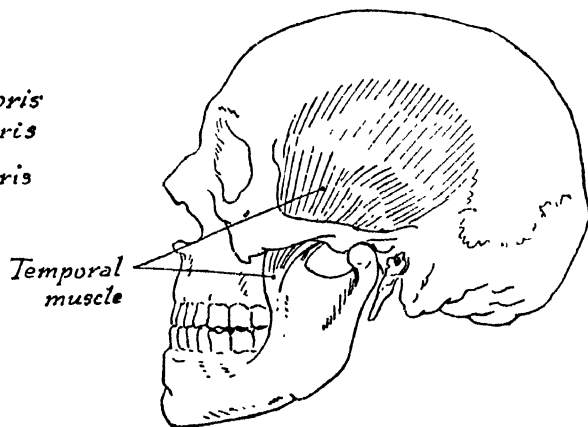
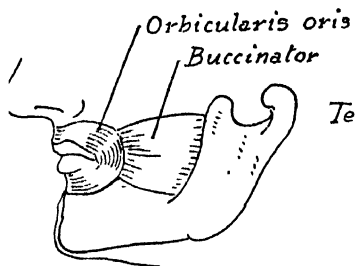
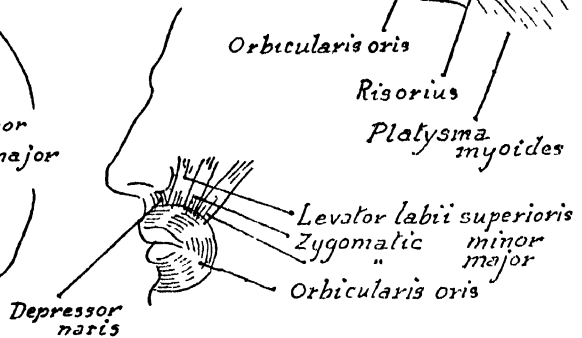
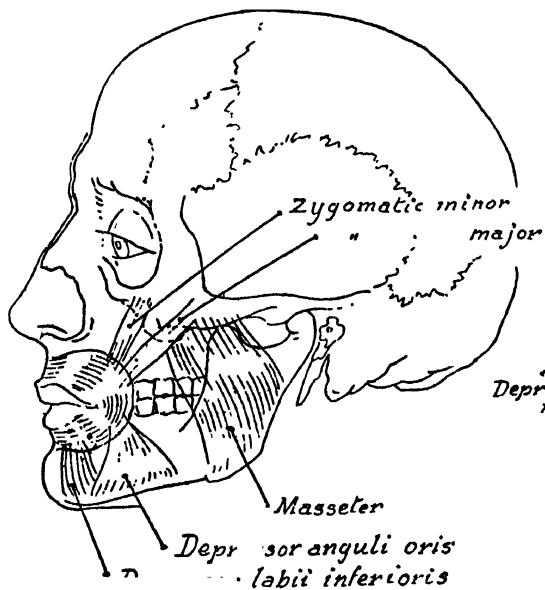
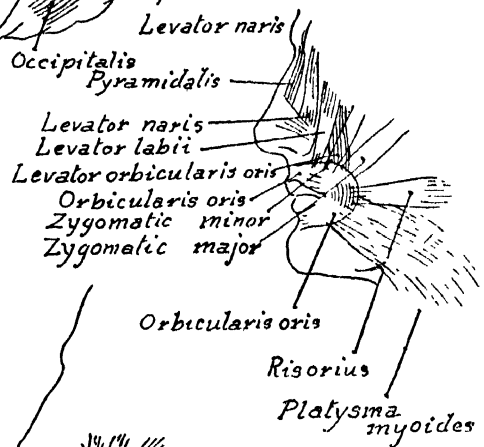
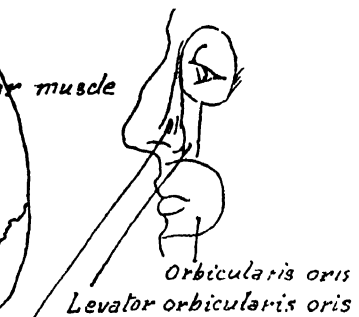
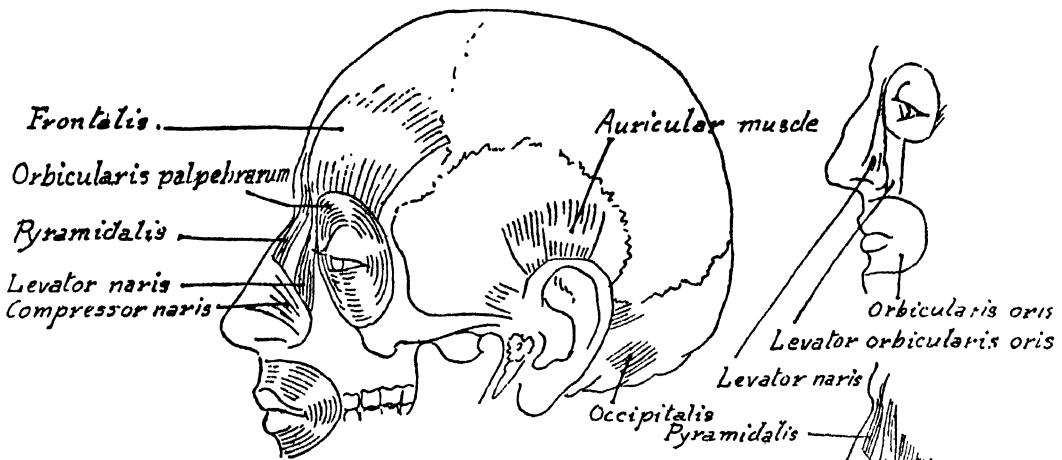


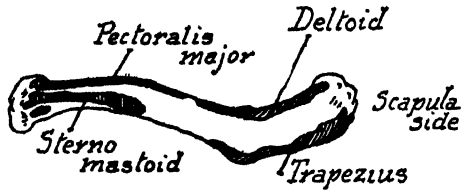


The underlying and the superficial muscles of the face and neck

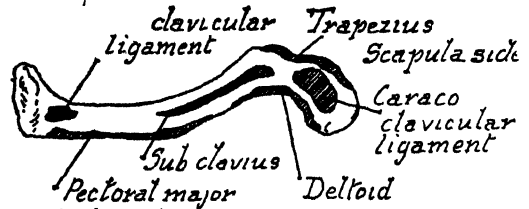
*Method of blocking the
planes of the face*



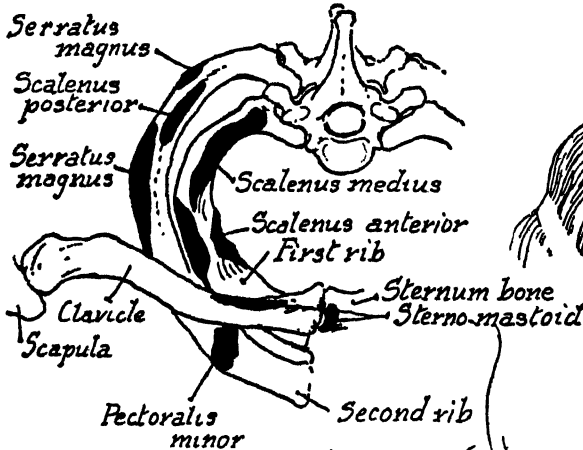




Attachment of muscles on upper surface of clavicle



Attachment of muscles on under surface of clavicle



Attachments of muscles (Top view)

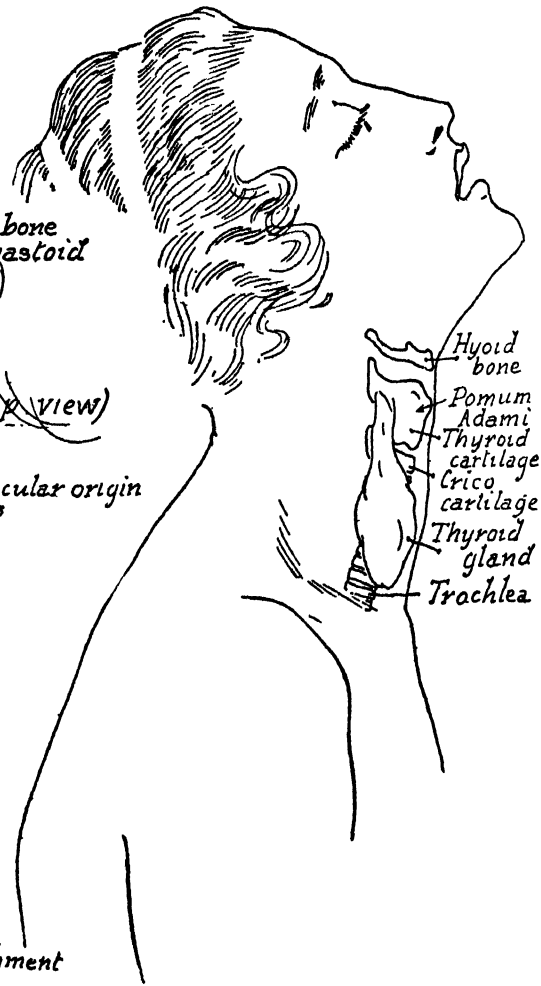


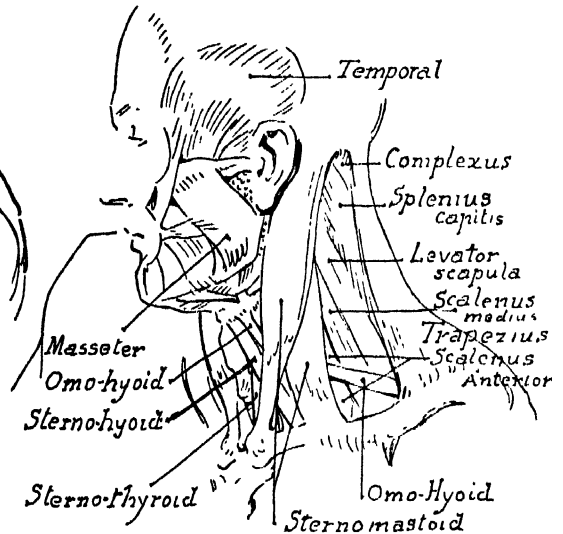
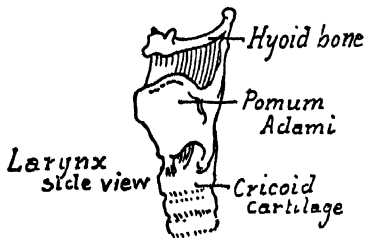
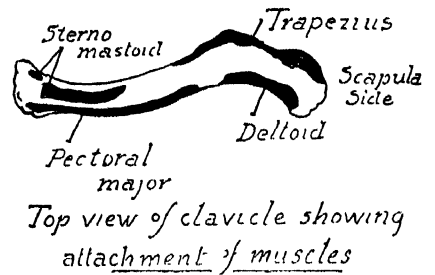
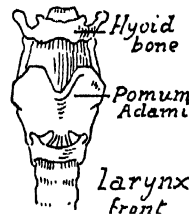
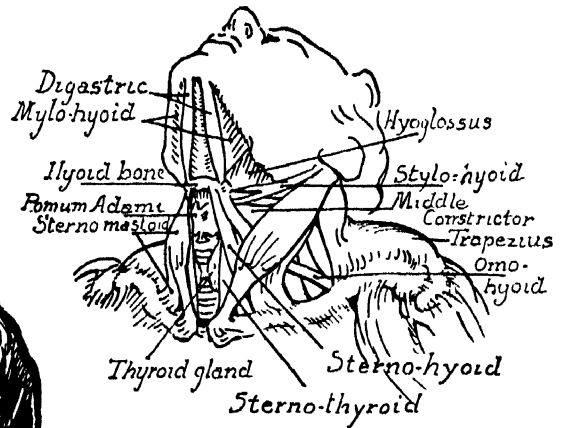
Rhomboid minor

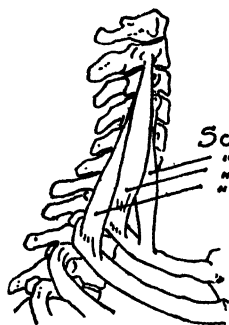
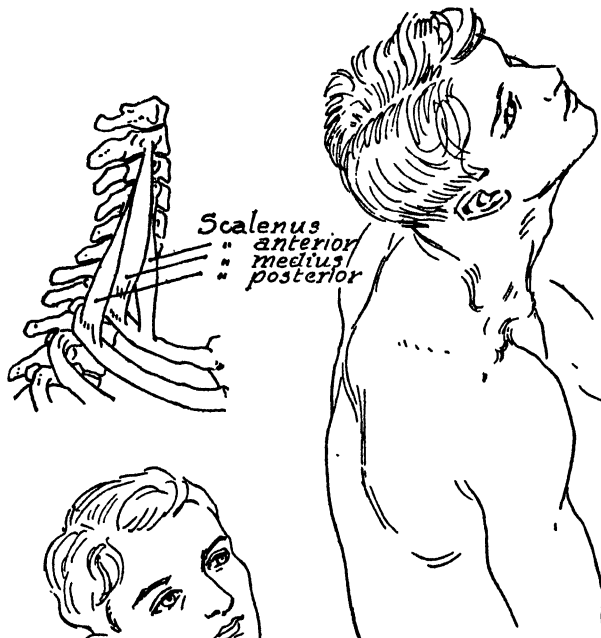
Rhomboid major

Back of scapula

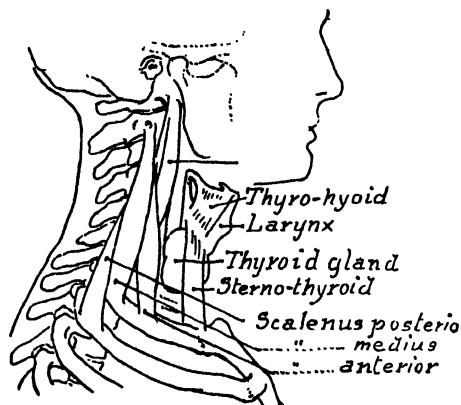
Showing attachment of muscles







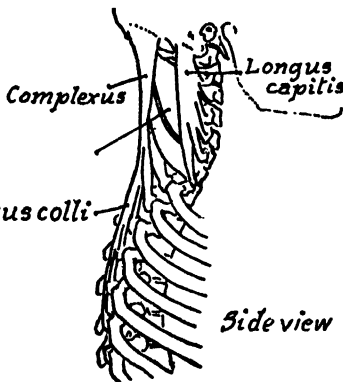
Scalenus
" anterior
" medius
" posterior



Thyro-hyoid
Larynx

Thyroid gland
Sterno-thyroid

Scalenus posterior
" medius
" anterior

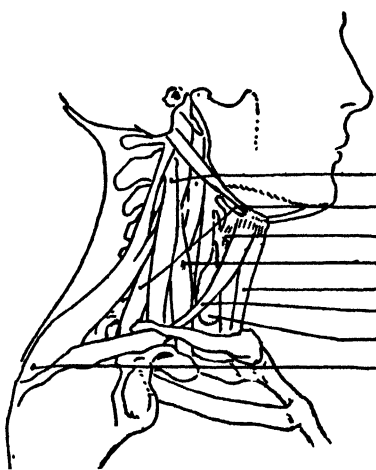


Complexus

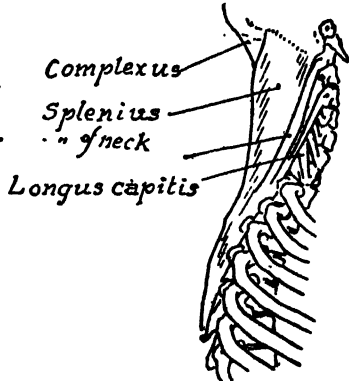
Longus capitis

Longus colli

Side view



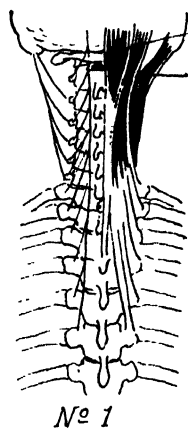
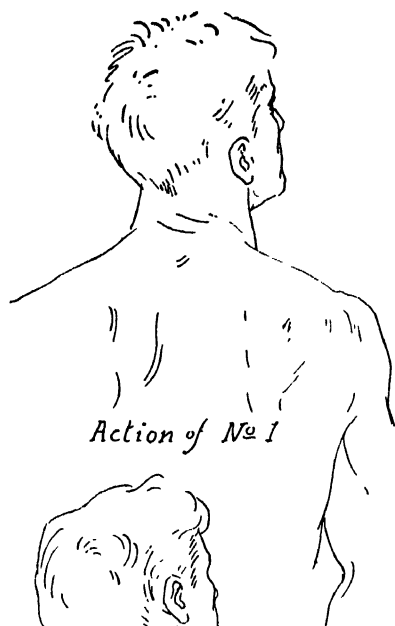
Scalenus medius
Scalenus posterior
Thyro-hyoid
Scalenus anterior
Sterno-hyoid
Omo-hyoid
Thyroid gland
Levator scapula



Complexus

Splenius
" neck

Longus capitis



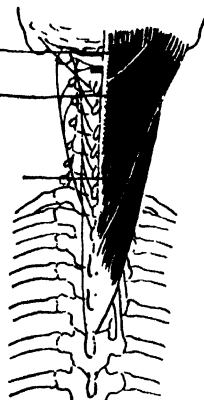
Complexus
Small splenius

Complexus
Splenius

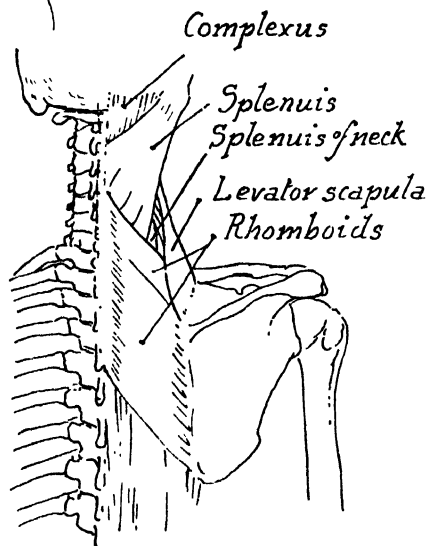
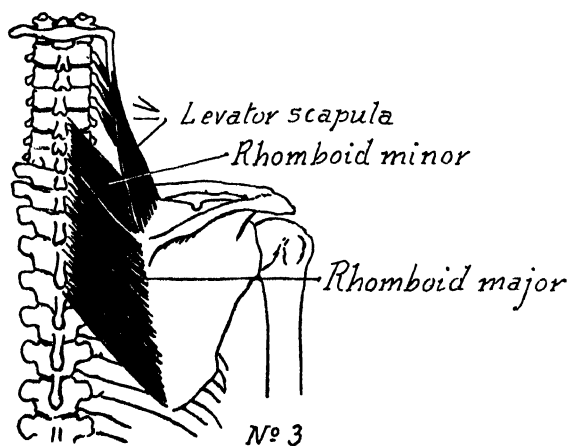
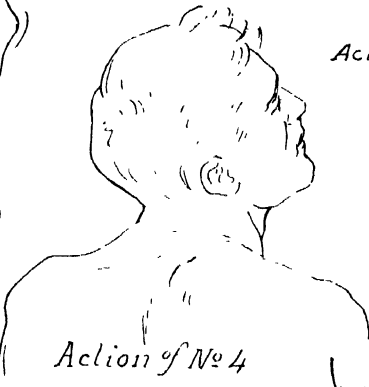
Splenius of neck

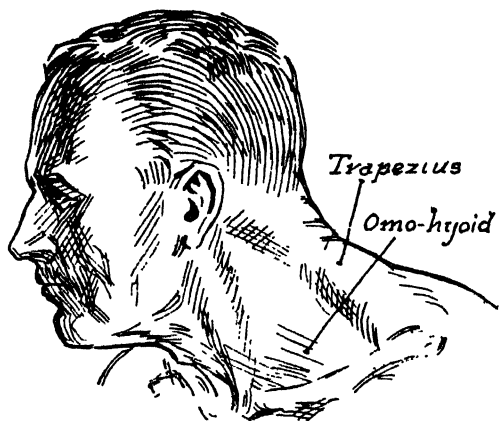


Action of № 2

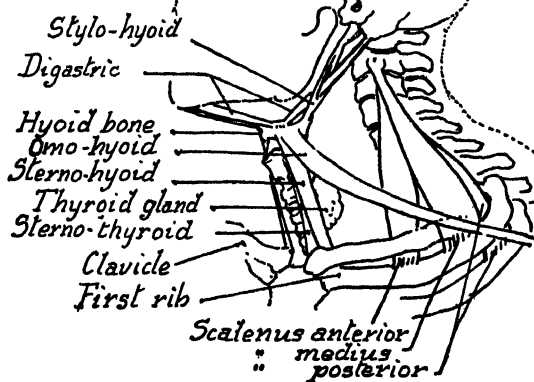
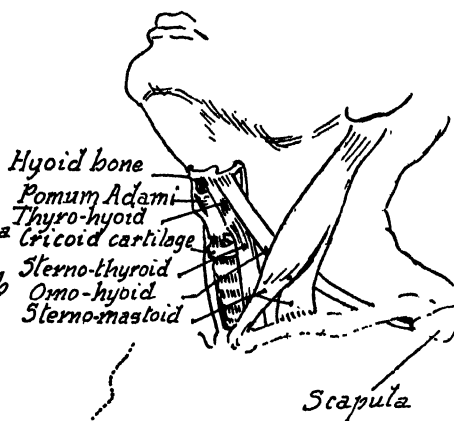
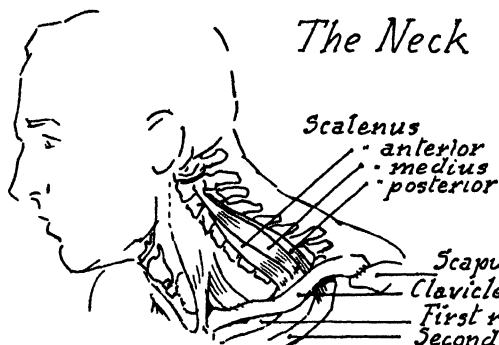


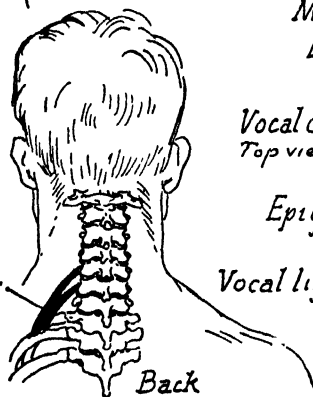
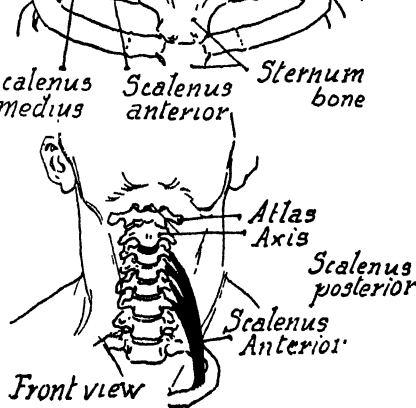
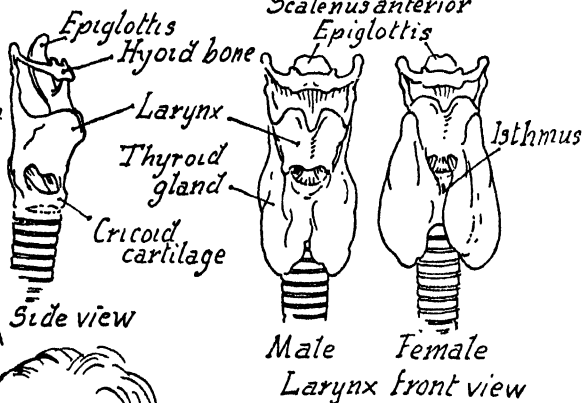
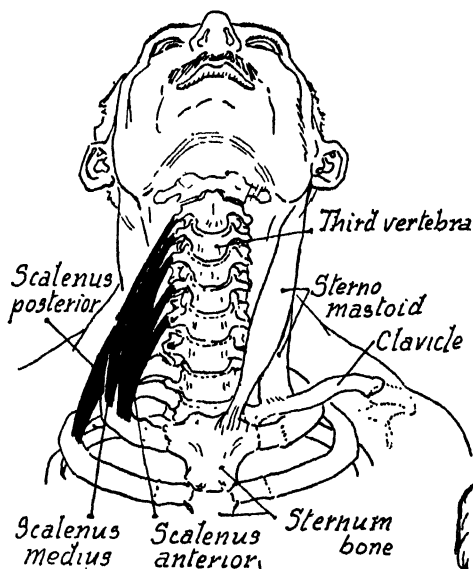
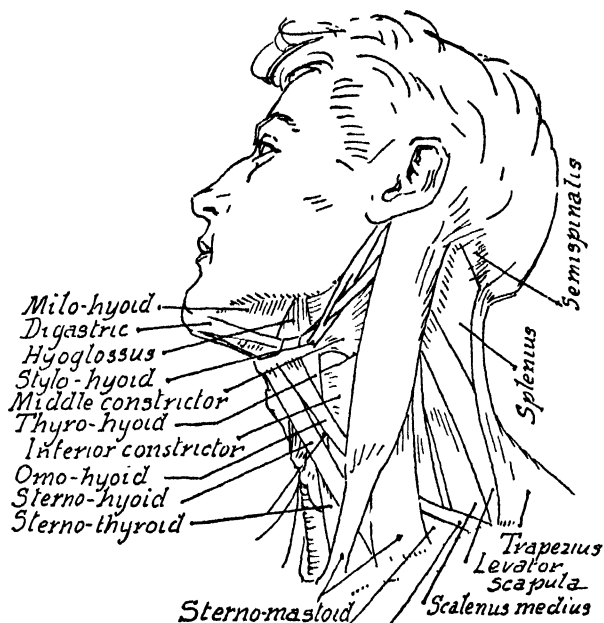
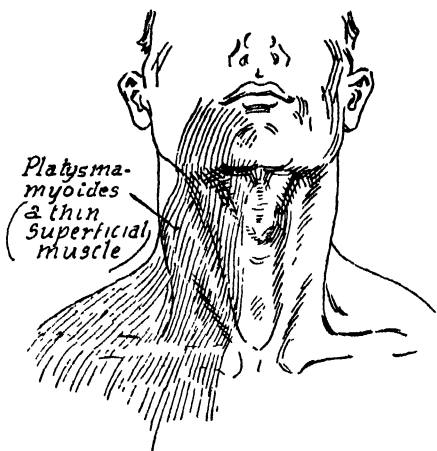
Muscles of back of neck



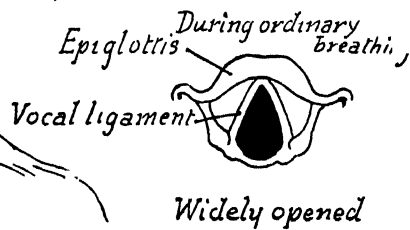


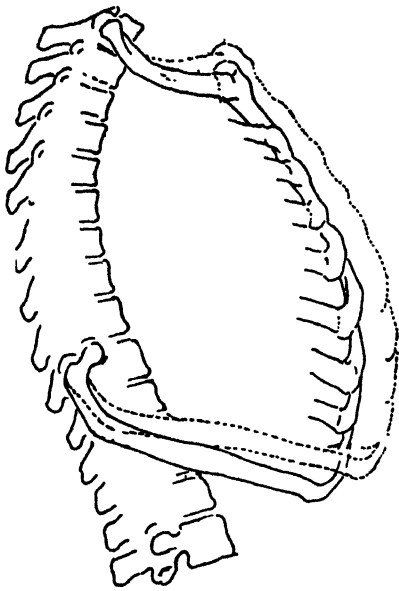
The Neck



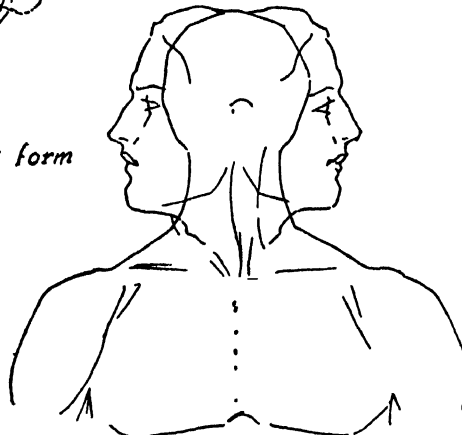
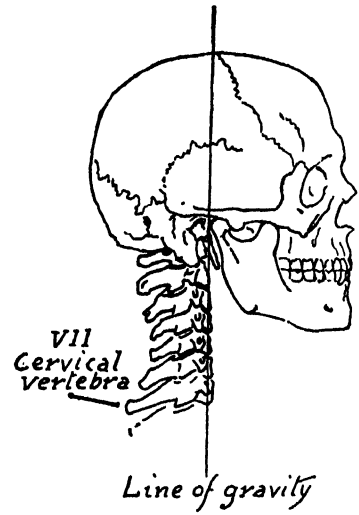


Vocal chords // ▮
Top view

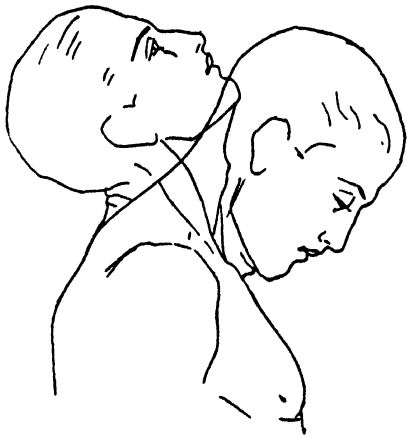




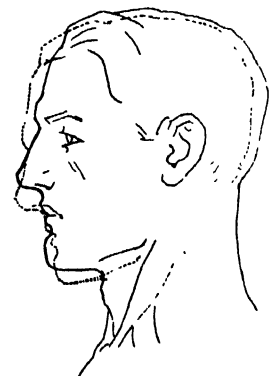
*Modification of chest form
in breathing*



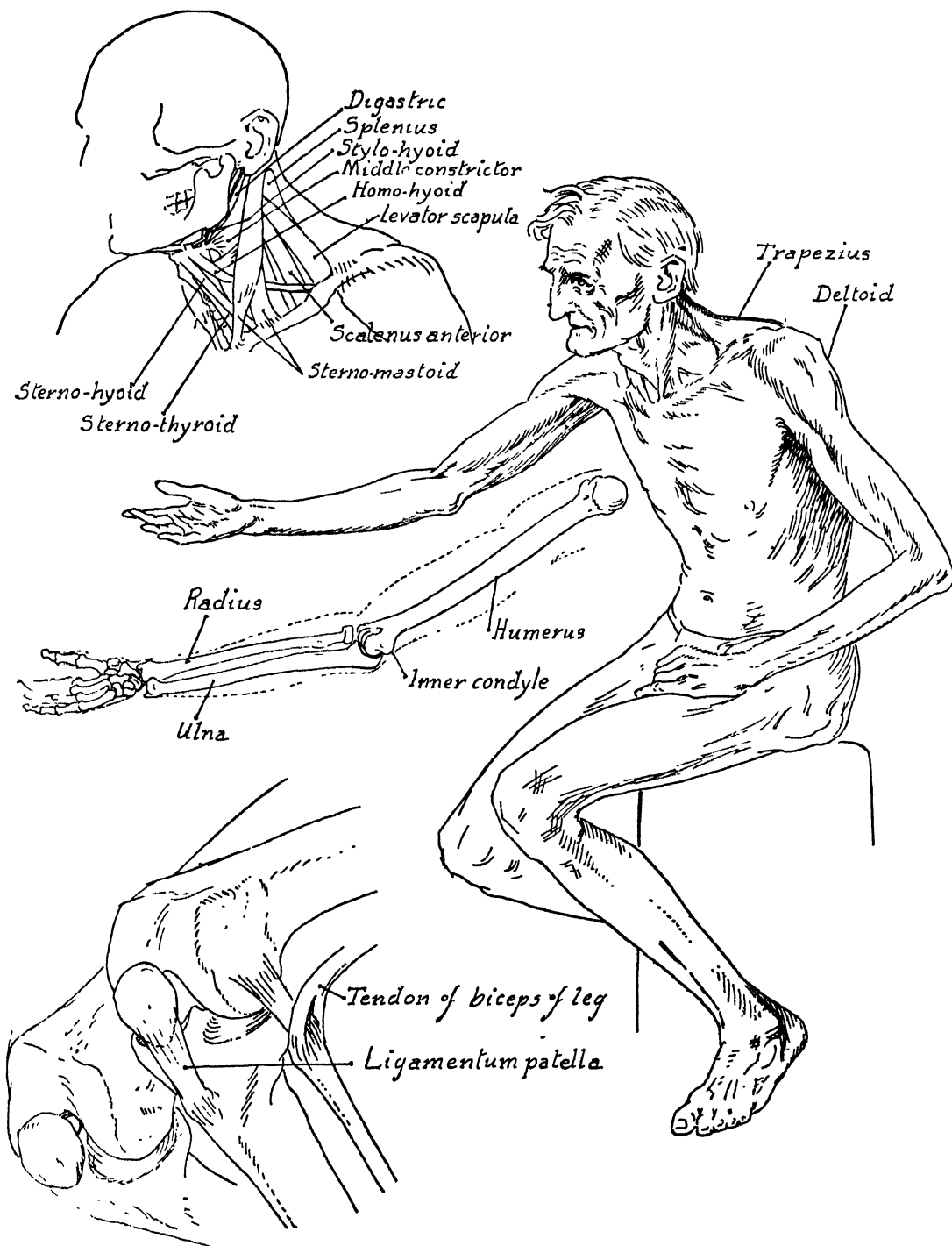
*Relation of head and
neck to shoulders
in extreme side
movements*

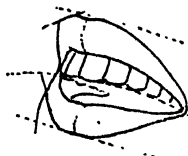
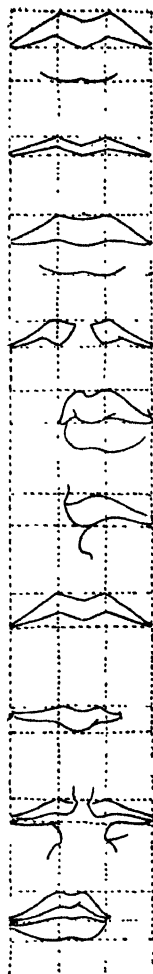


Extent of bending forward and back



*Flexion of head
without moving neck*





Two years

Mouths



Six years



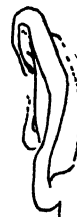
Woman



Man



Man



Eight years



Man



Woman



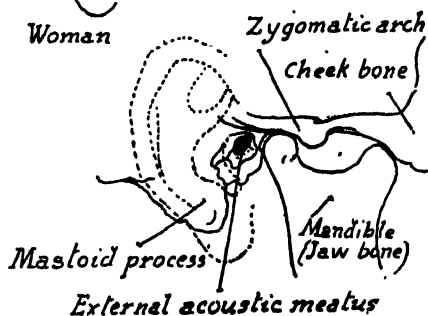
Old man

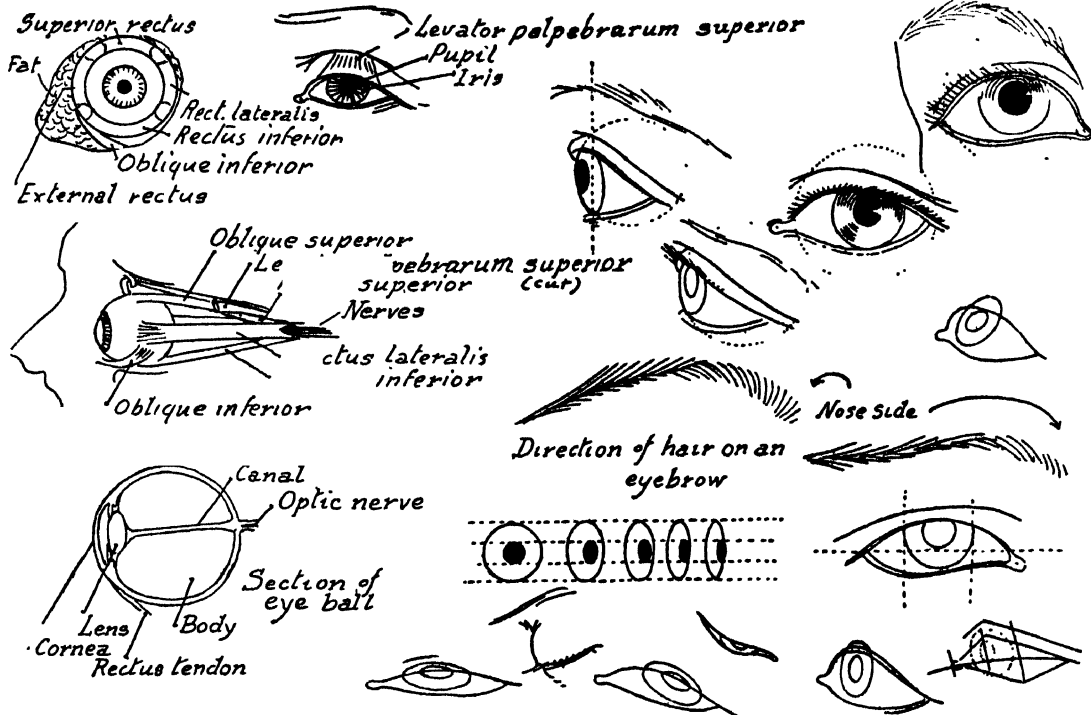


Ears



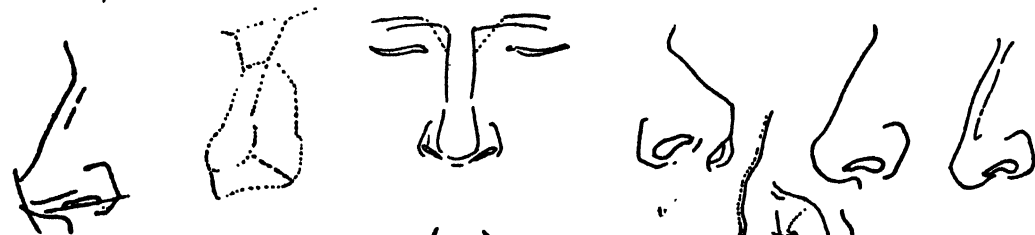
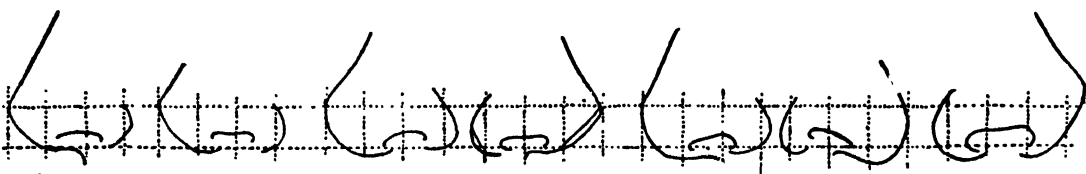
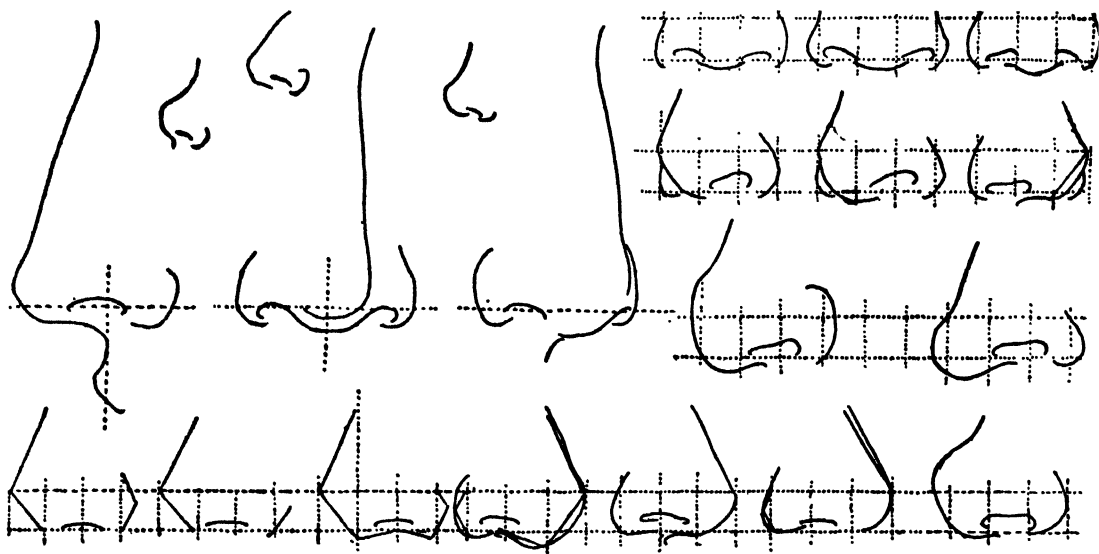
Man





EYE S. (PRINCIPLES & ACTION)



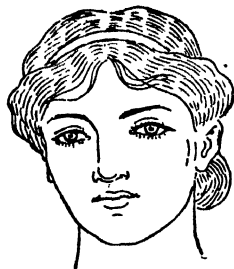


The Nose





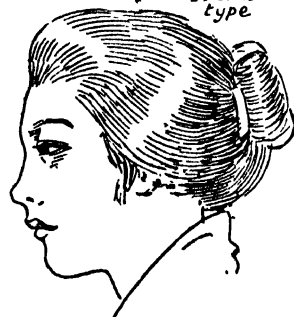
*Caucasian
(white race)*



*Prehistoric
type*



*Mongolian
(yellow race)*



*Ethiopian
(black race)*



*American Indian
(red race)*



*Malayan
(brown race)*



The five races of man



Surprise



Disapproval



Amusement



Doubt



Pain



Strain



Anger



Disdain



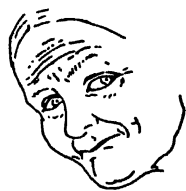
Questioning



Reflection



Supplication



Reverie



Laughter



Skepticism



Happiness



Singing



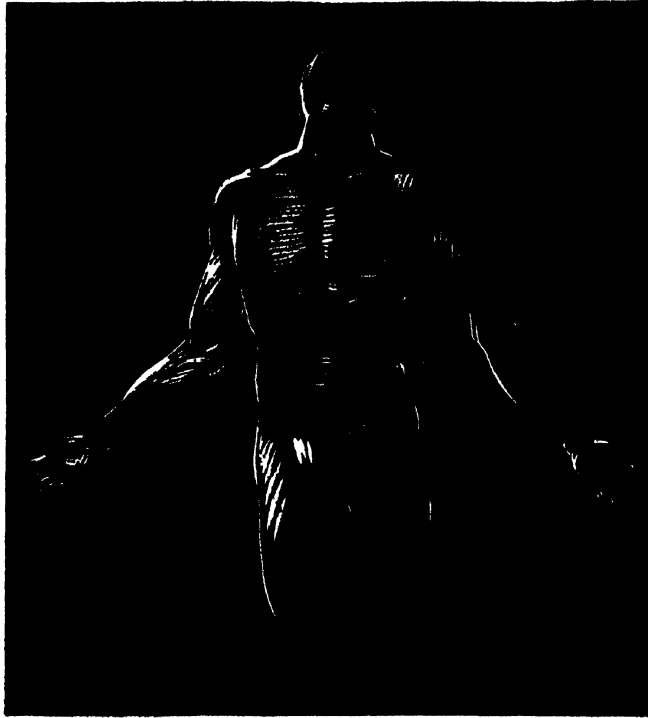
Suspense



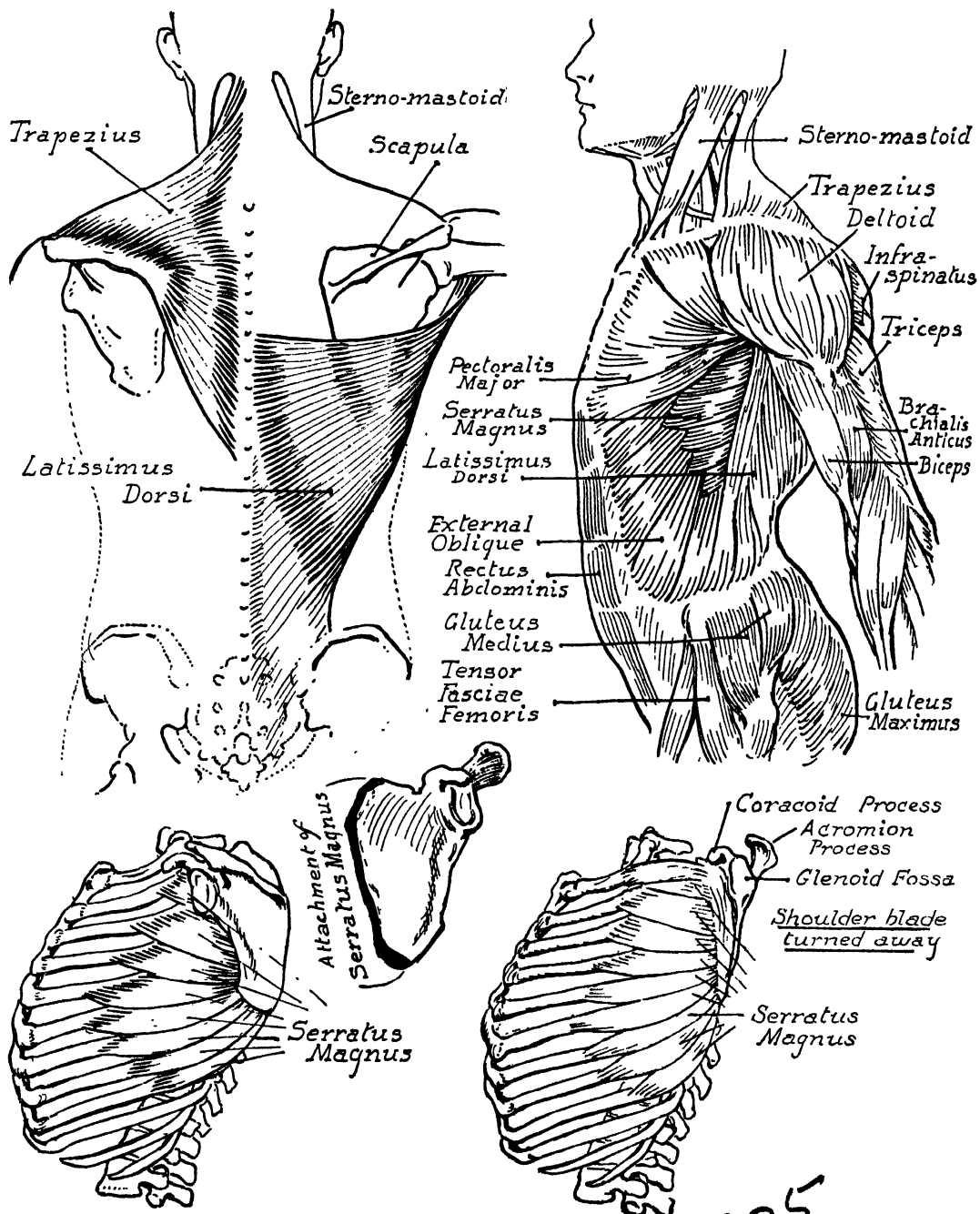
Laughter

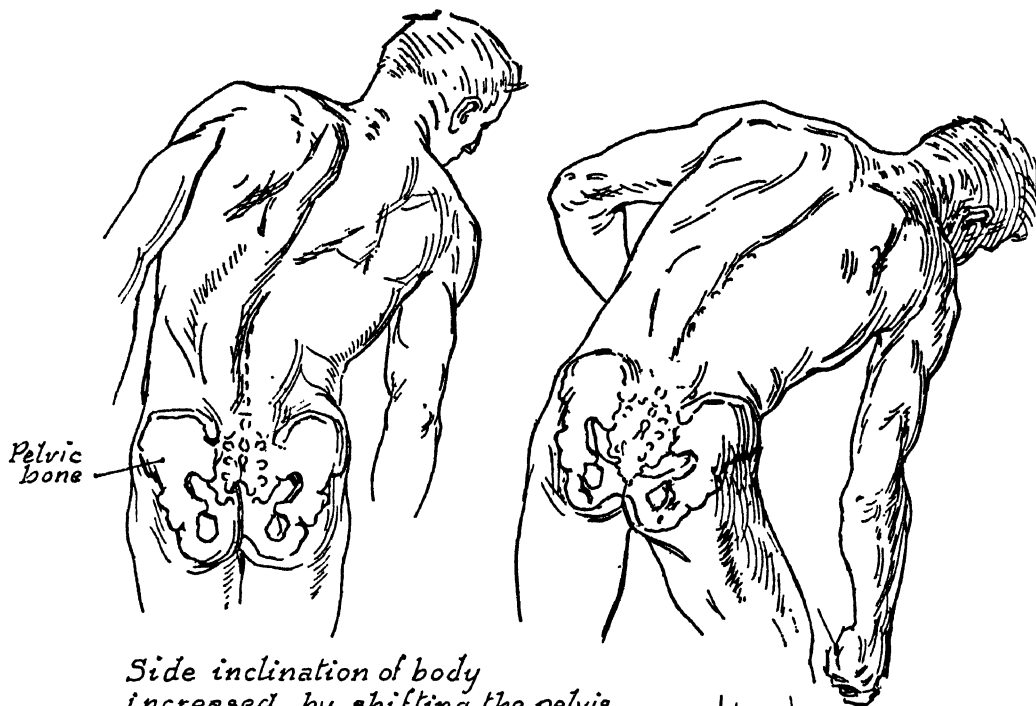


Studies of Expression



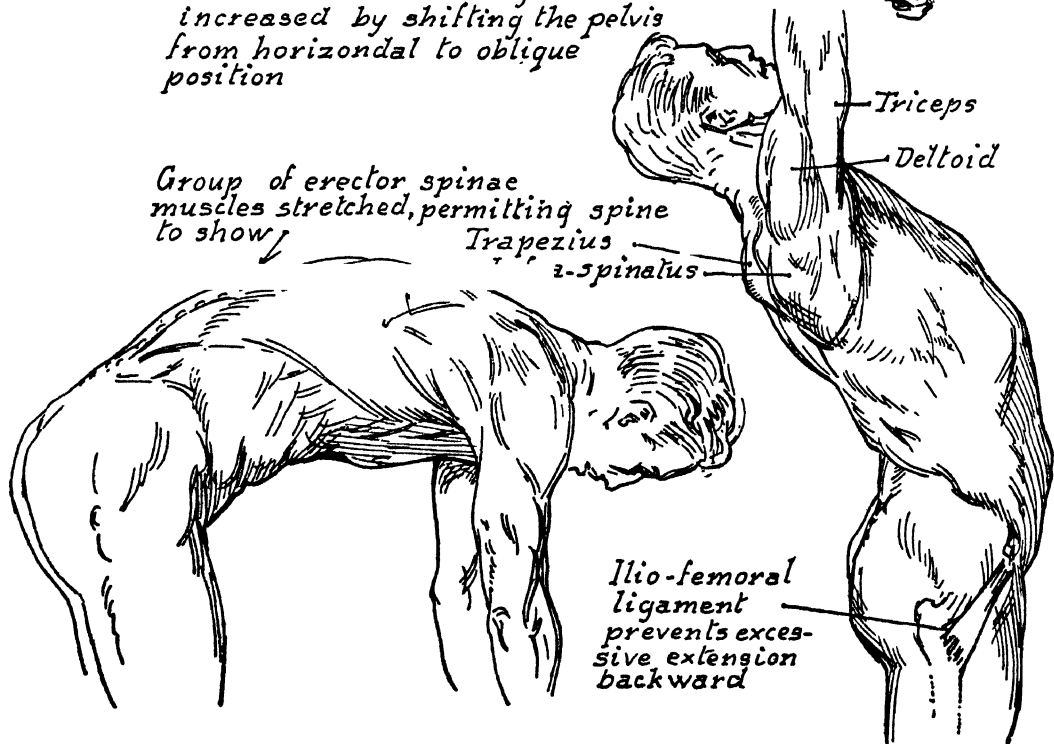
PART IV
THE TORSO



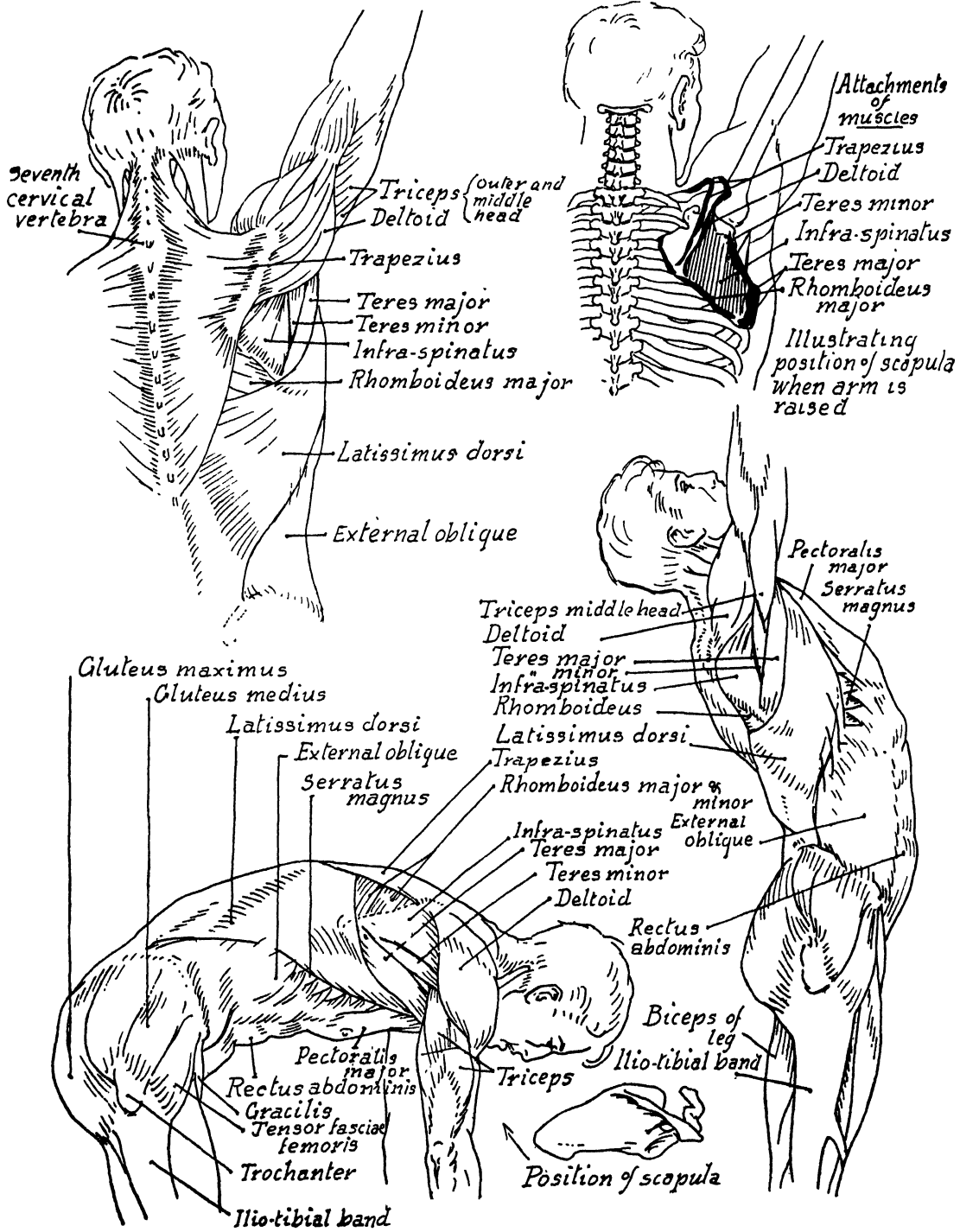


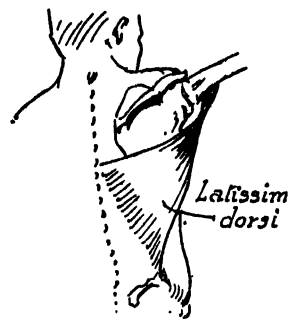
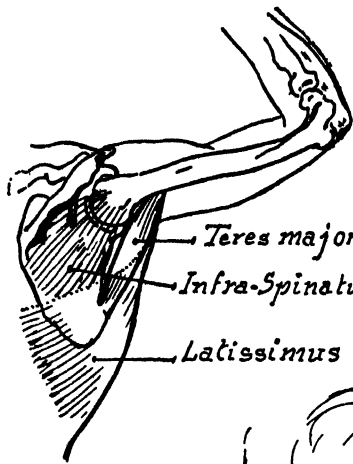
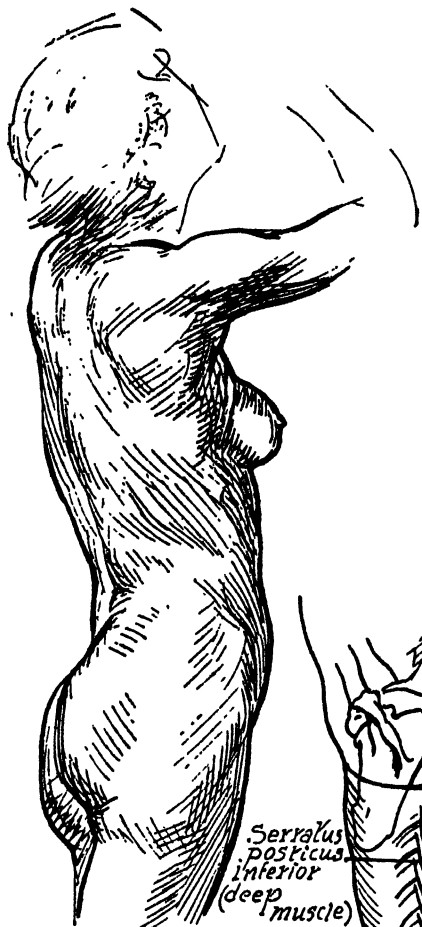
Side inclination of body increased by shifting the pelvis from horizontal to oblique position

Group of erector spinae muscles stretched, permitting spine to show



Ilio-femoral ligament prevents excessive extension backward



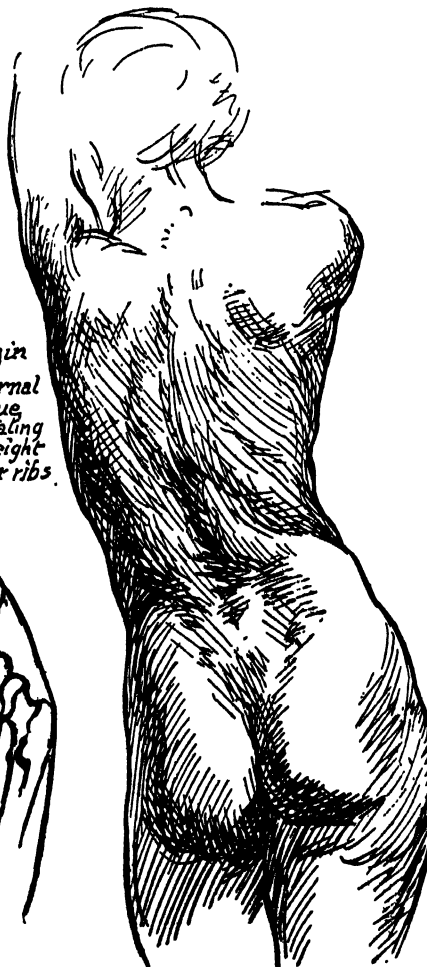
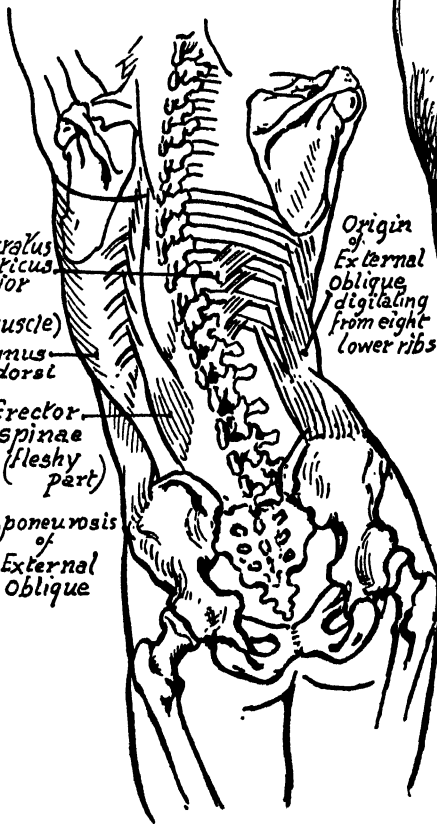


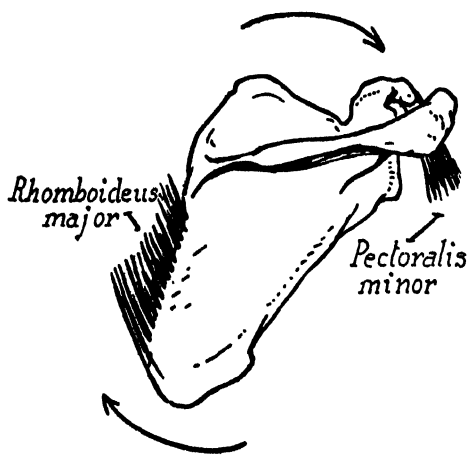
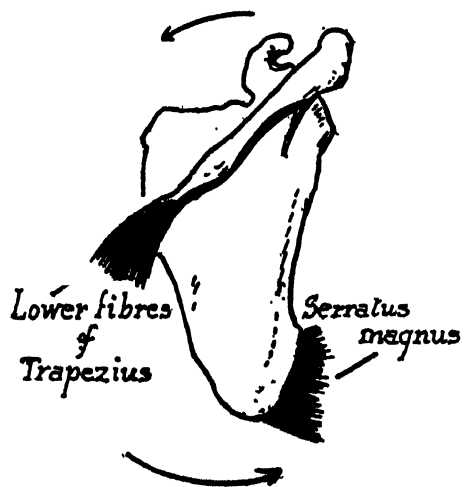
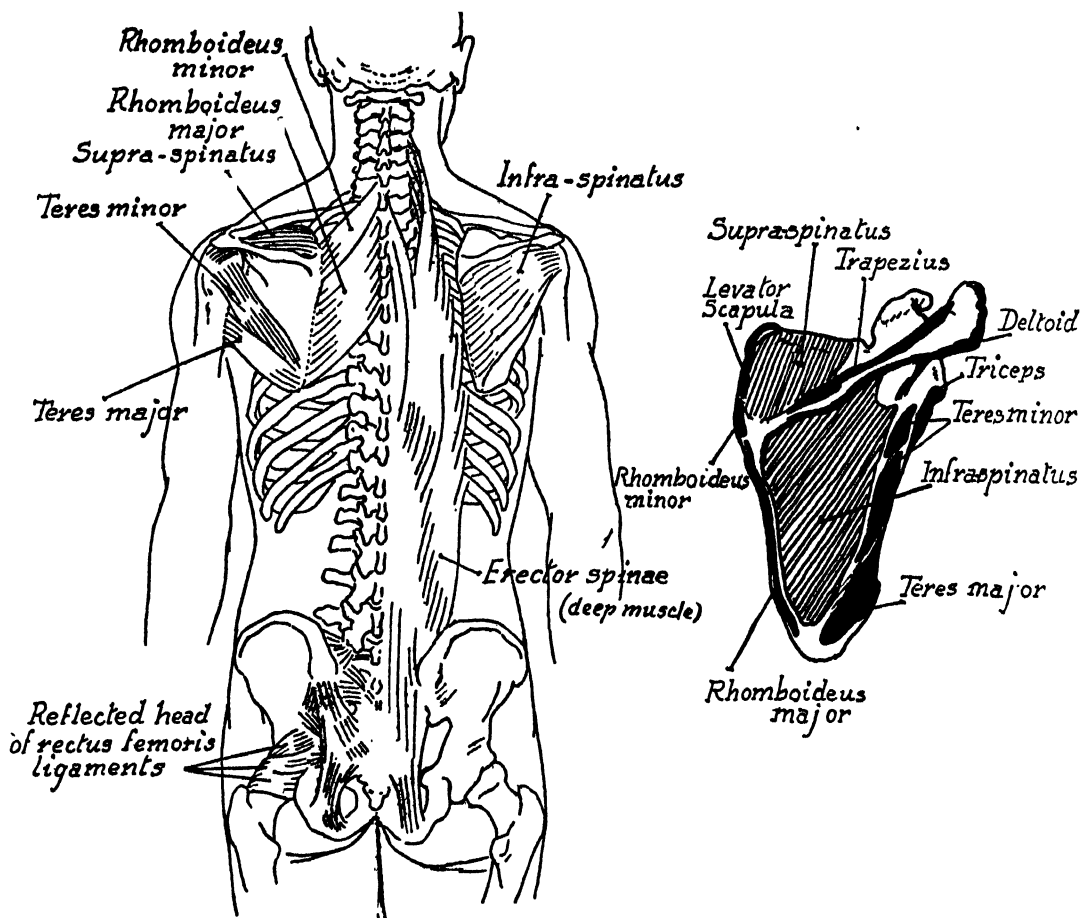
Serratus
posticus
inferior
(deep
muscle)
Latissimus
dorsi

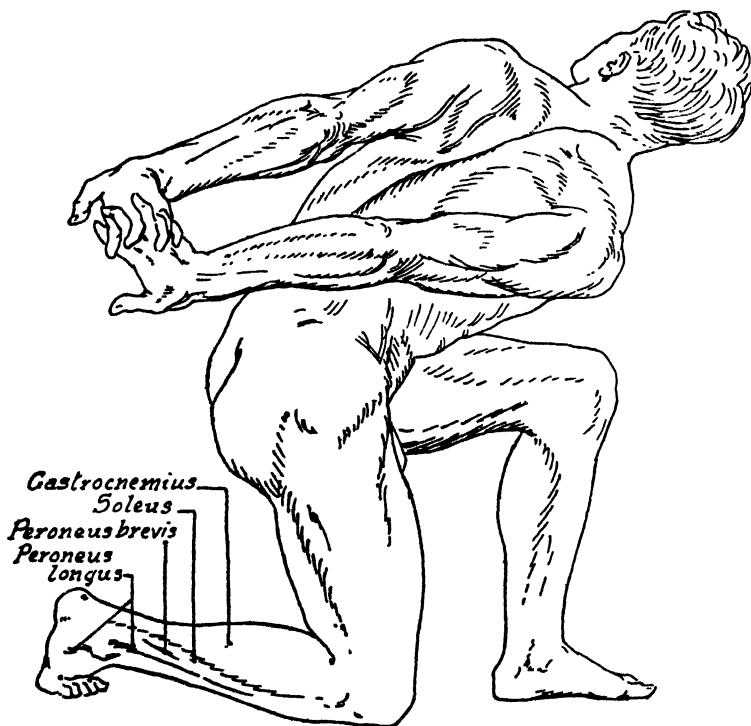
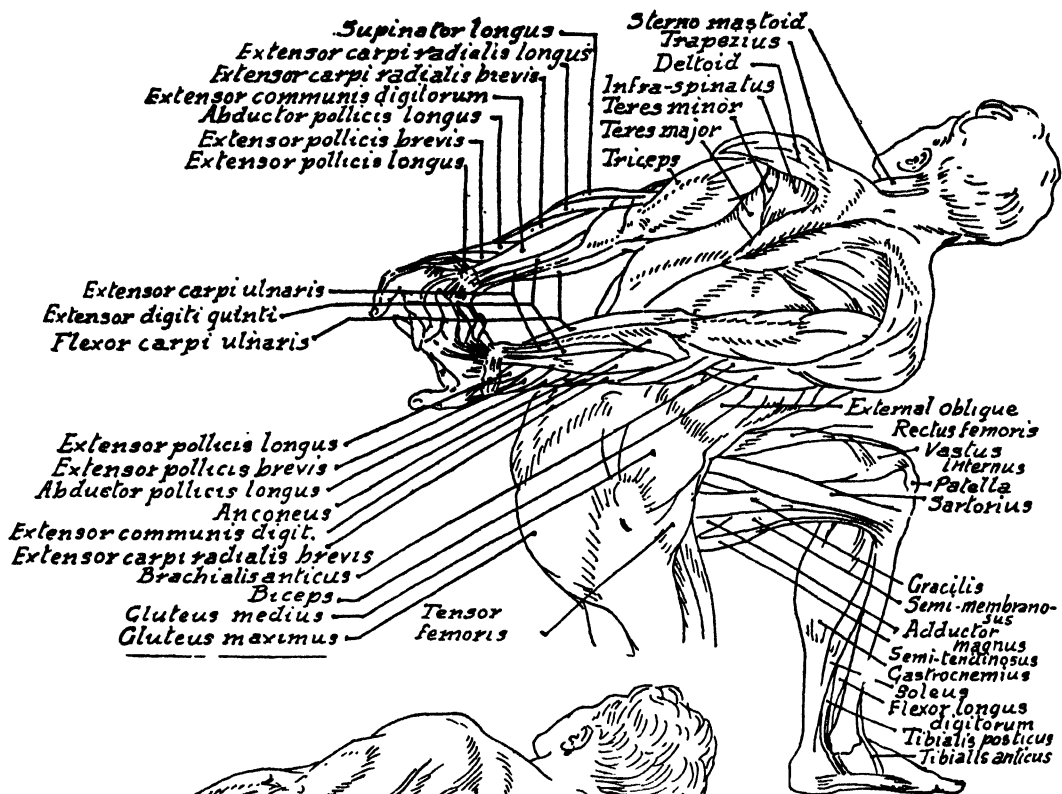
Origin
of
External
oblique
digitating
from eight
lower ribs

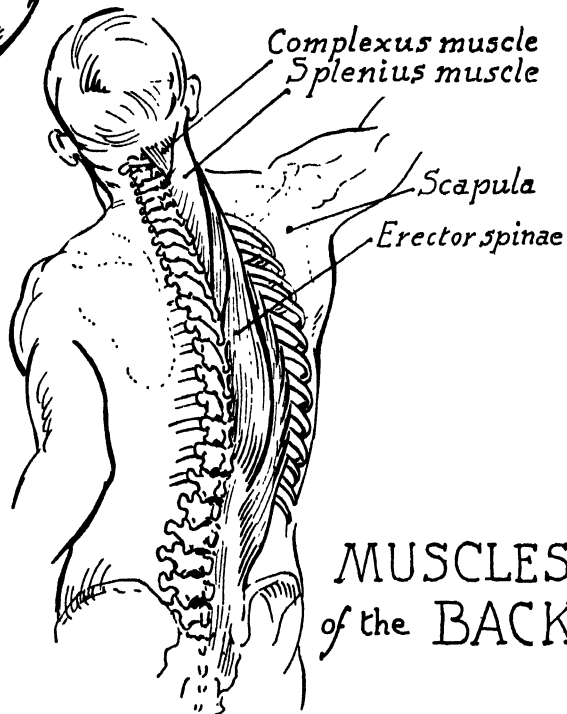
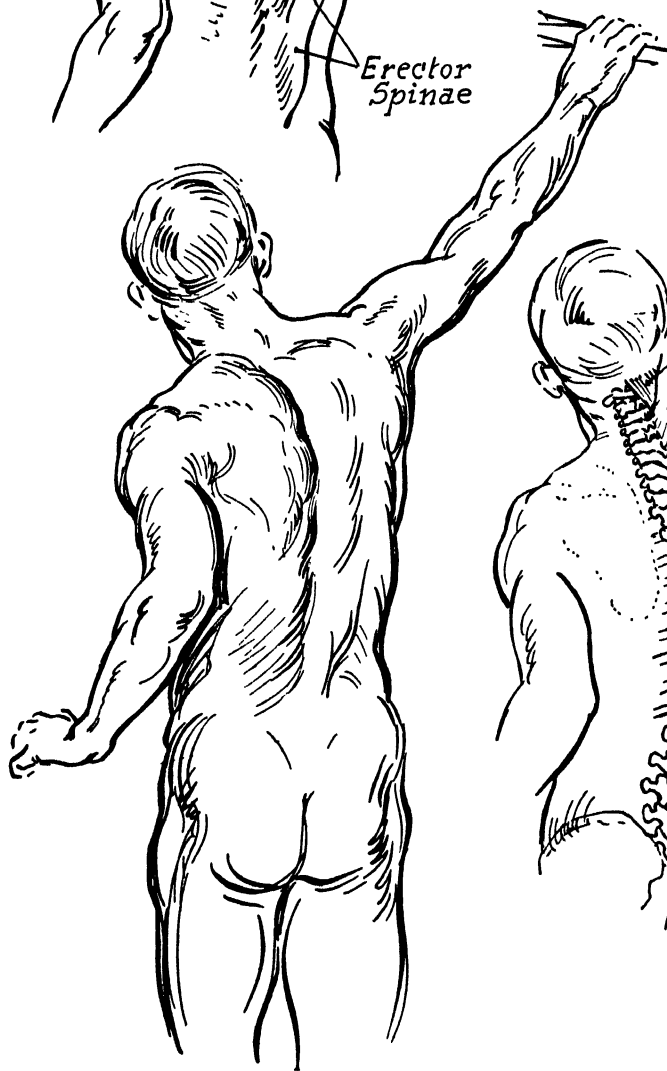
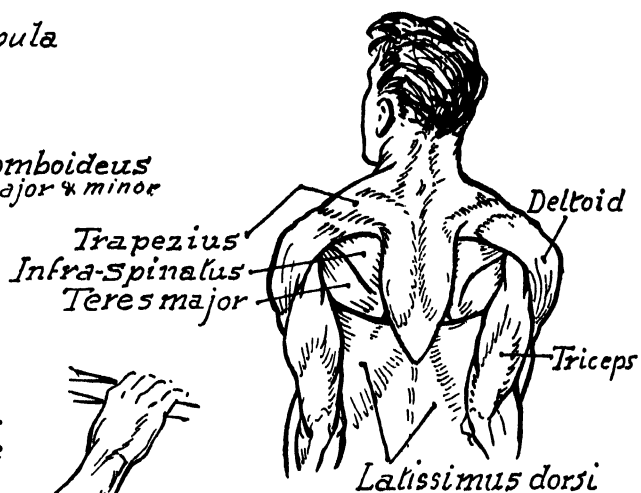
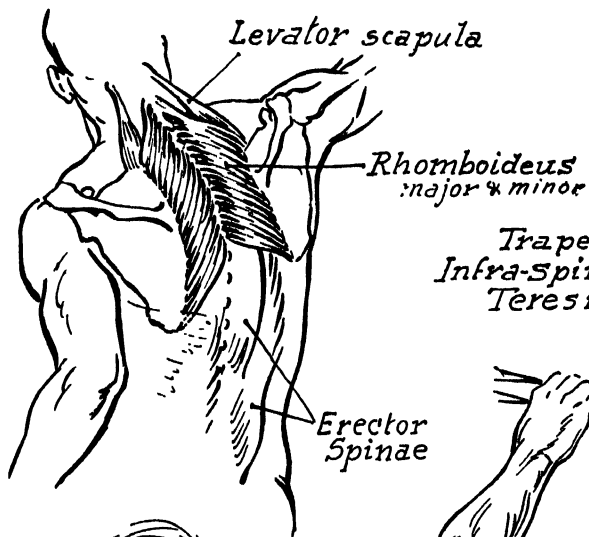
Erector
spinae
(fleshy
part)

Aponeurosis
of
External
Oblique



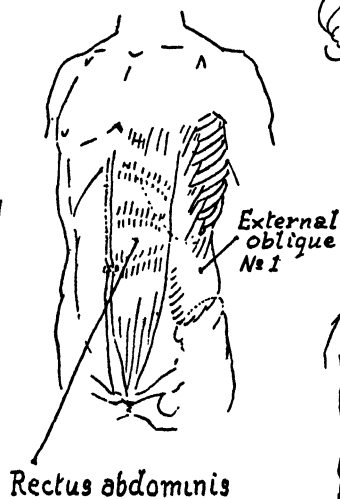
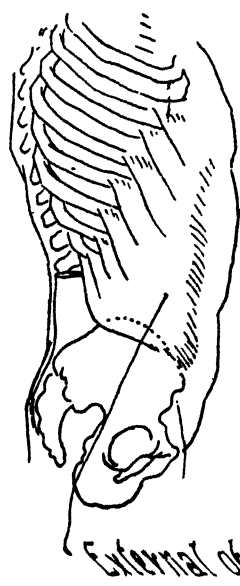
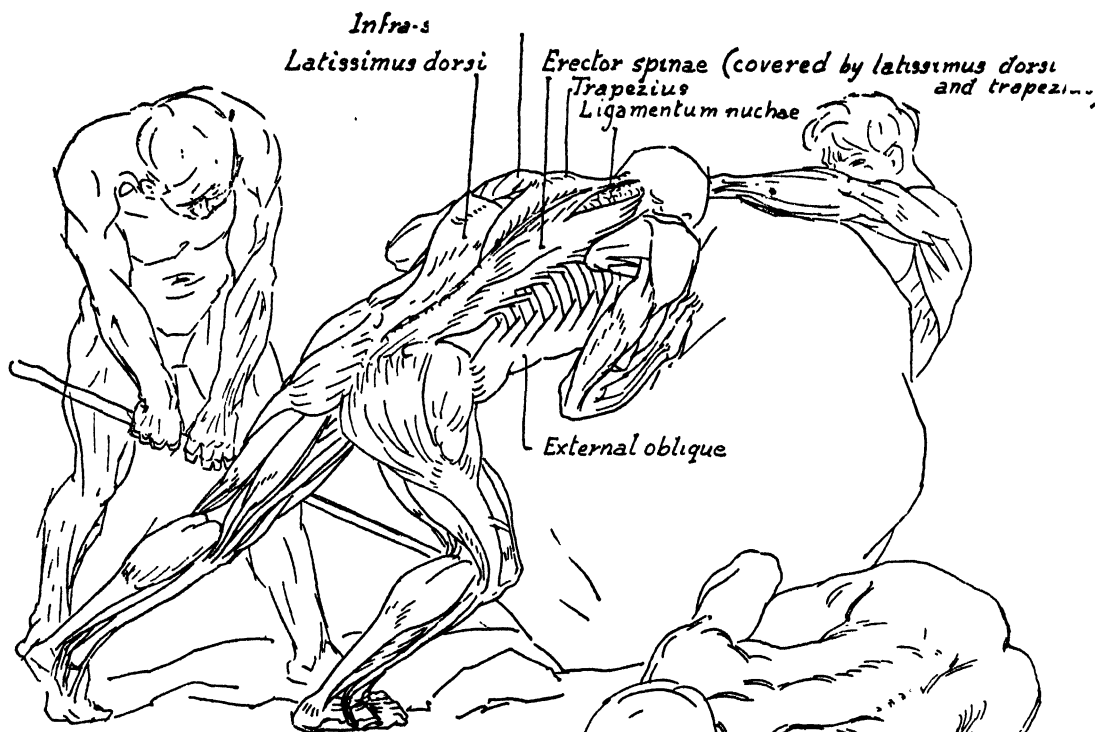






MUSCLES of the BACK

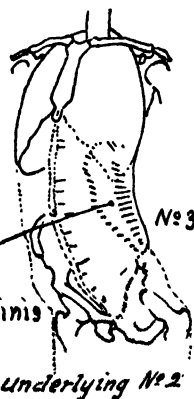
Victor Ward



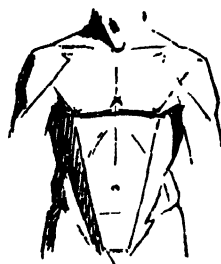
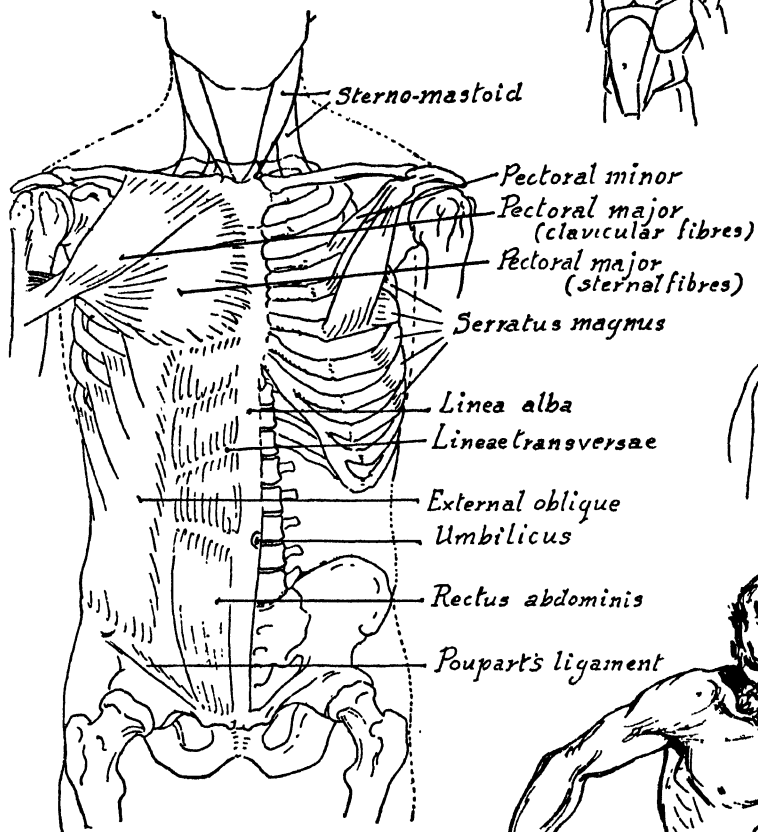
Rectus abdominis



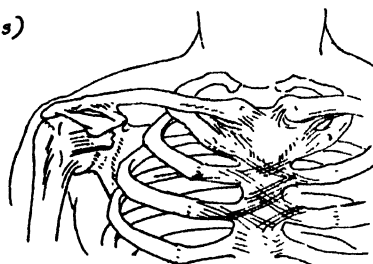
Transversus abdominis
underlying Nº 1



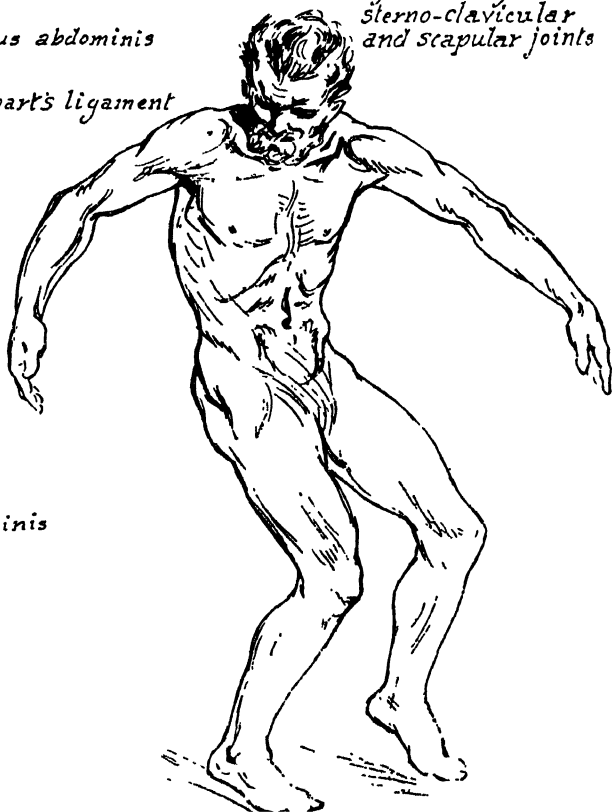
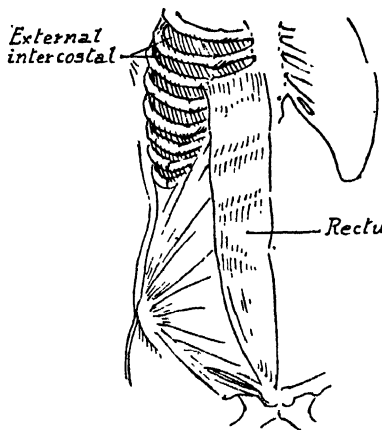
underlying Nº 2

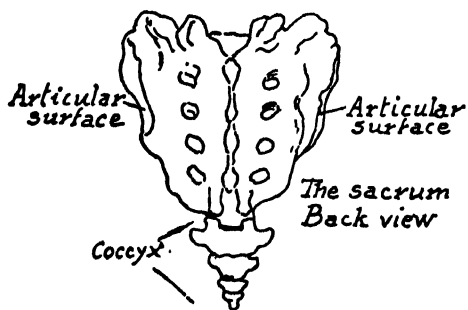
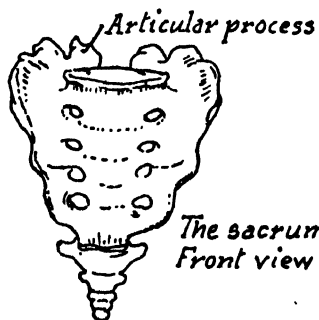
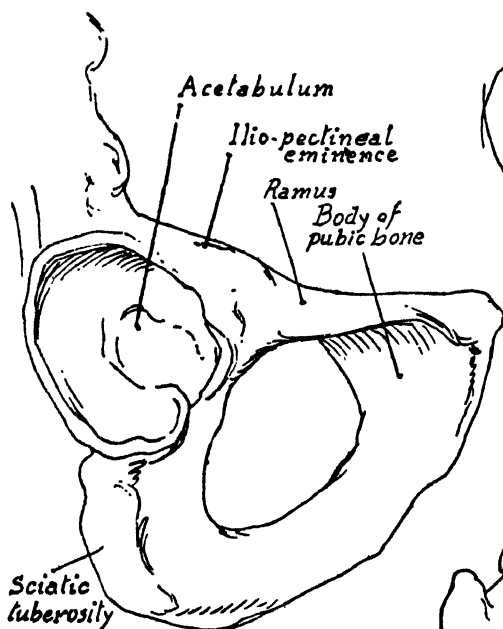
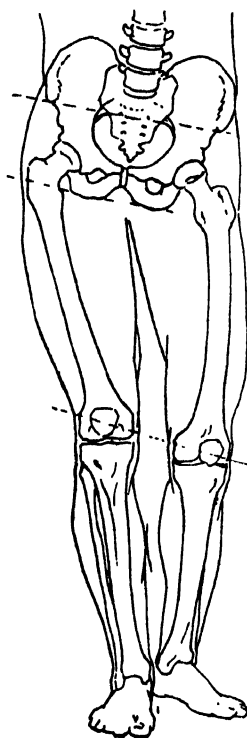
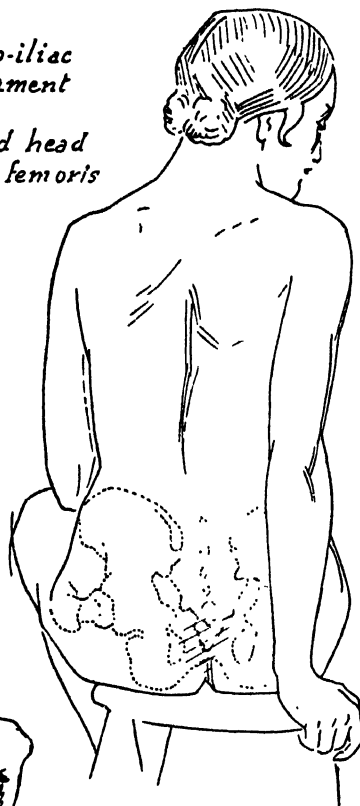
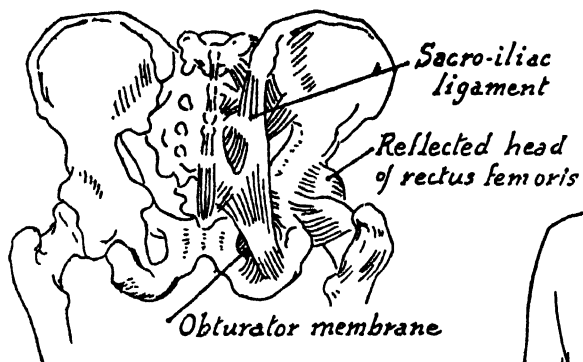


Planes

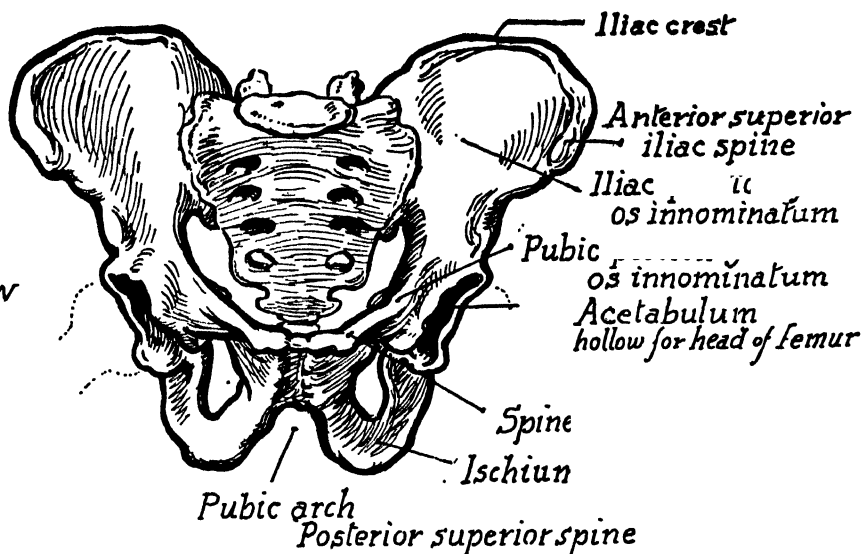


Ligaments of the sterno-clavicular and scapular joints

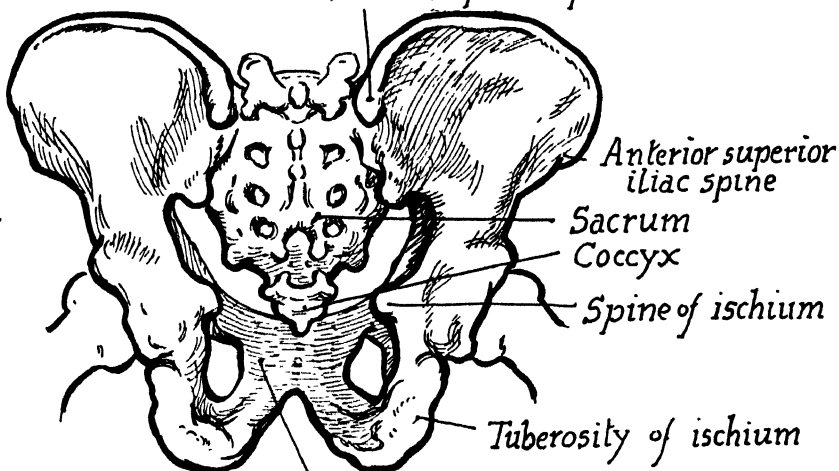




*Male Pelvis
Front view*



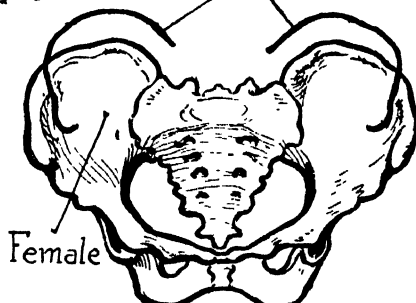
*Male Pelvis
Back View*



Female



Body of pubic bone Male



Showing female bone tilted forward

Difference of height and breadth



Front from below



Front



Three quarter front



Front



Side & back



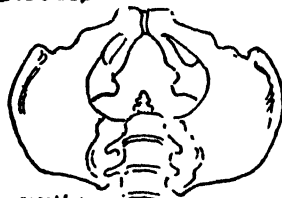
Side view



Three quarter view within



Three quarter back



Within



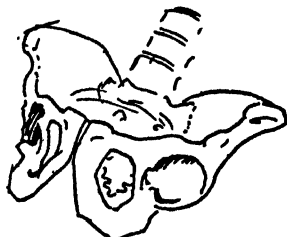
Lying down



Looking within



Under view



Three quarter from below

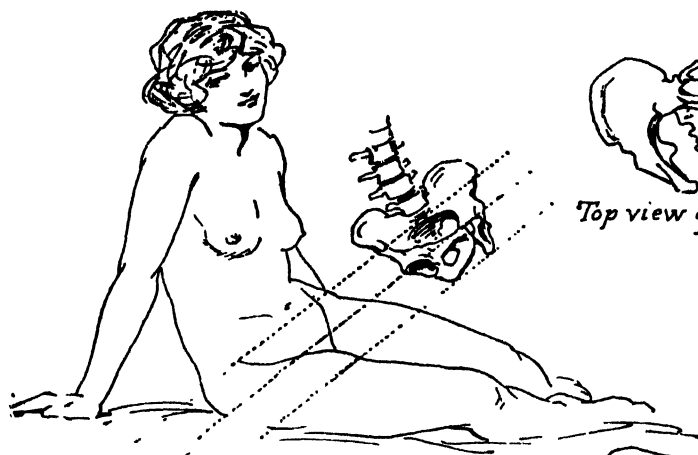


Side

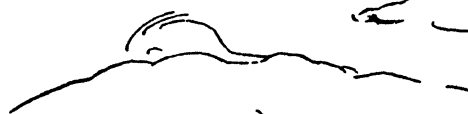
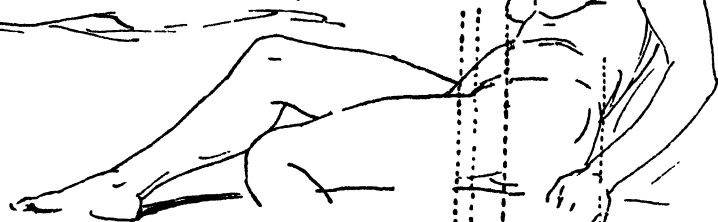


Three quarter back

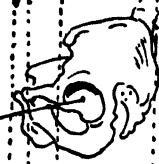
Pelvic bone in various positions



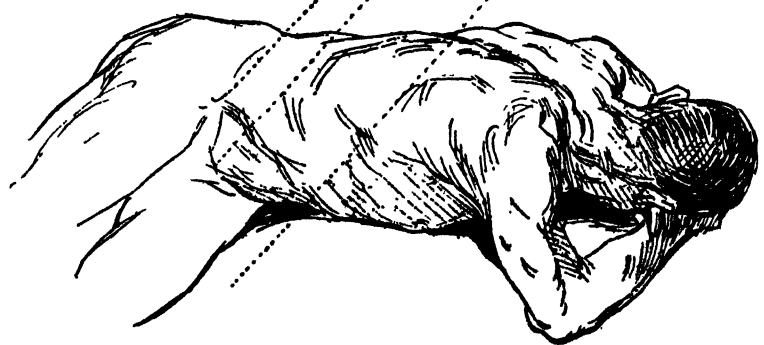
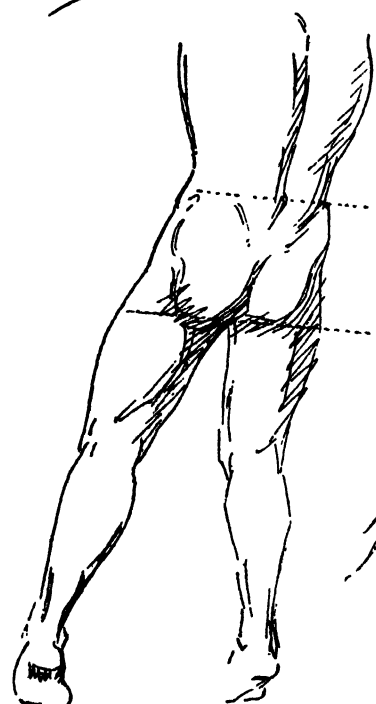
Top view of pelvic bone



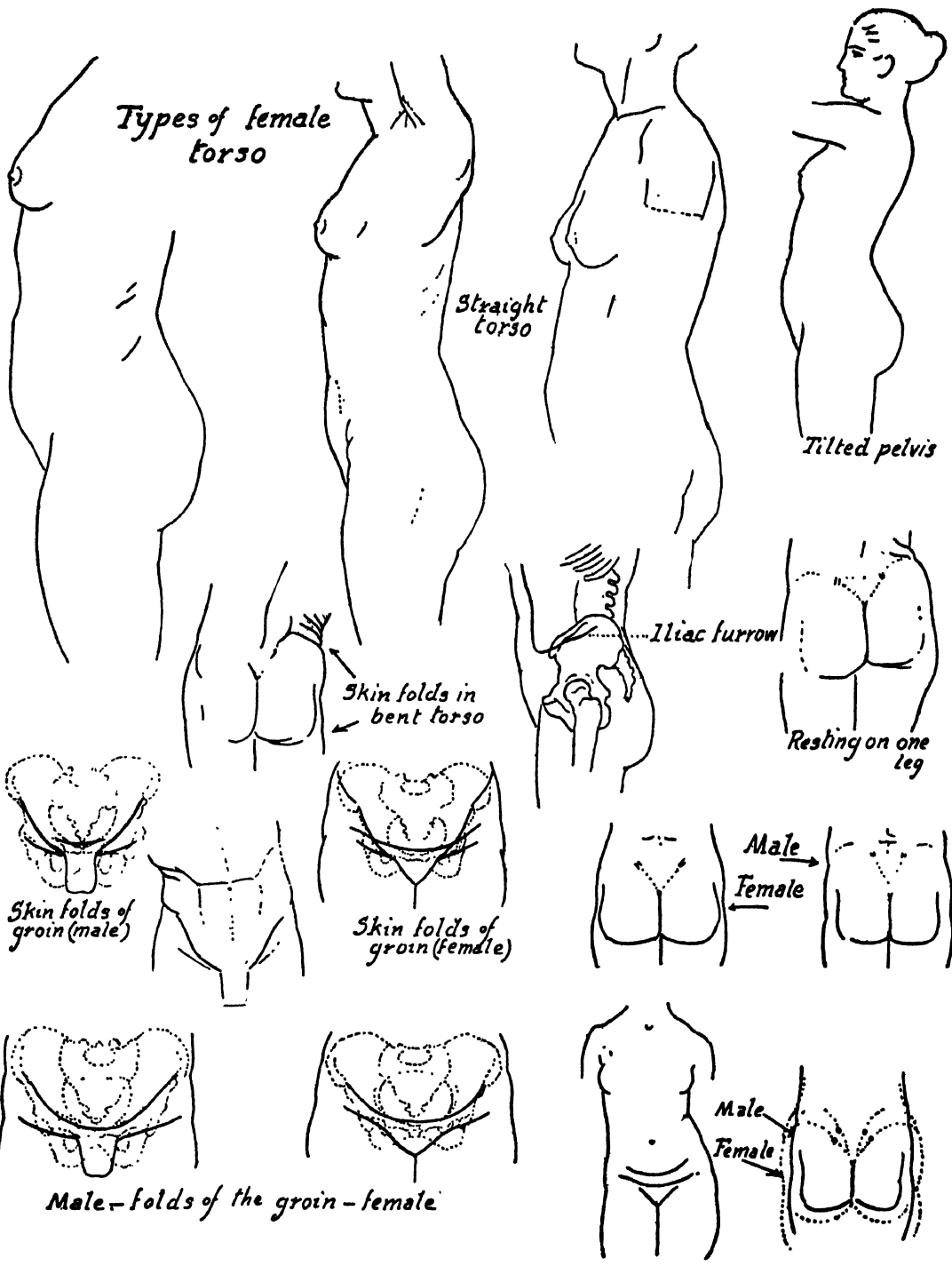
*Various views
of pelvic bone*



*Acetabulum
hollow for head of
thigh bone*



Types of female torso



Straight torso

Tilted pelvis

Iliac furrow

Skin folds in bent torso

Resting on one leg

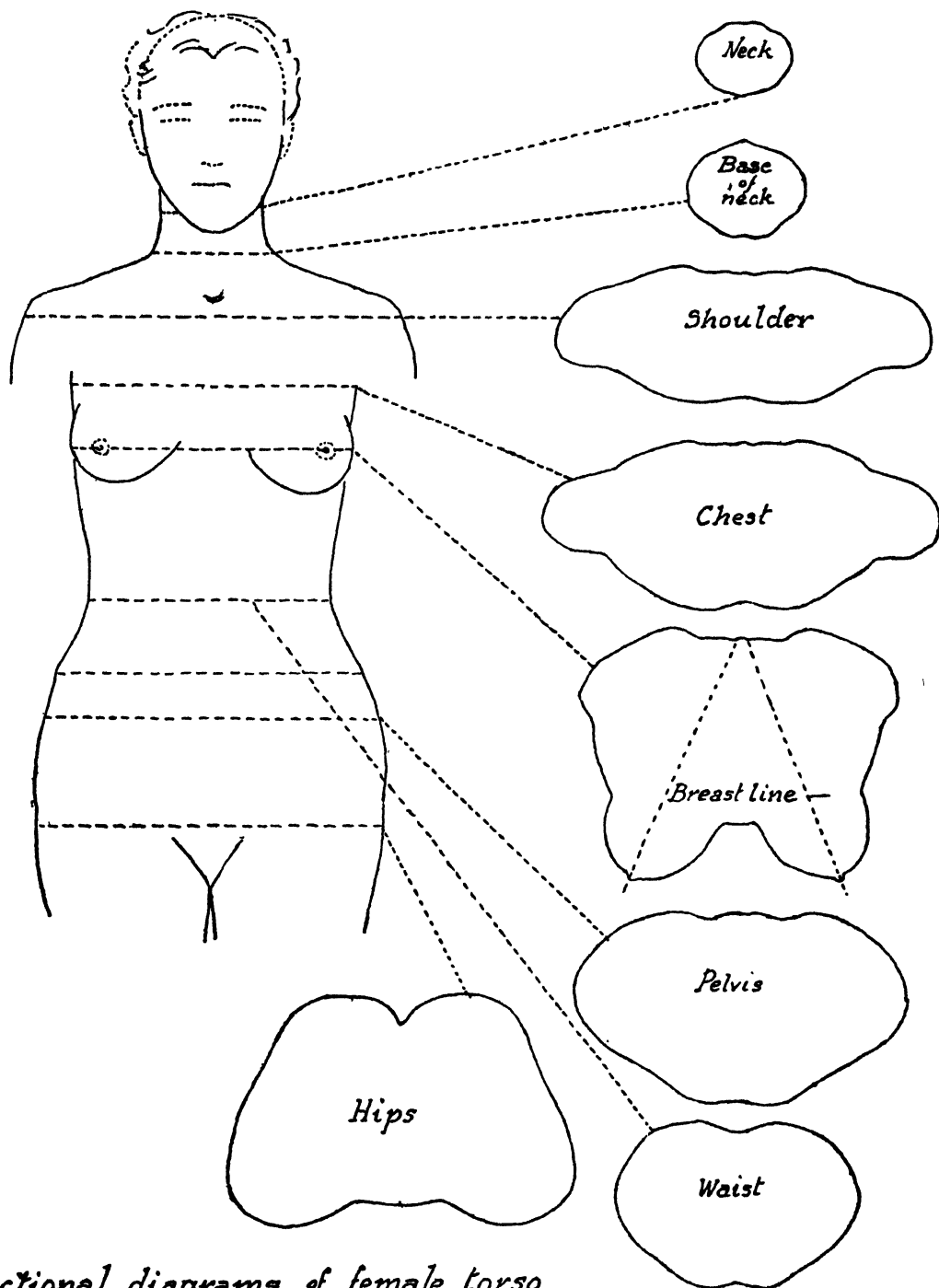
Skin folds of groin (male)

Skin folds of groin (female)

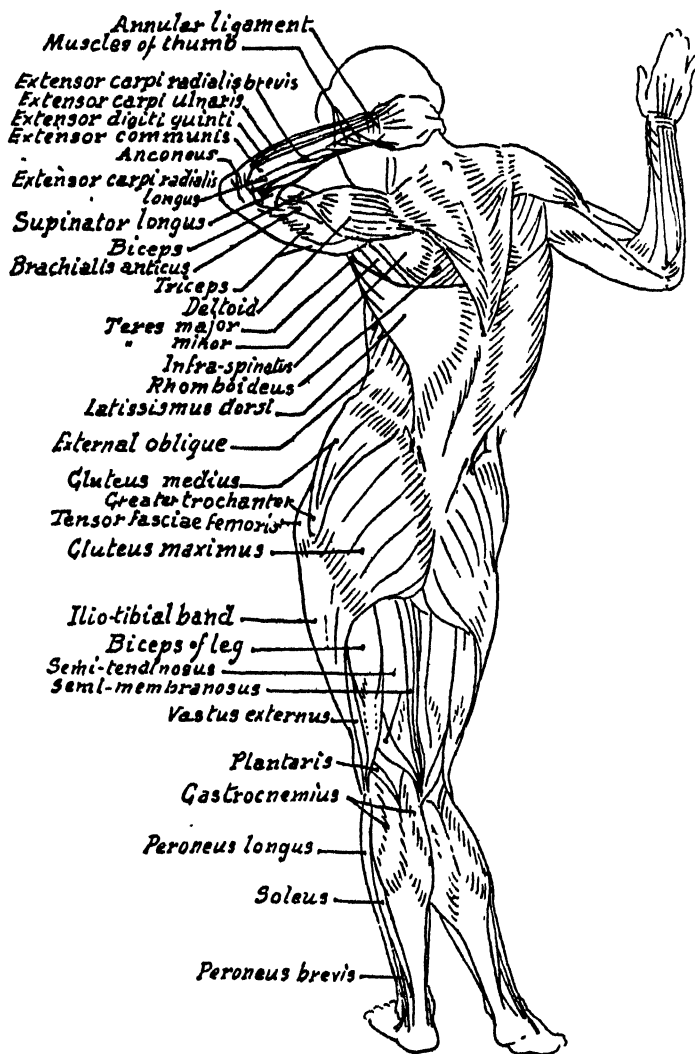
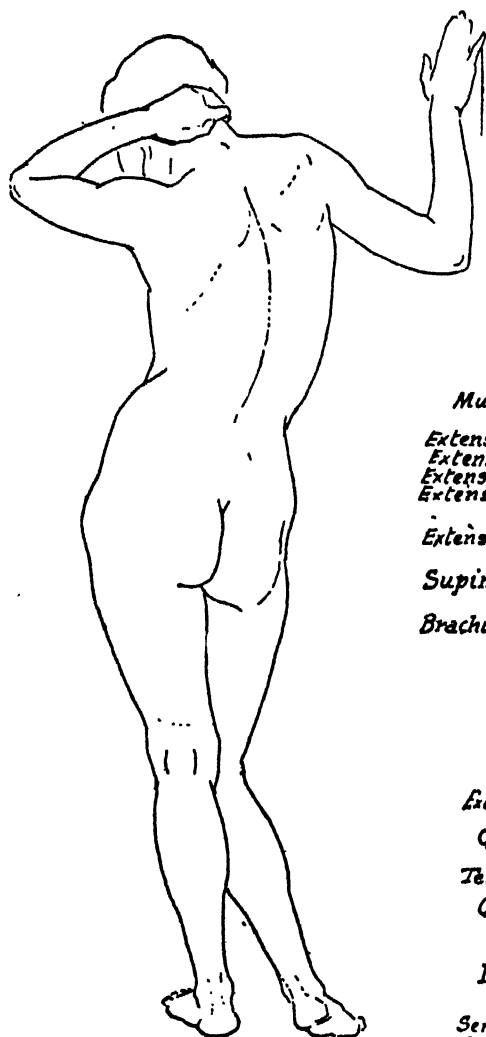
Male
Female

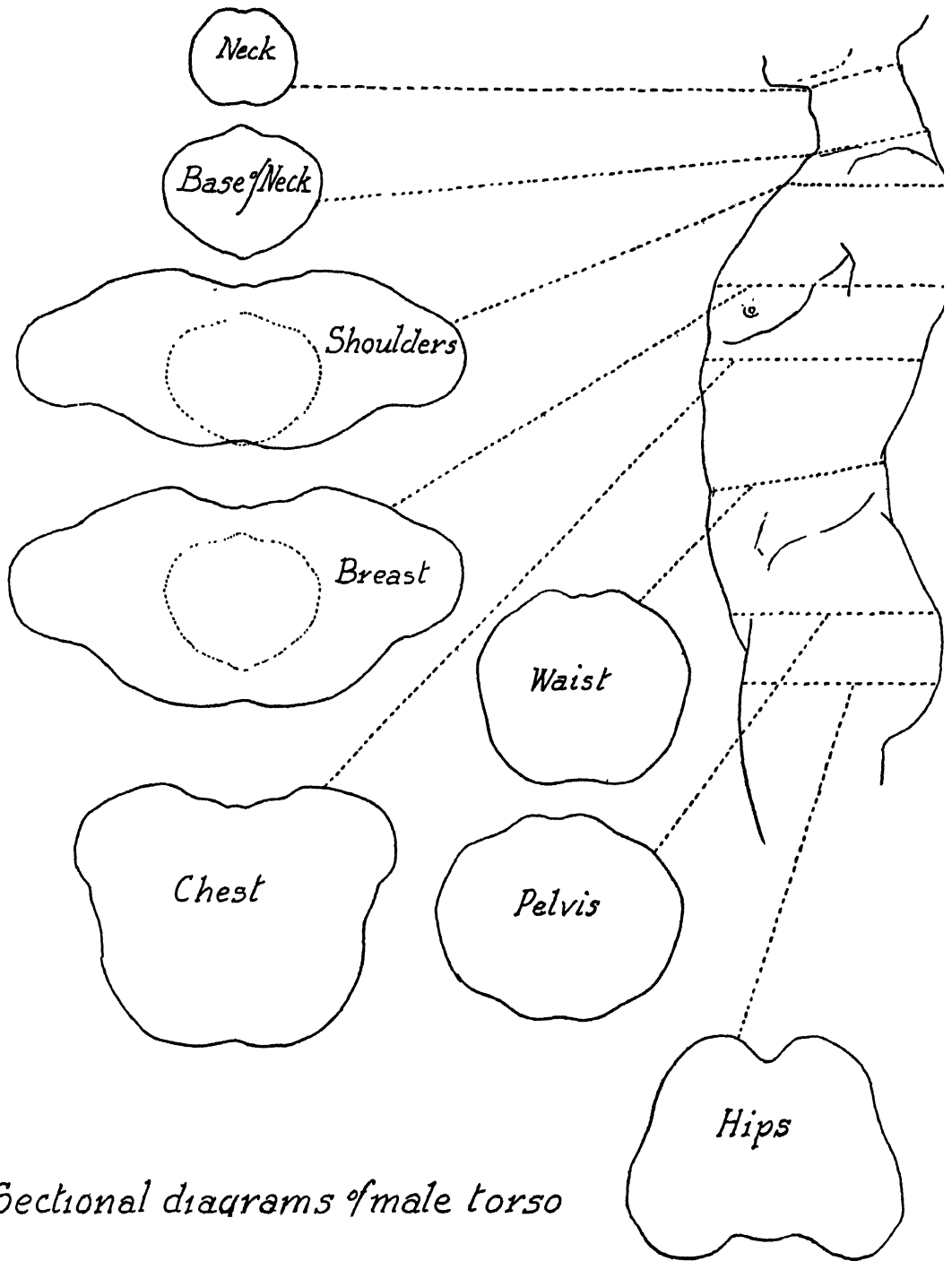
Male - folds of the groin - female

Male
Female



Sectional diagrams of female torso

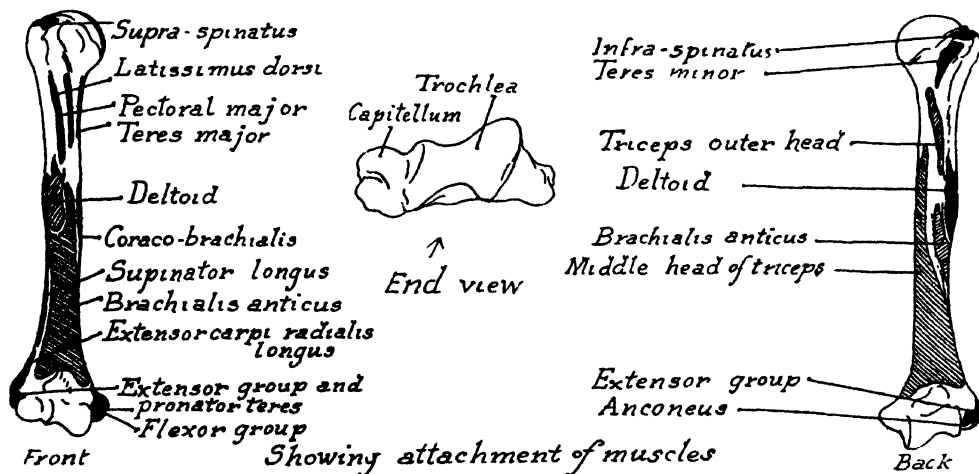
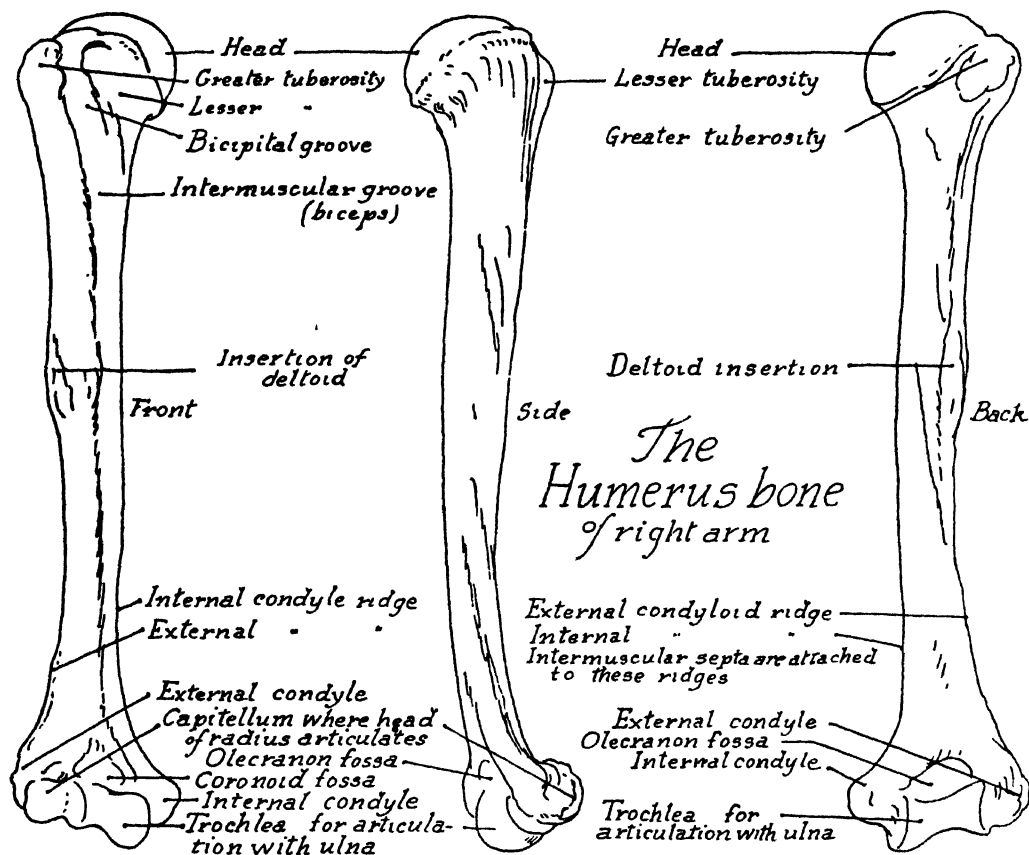




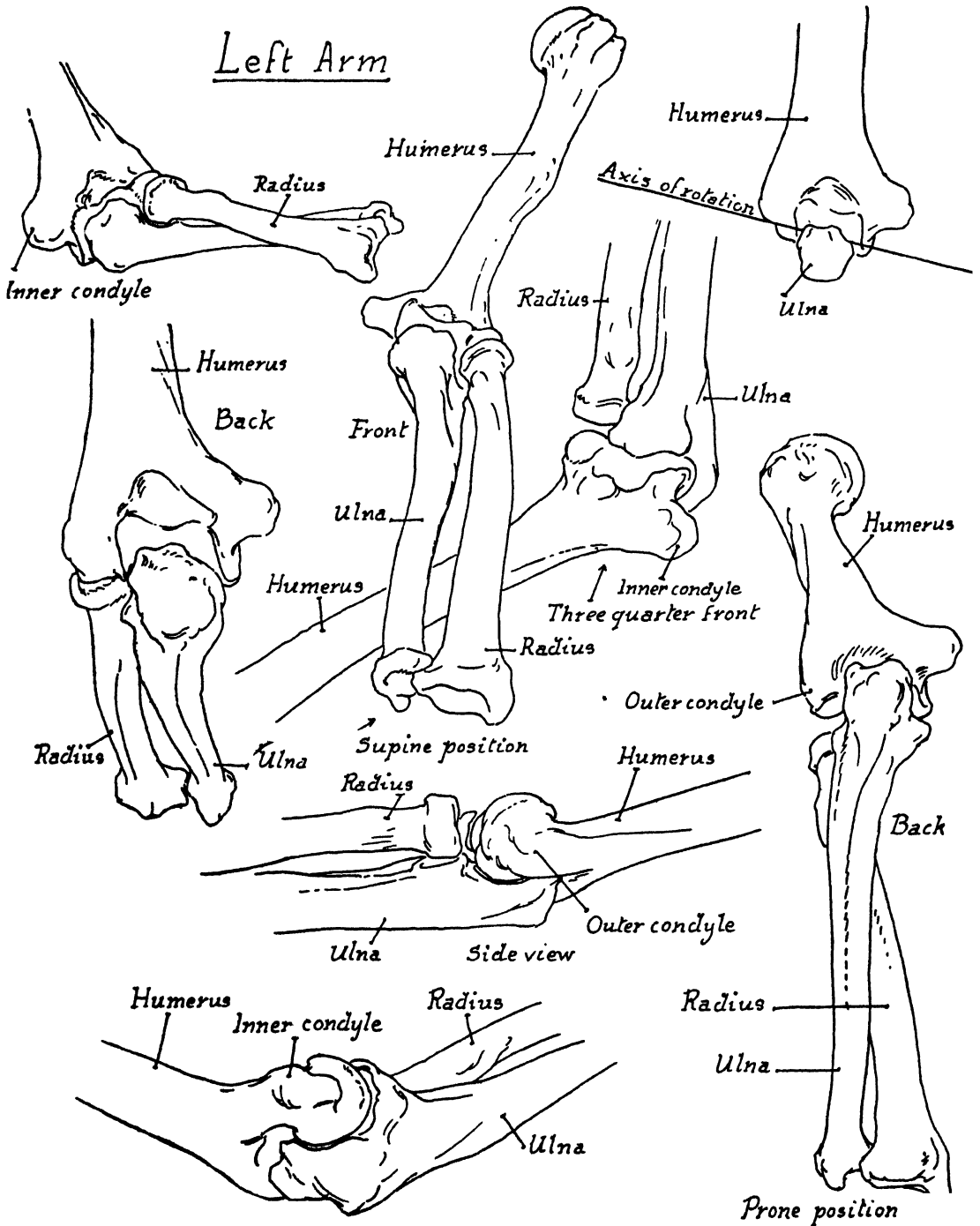
Sectional diagrams of male torso



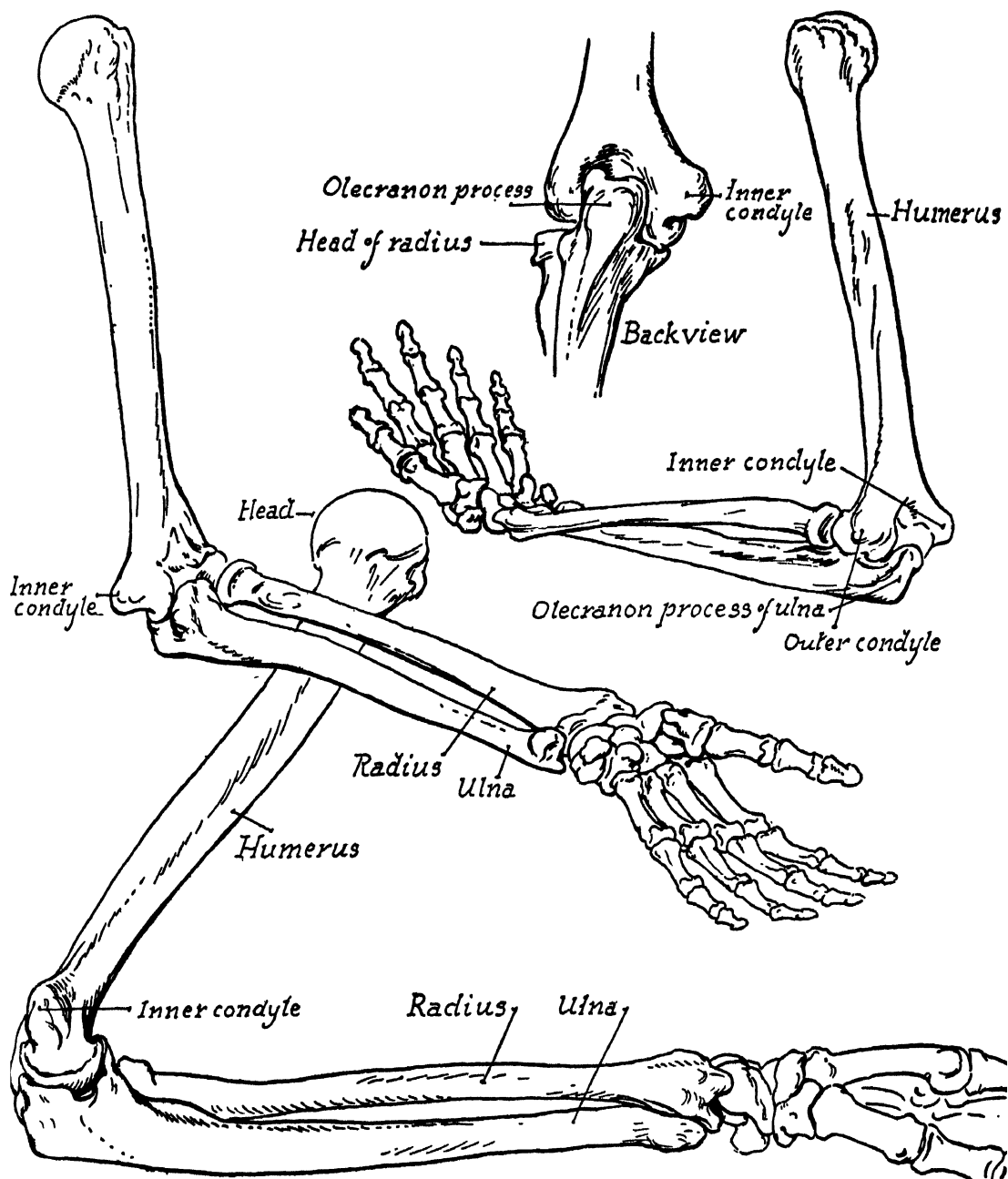
PART V
THE ARM



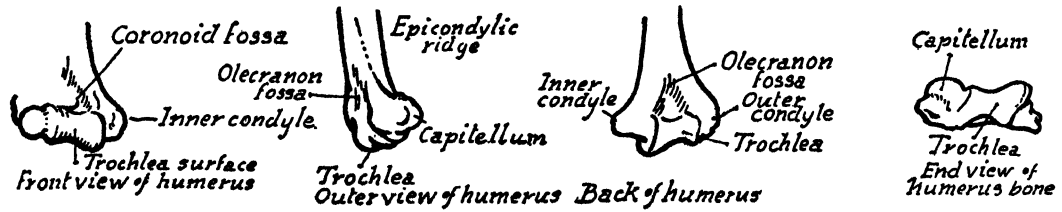
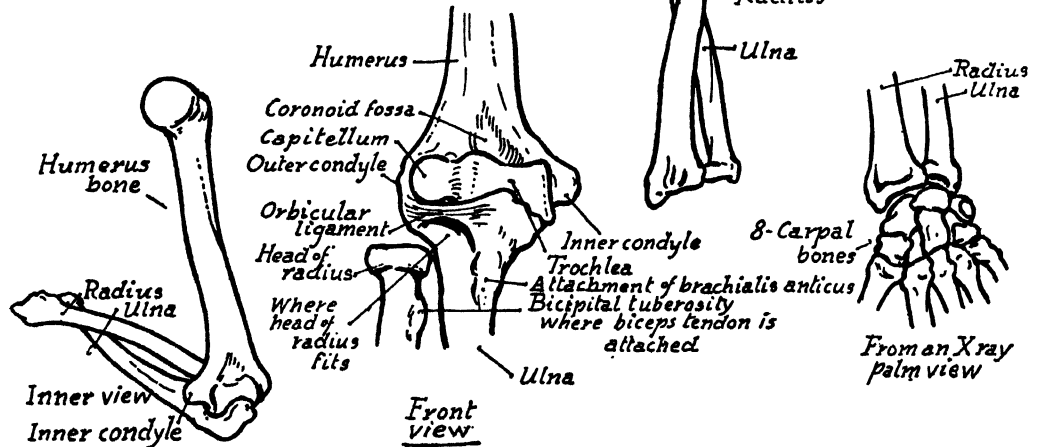
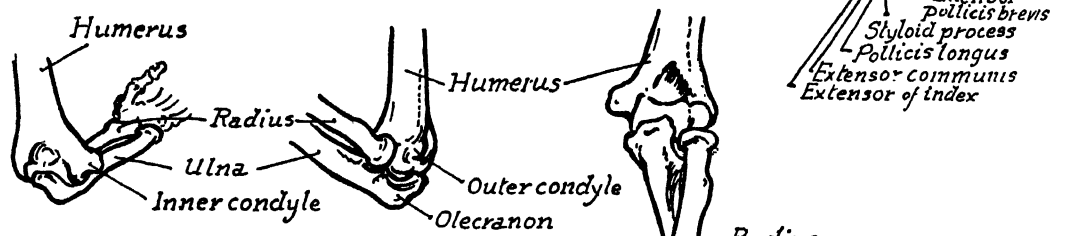
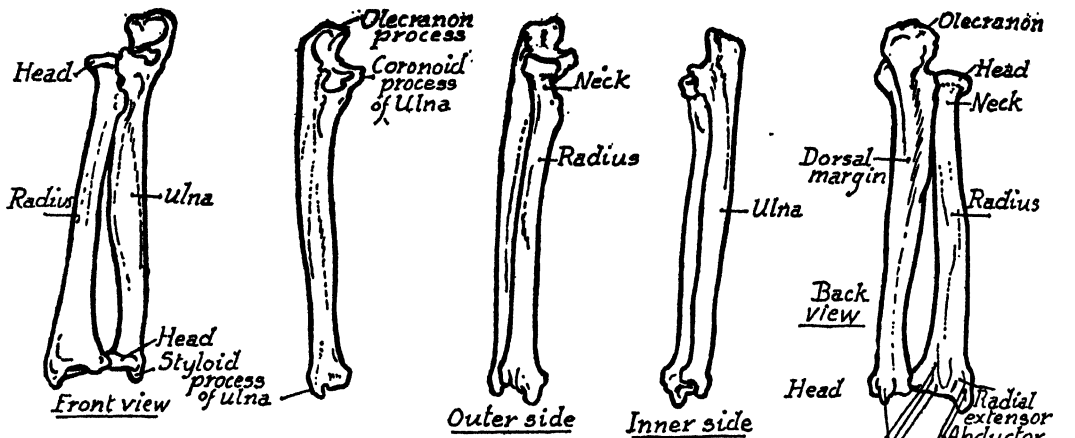
Left Arm

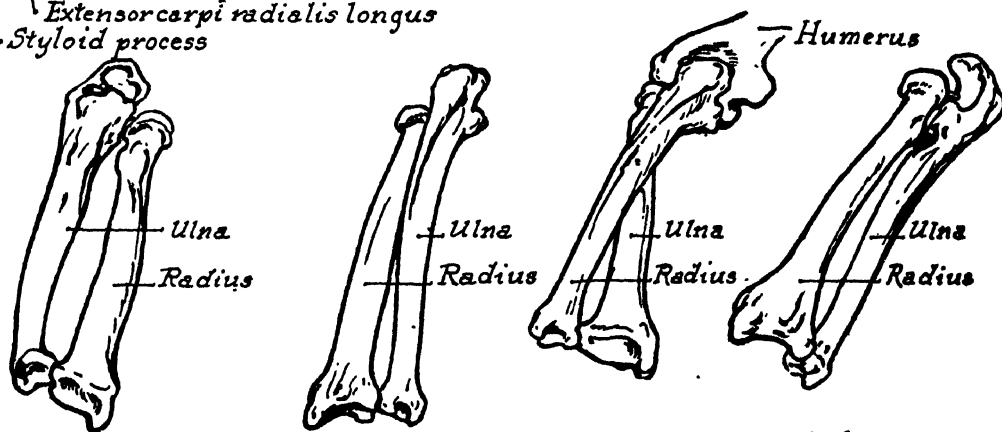
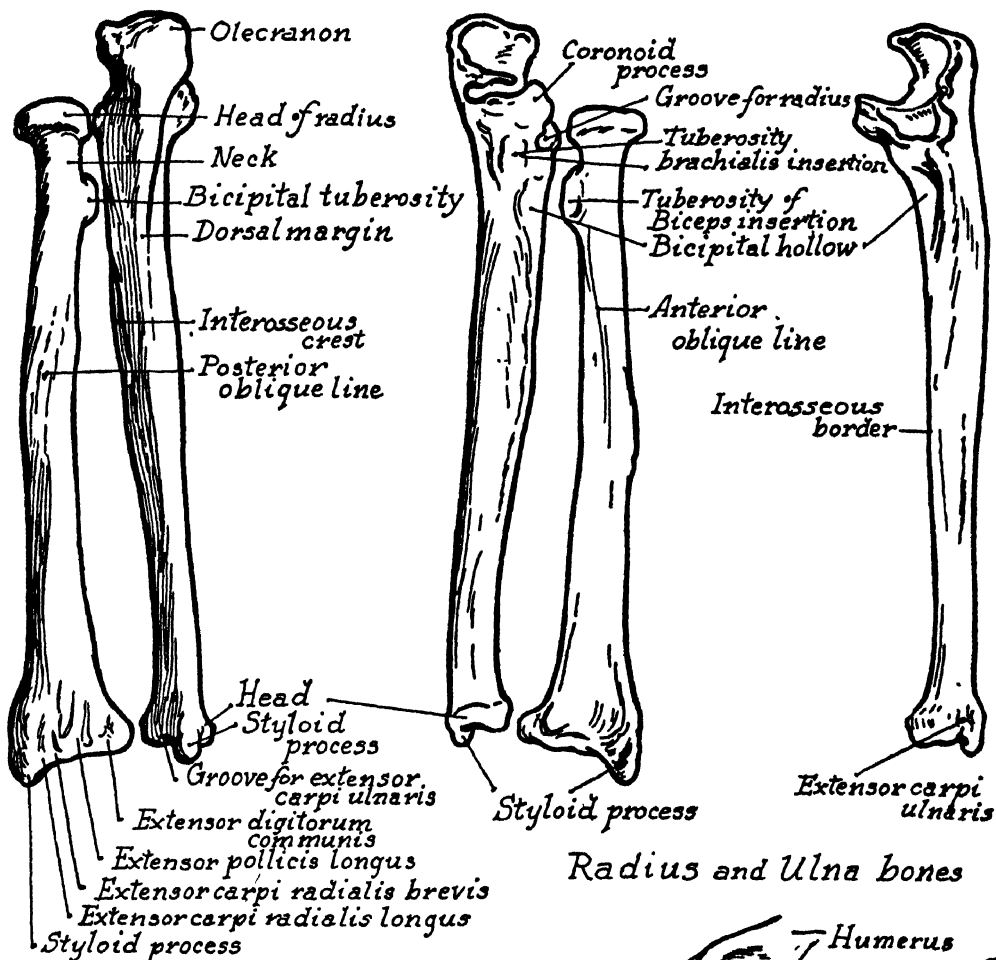


Various positions of arm bones

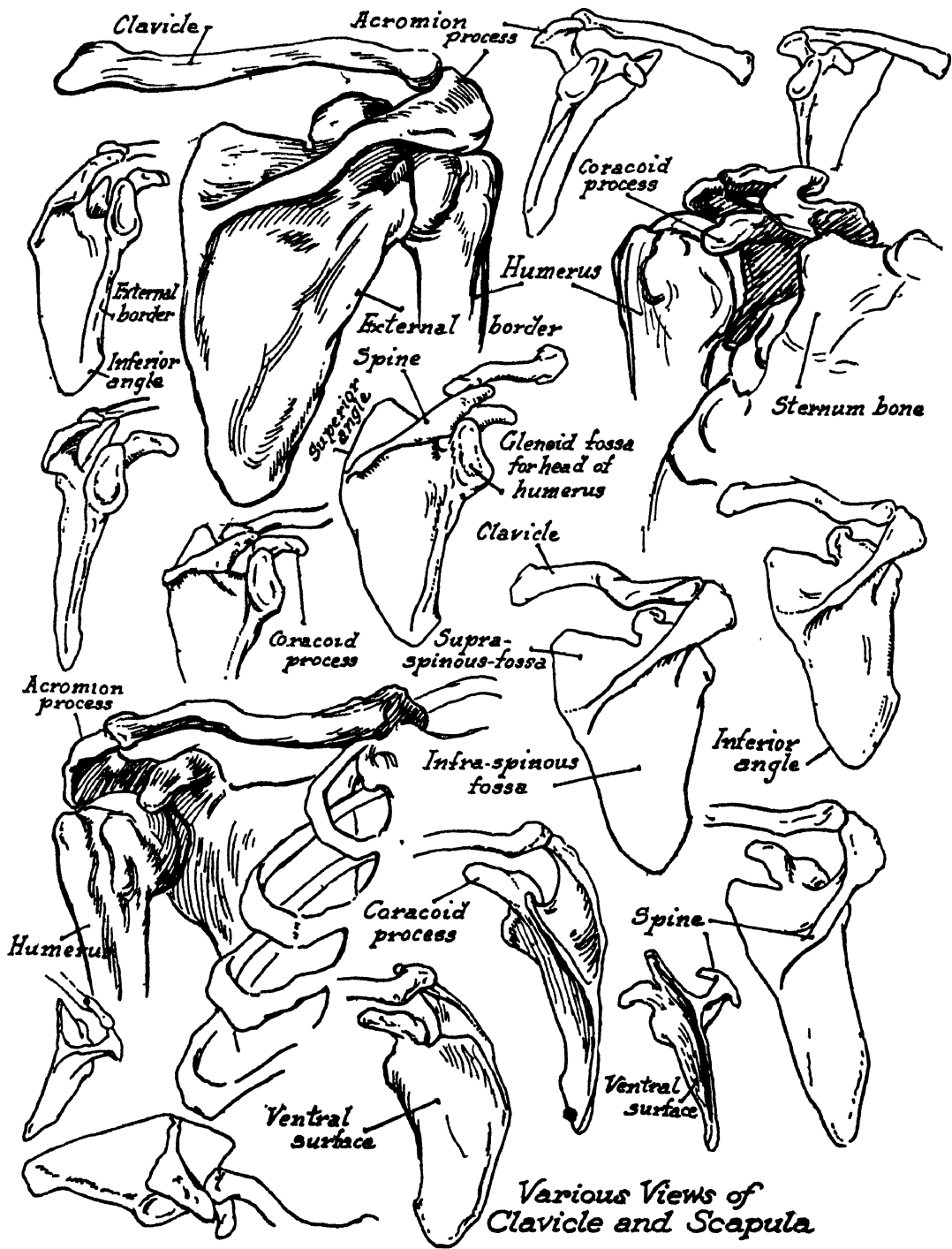


Bones of Arm and Hand

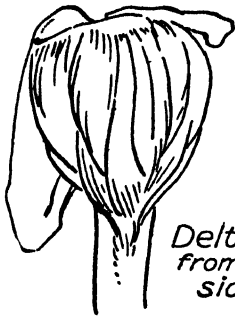




Relations and foreshortenings of radius and ulna



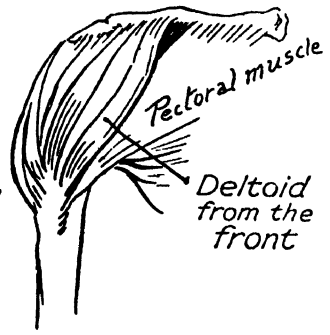
*Various Views of
Clavicle and Scapula*



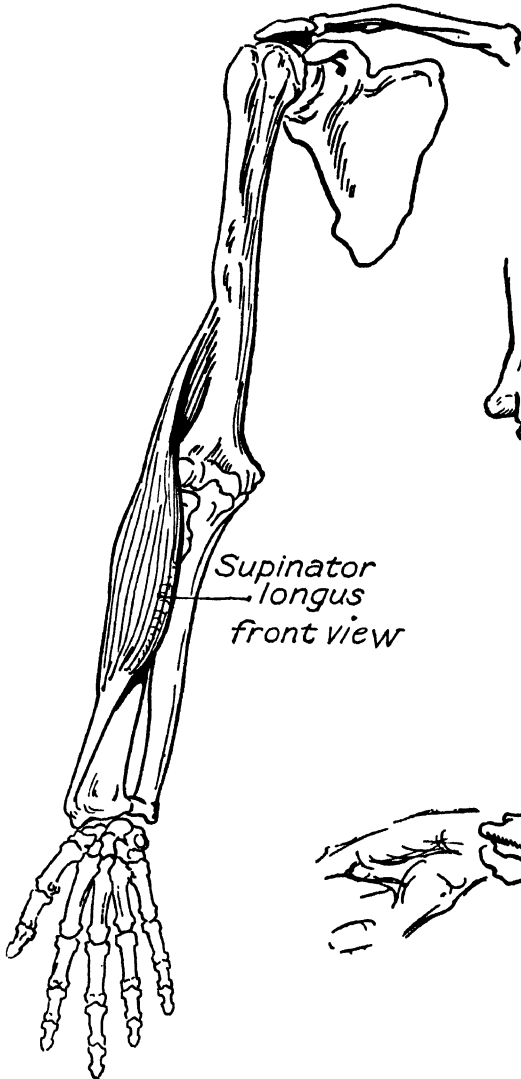
*Deltoid
from the
side*



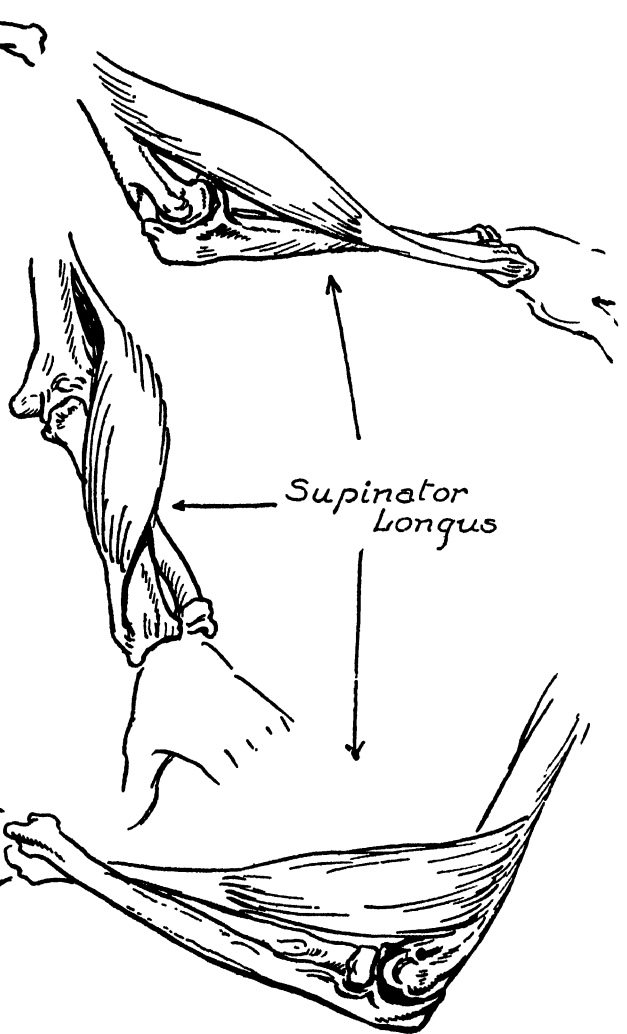
*Deltoid
from the
back*



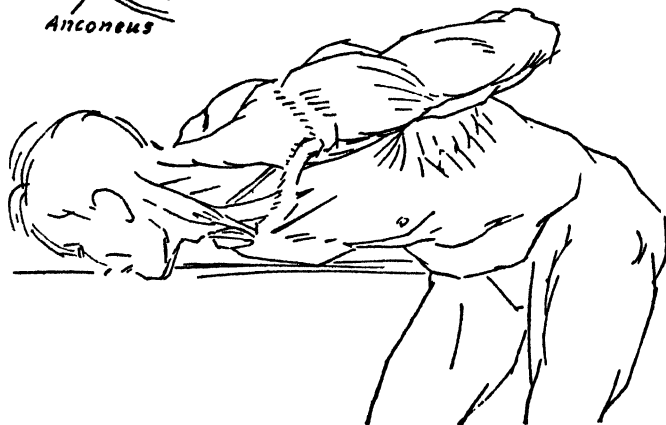
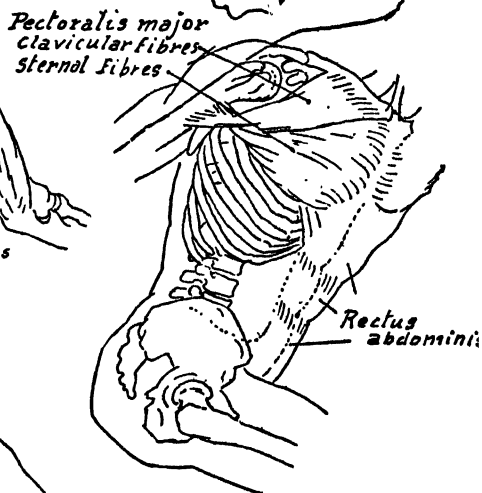
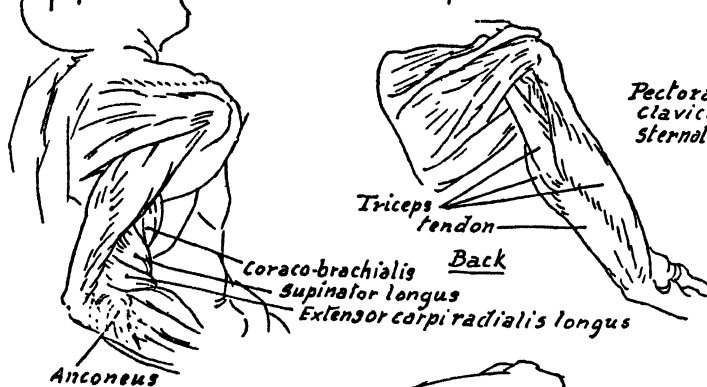
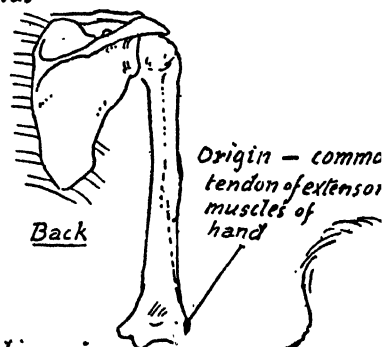
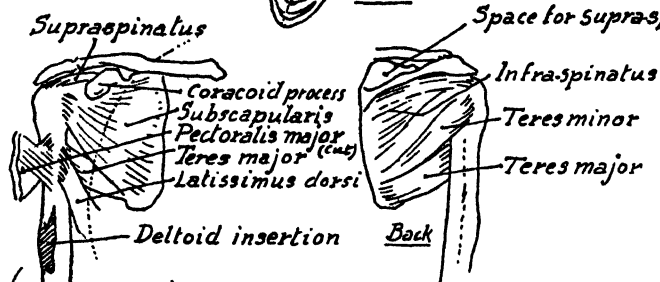
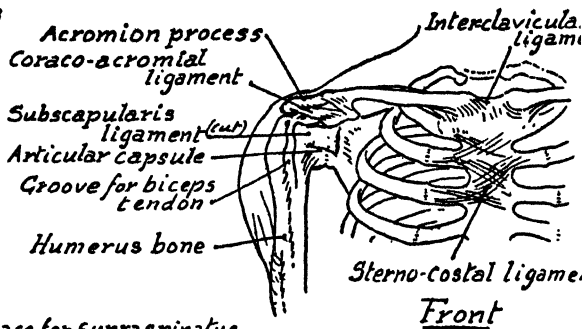
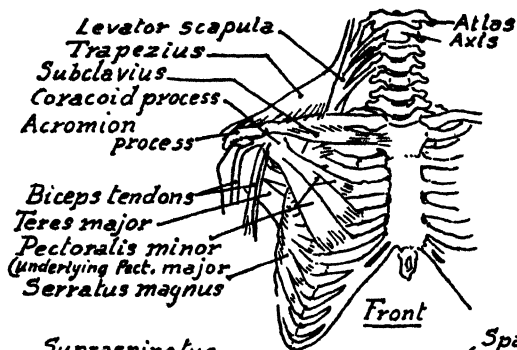
Pectoral muscle
*Deltoid
from the
front*



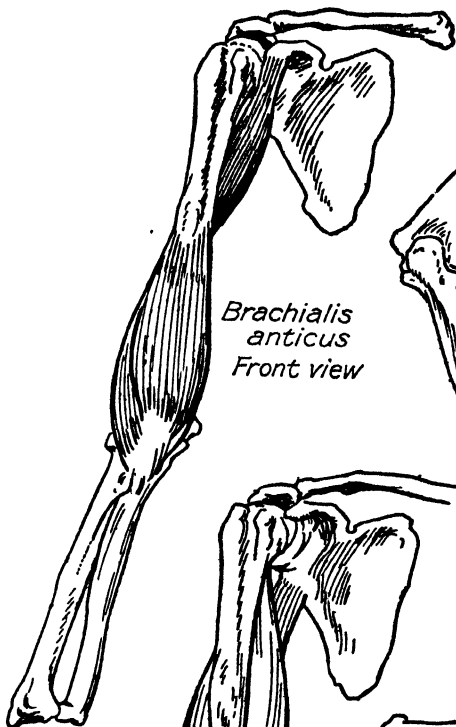
*Supinator
longus
front view*



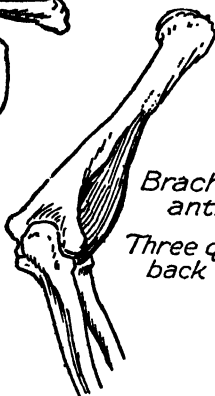
*Supinator
longus*



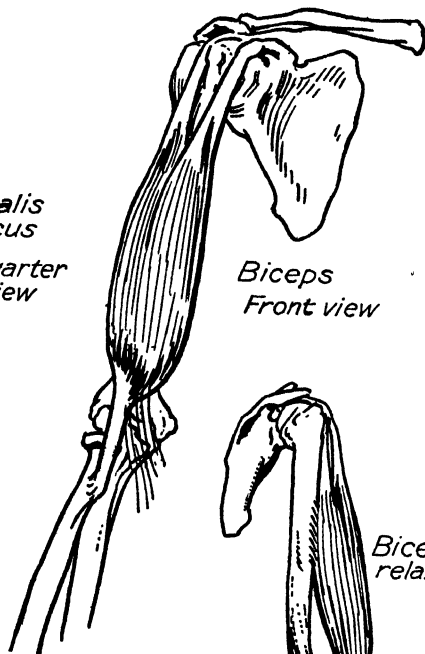
*Studies of shoulder girdle,
grouped for comparison*



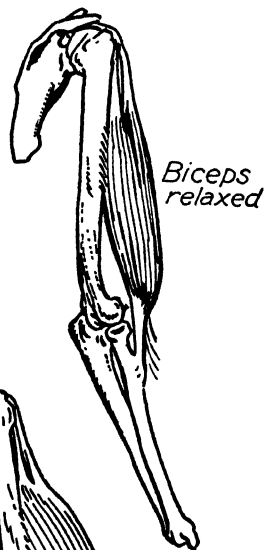
*Brachialis
anticus
Front view*



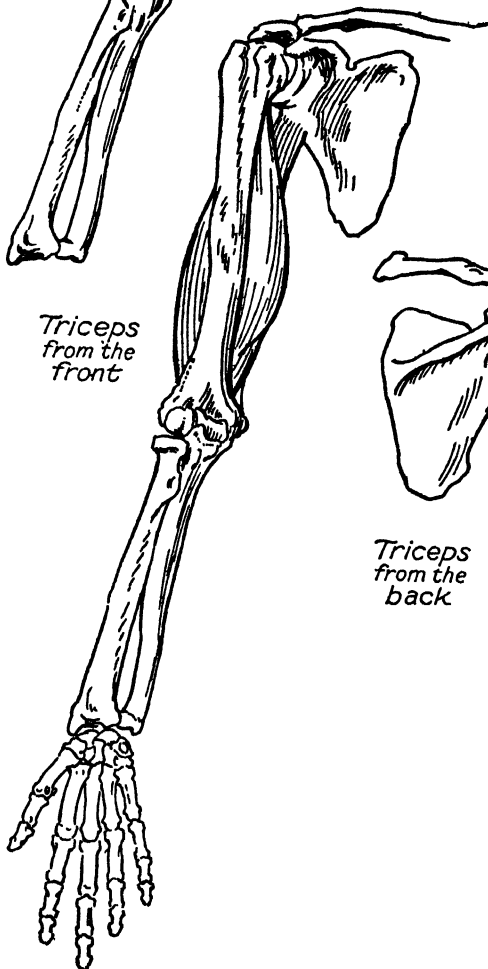
*Brachialis
anticus
Three quarter
back view*



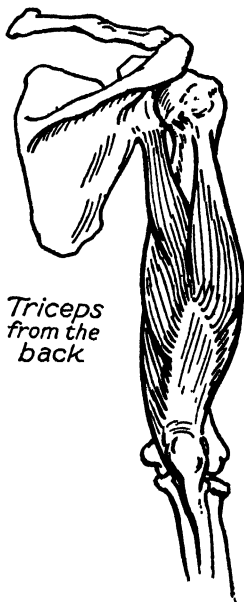
*Biceps
Front view*



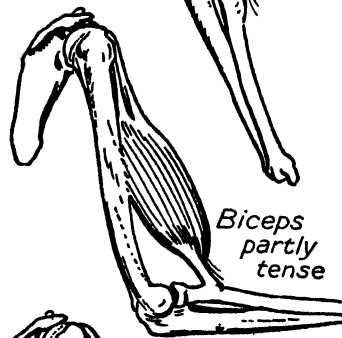
*Biceps
relaxed*



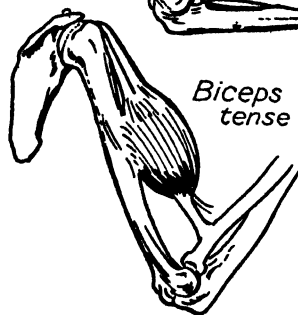
*Triceps
from the
front*



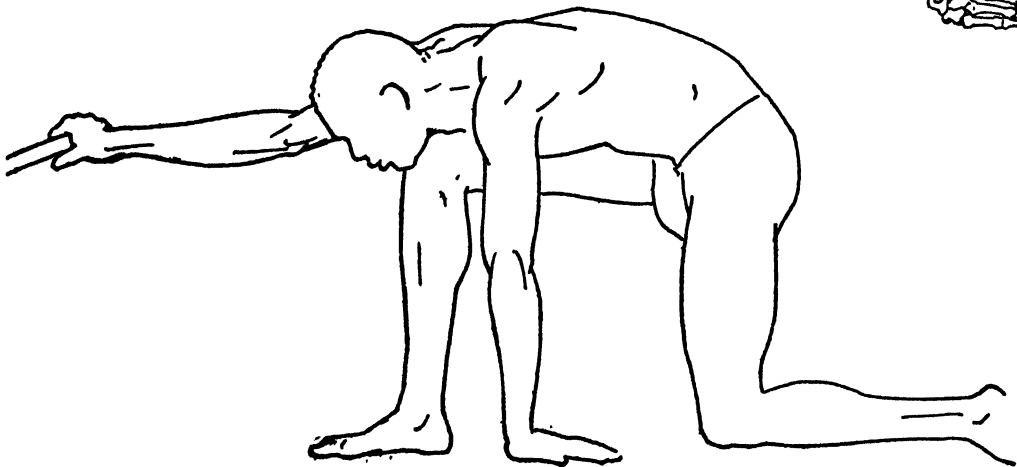
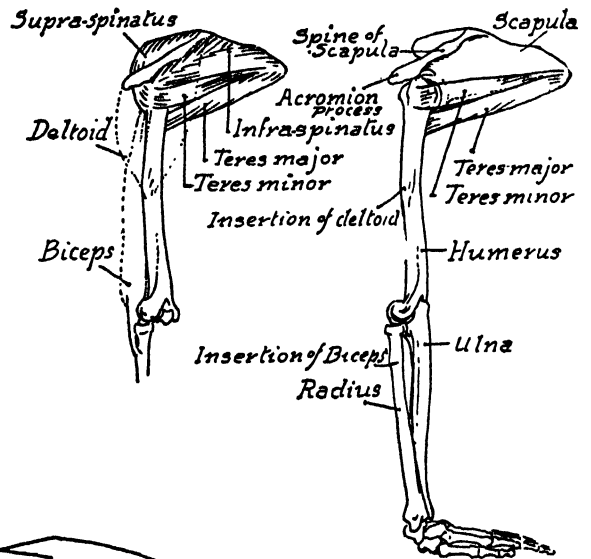
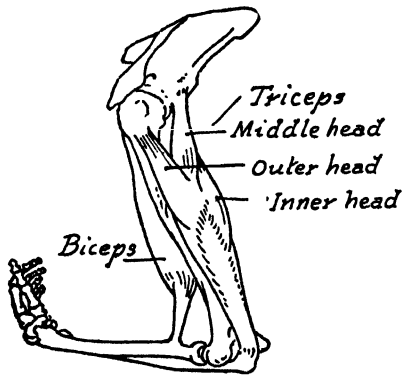
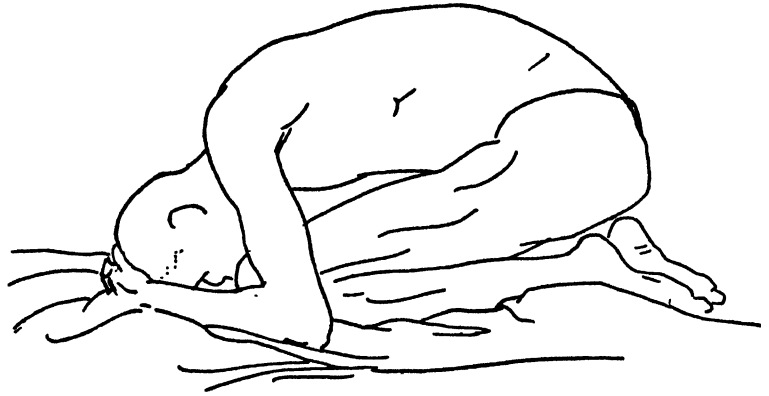
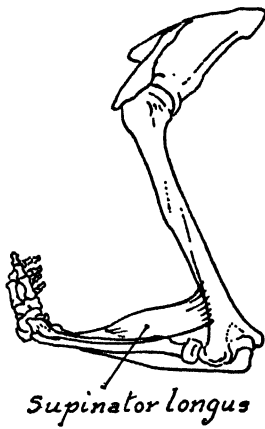
*Triceps
from the
back*

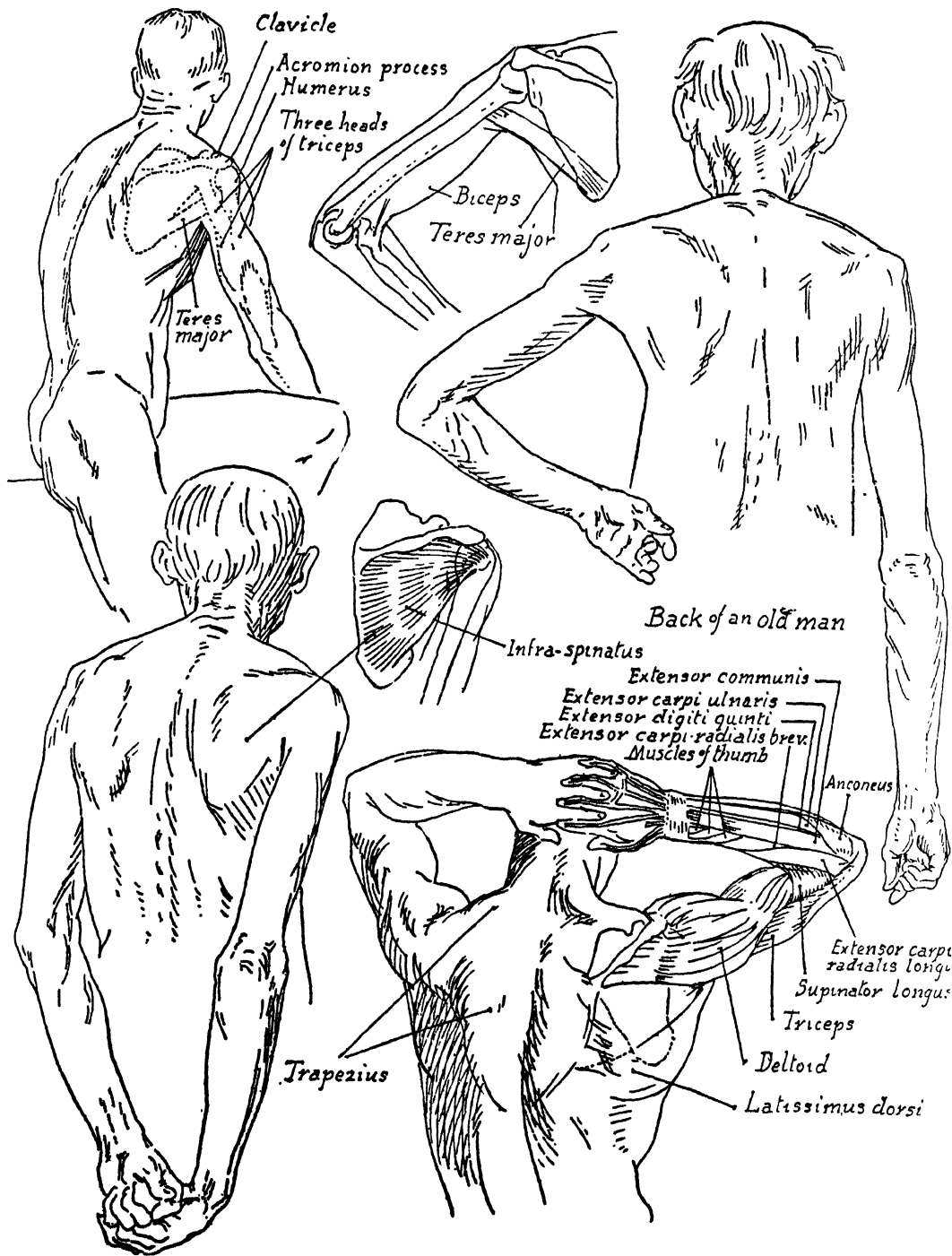


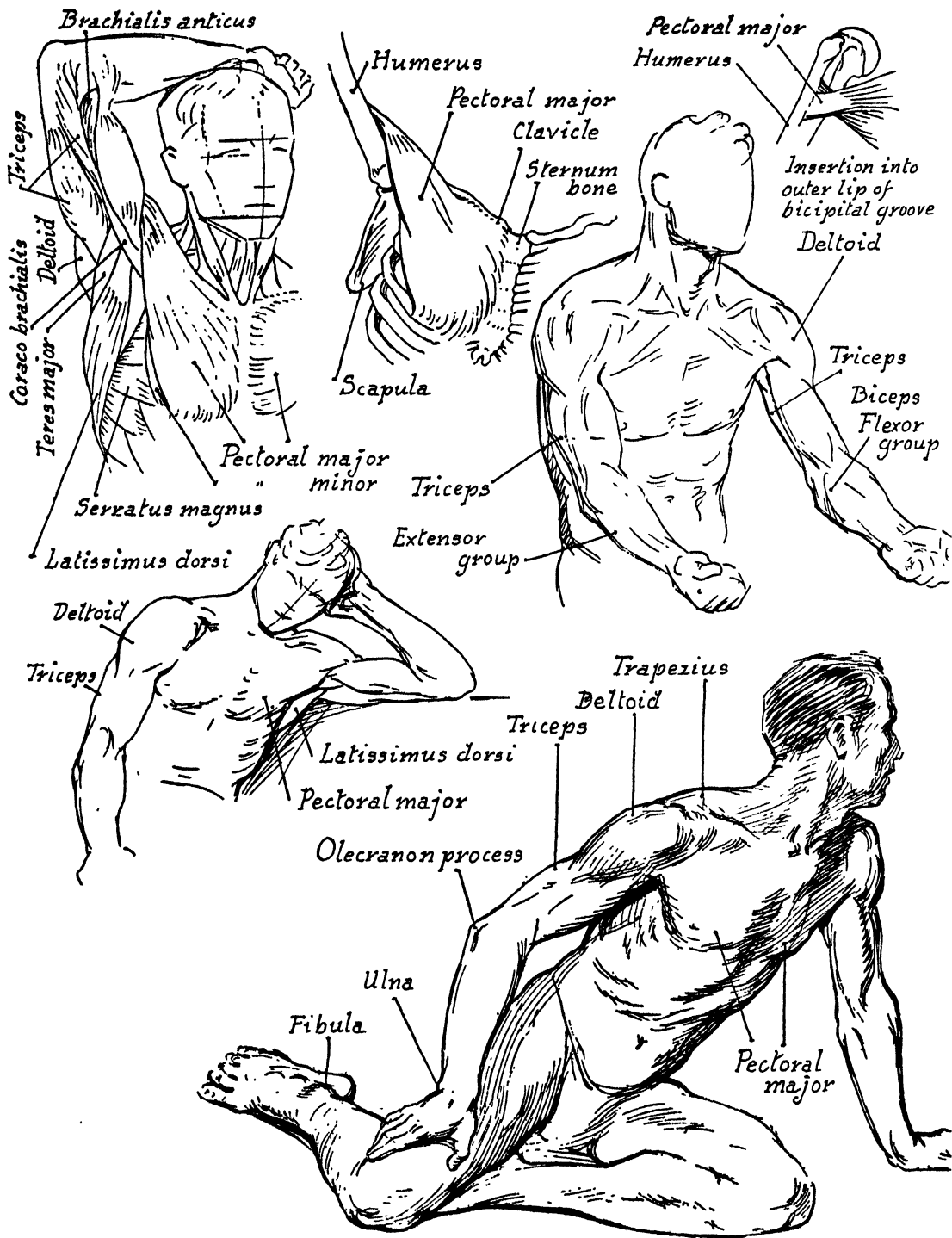
*Biceps
partly
tense*

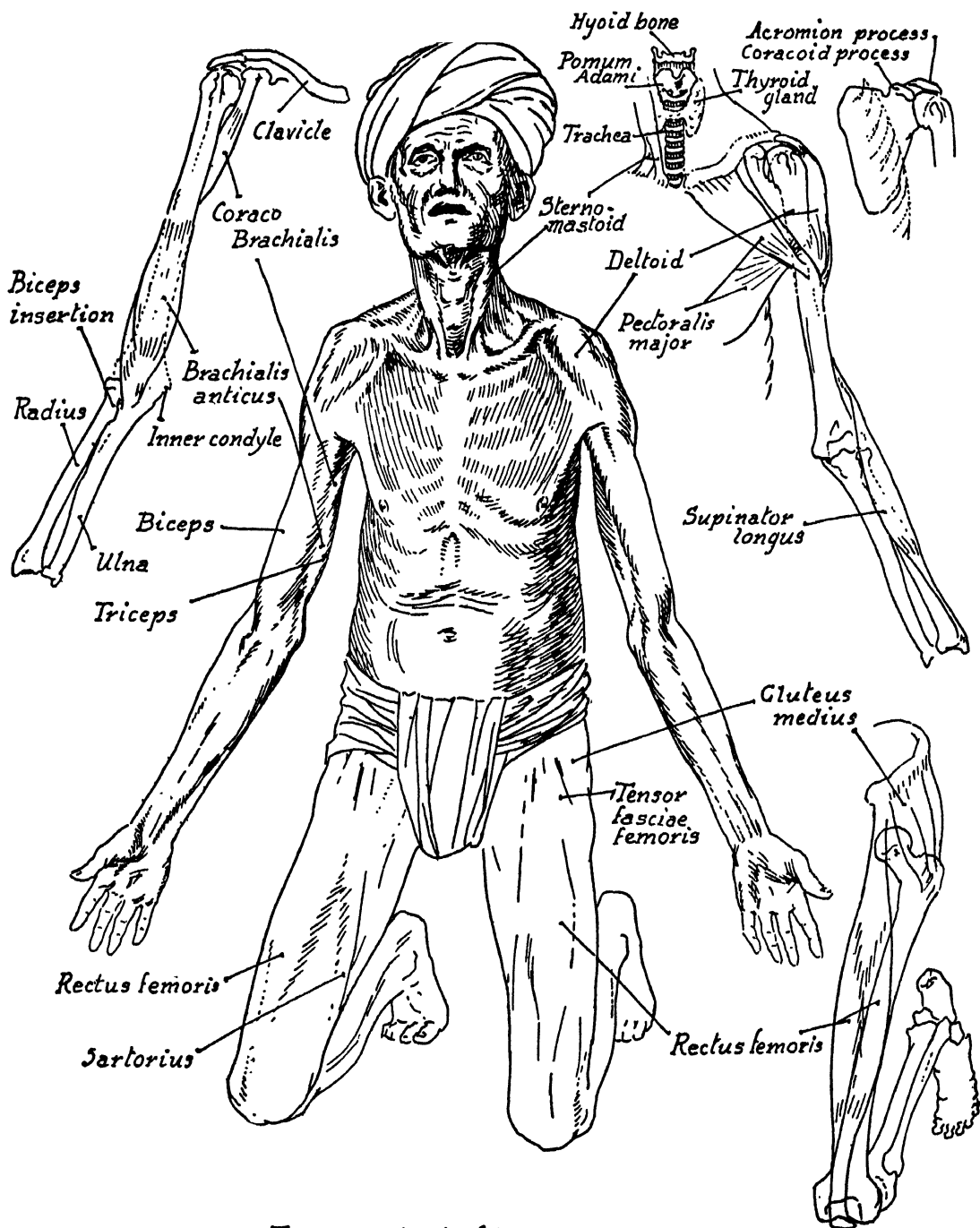


*Biceps
tense*

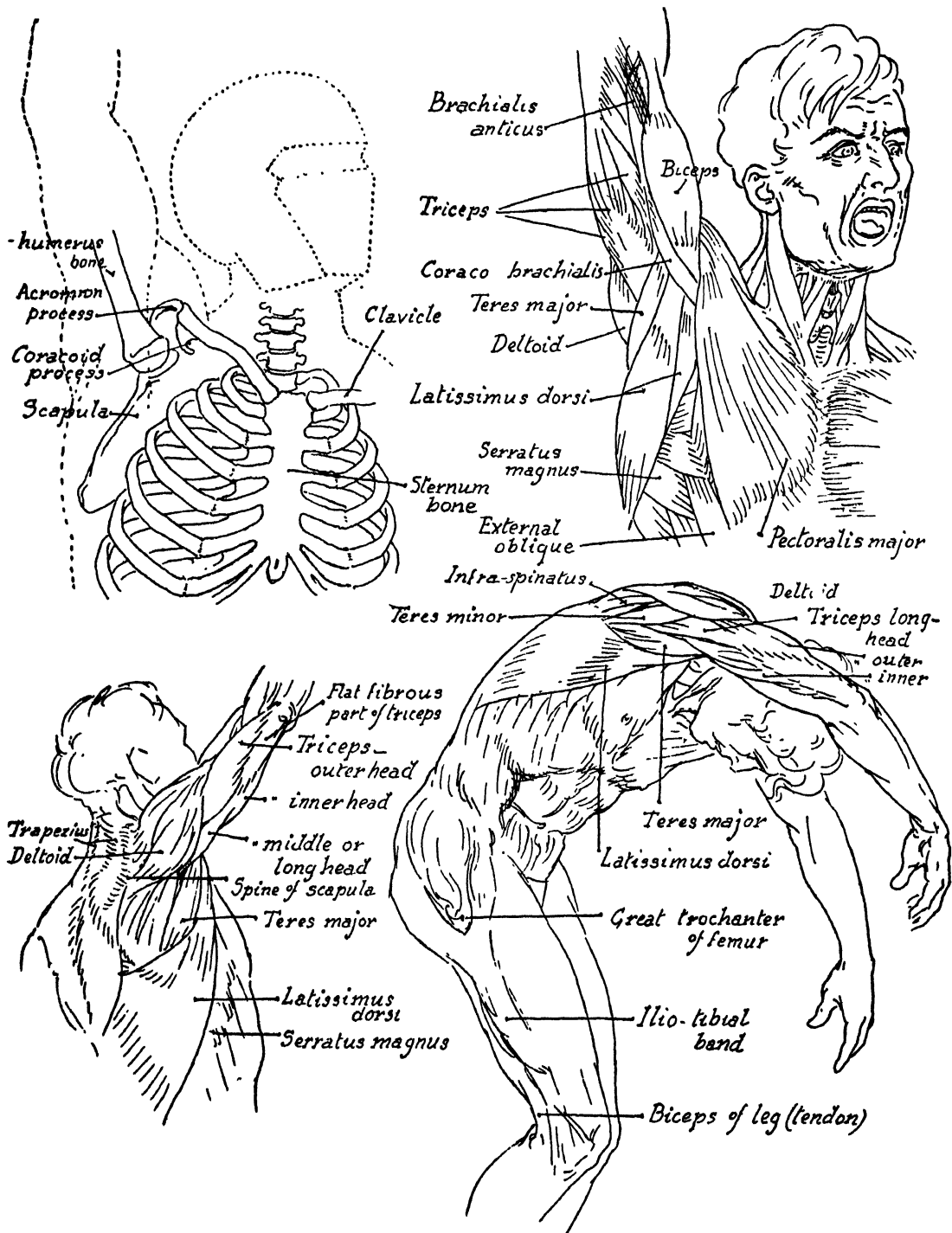




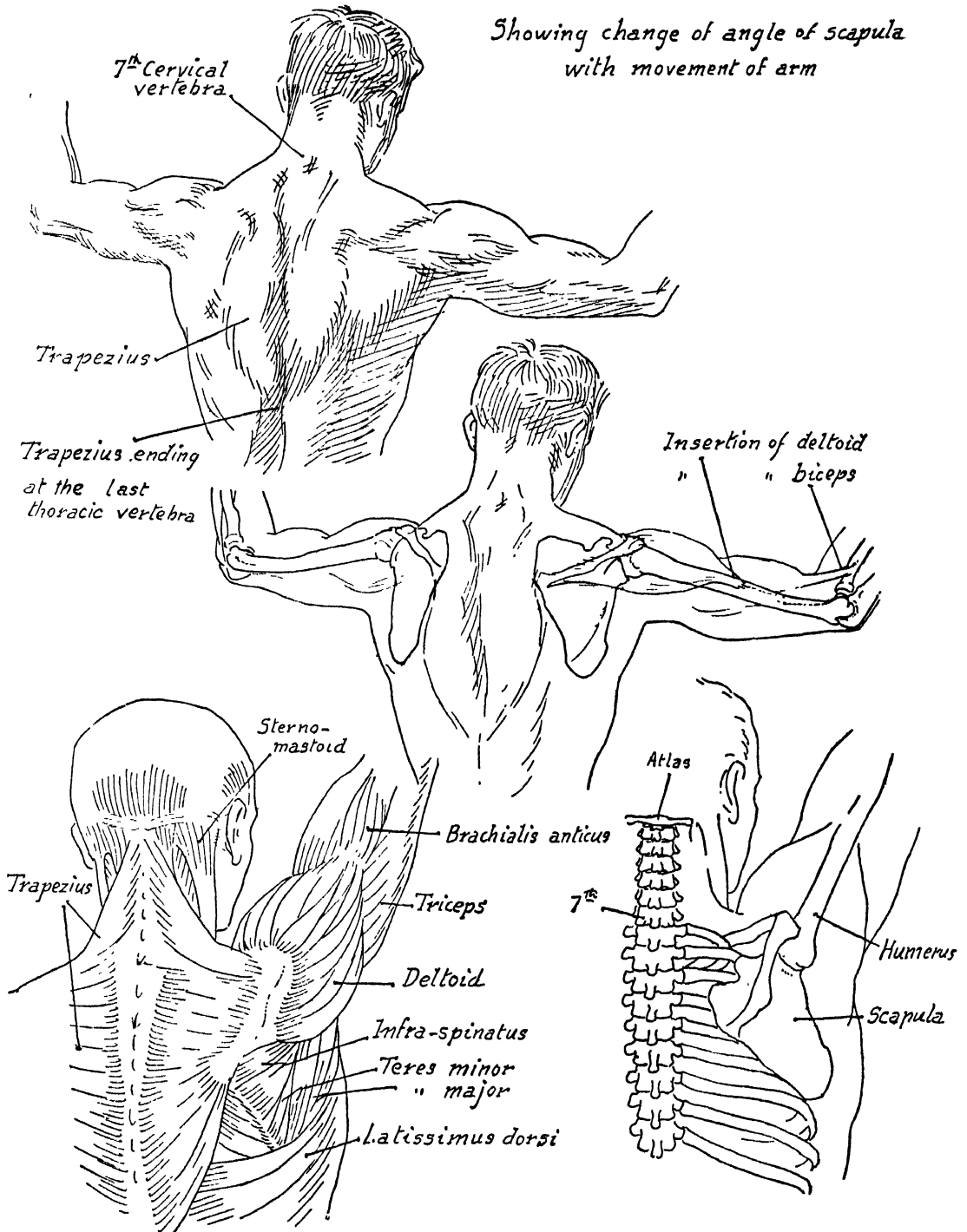


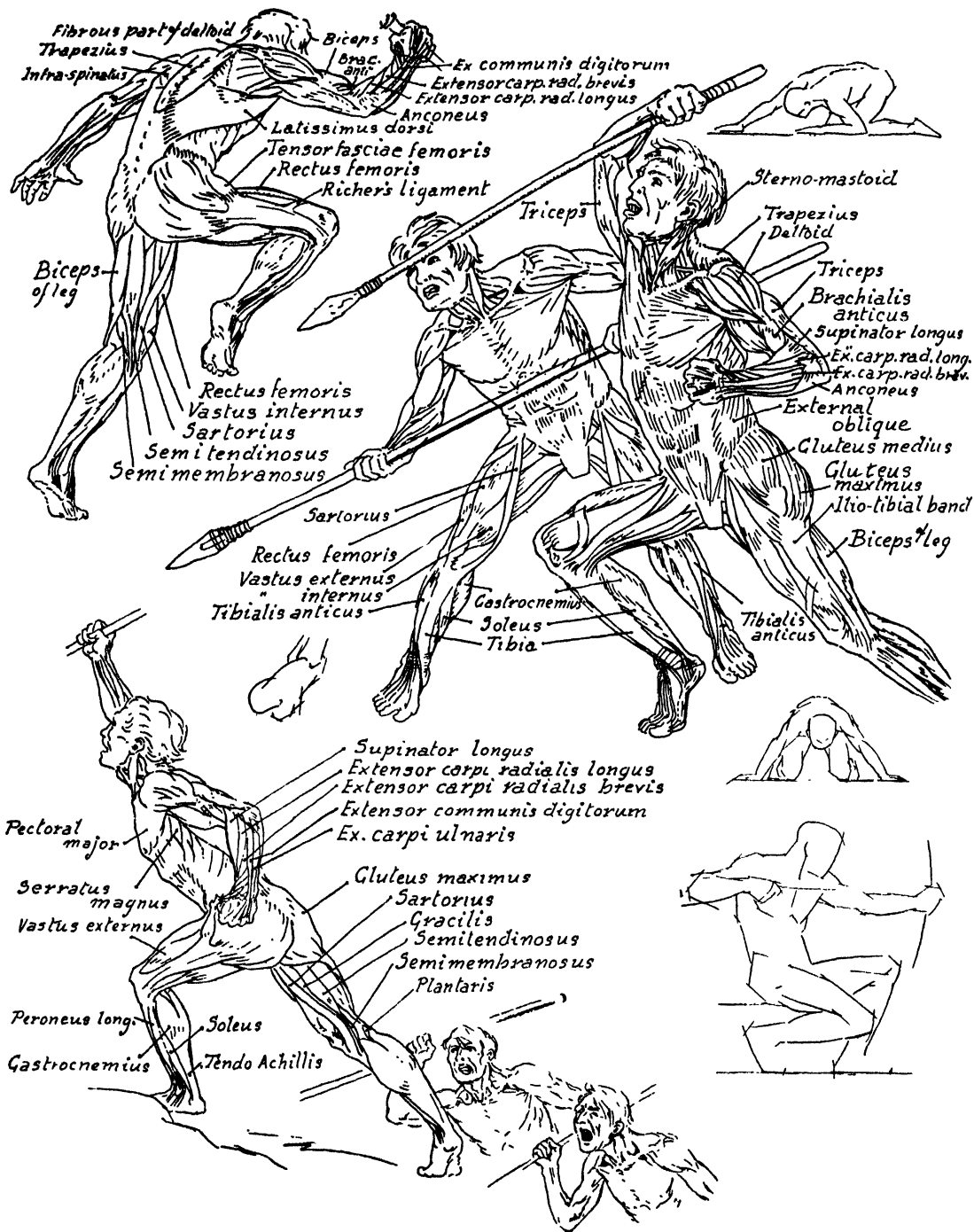


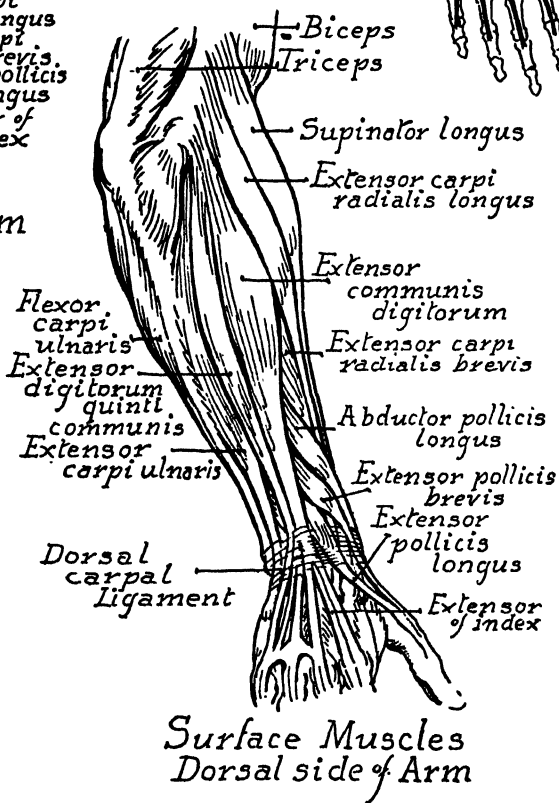
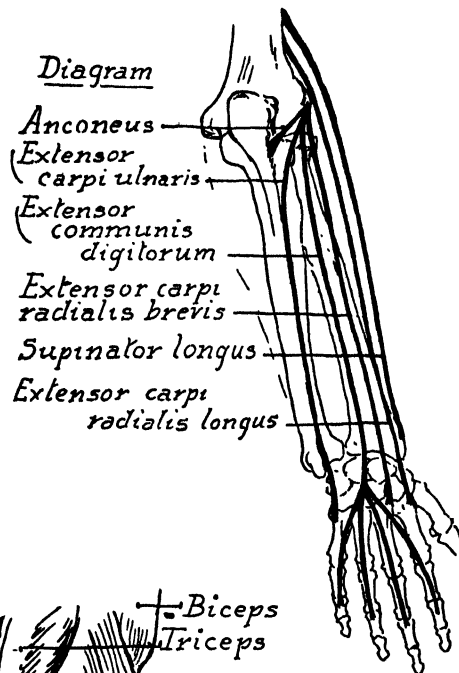
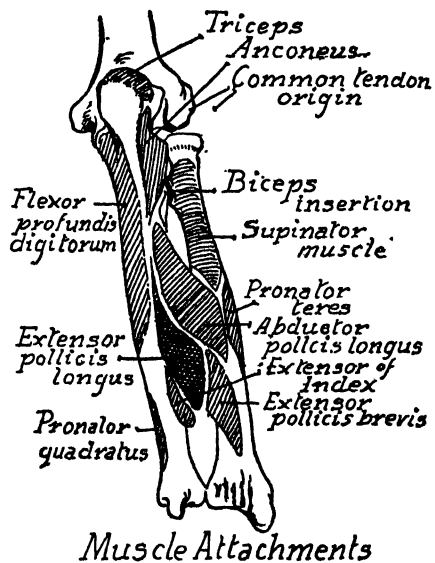
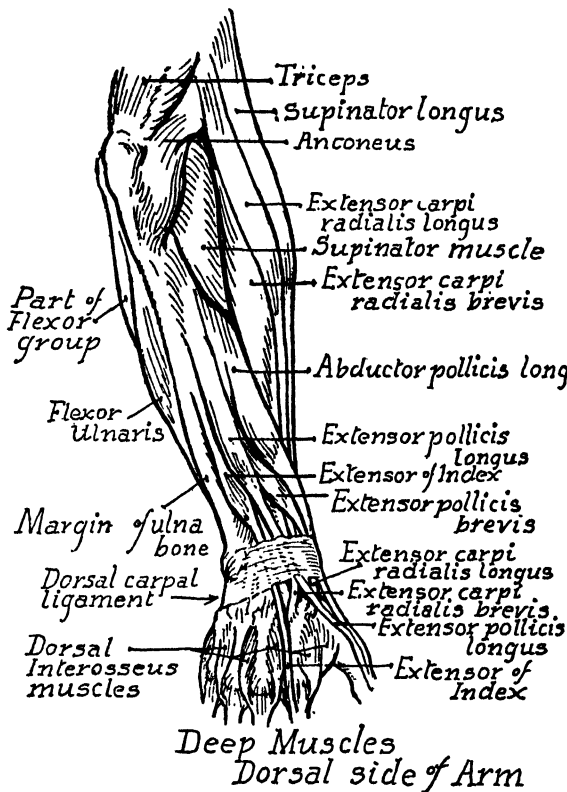
Emaciated figure

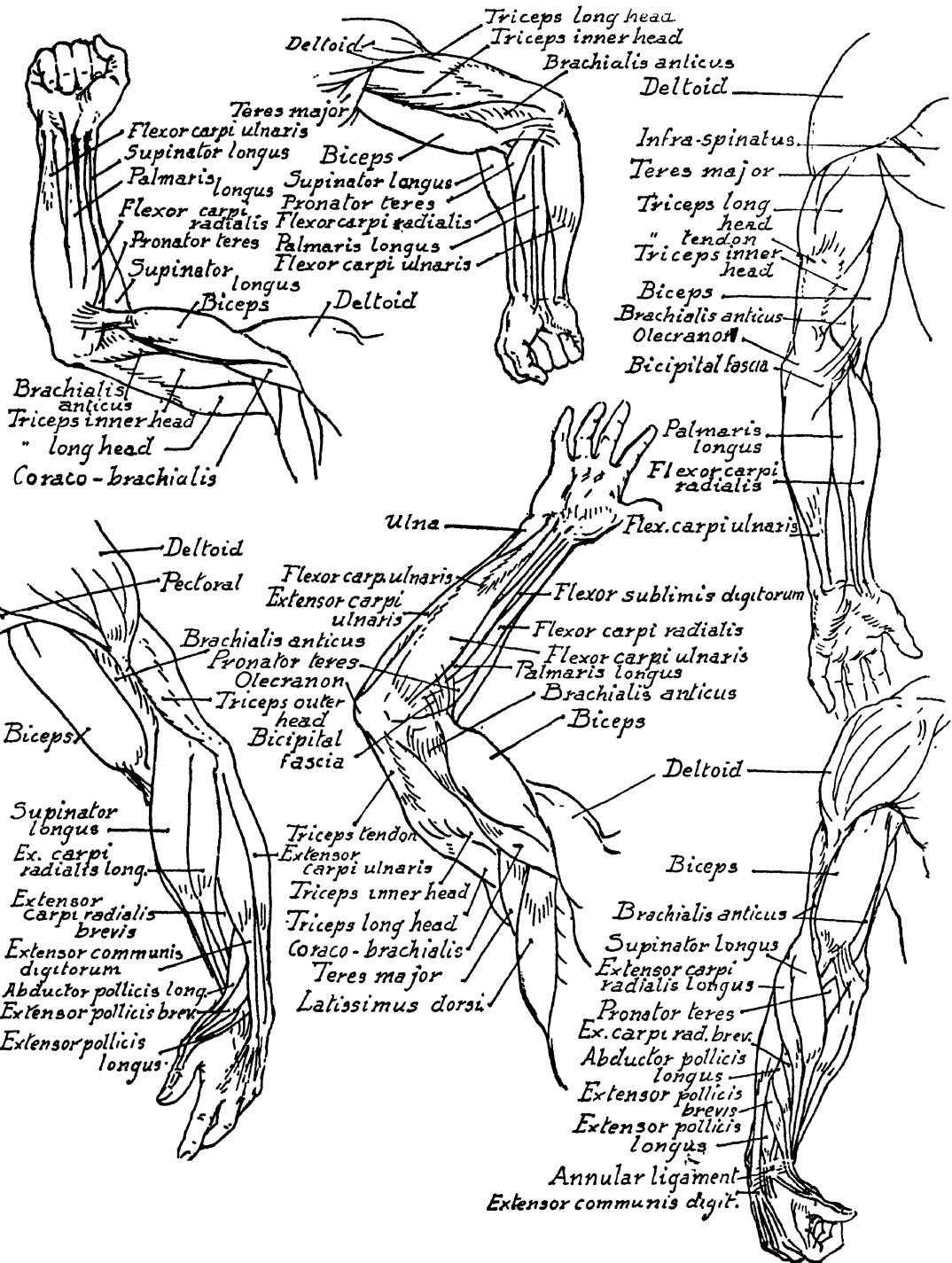


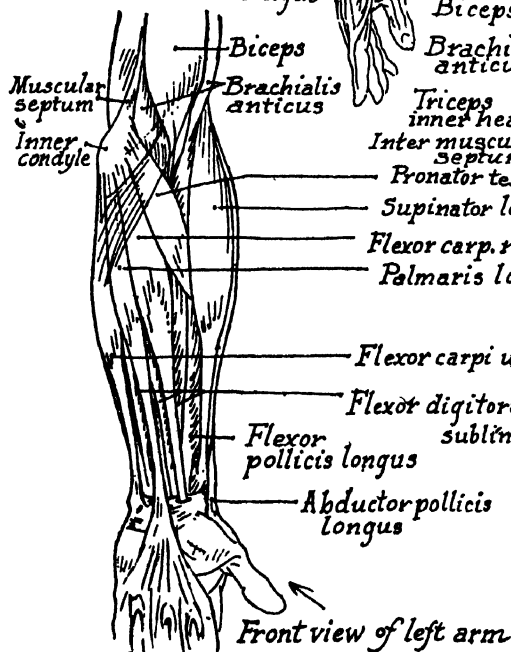
Showing change of angle of scapula
with movement of arm



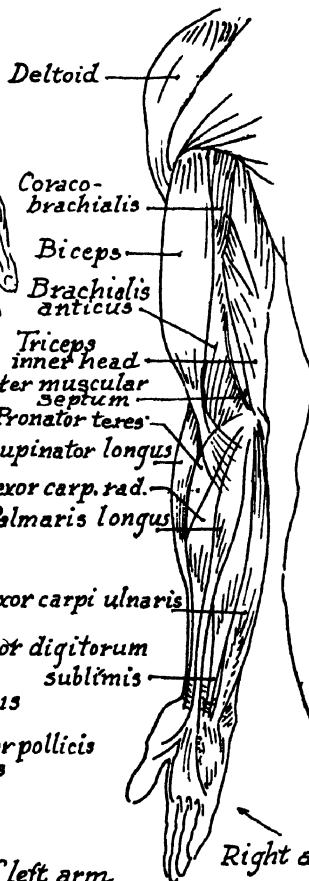
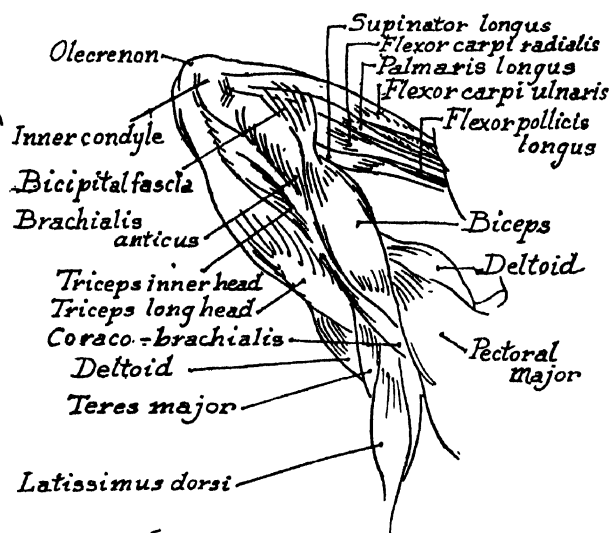






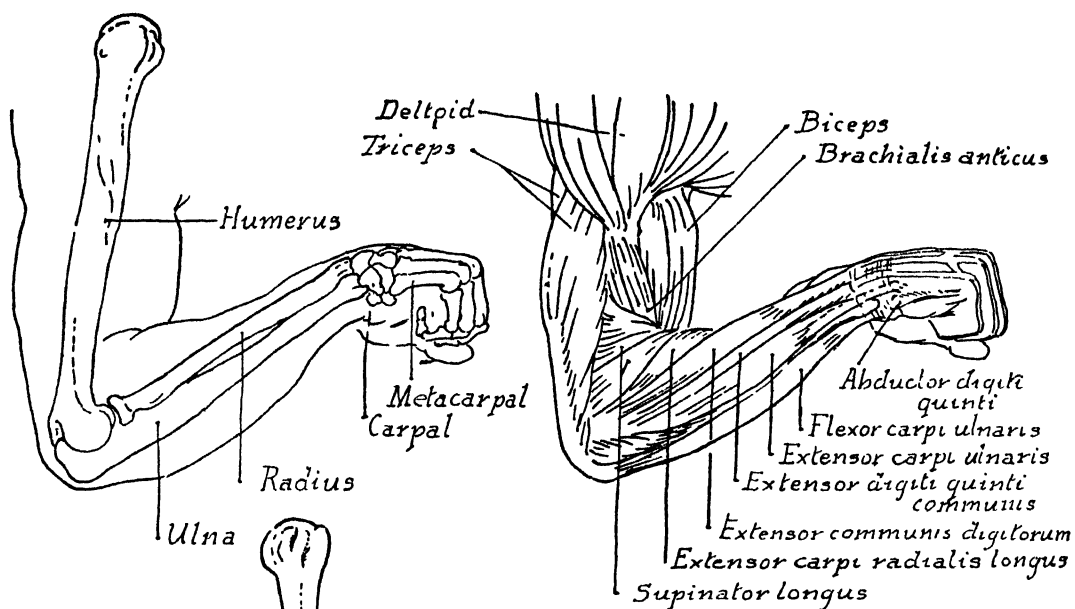


Front view of left arm

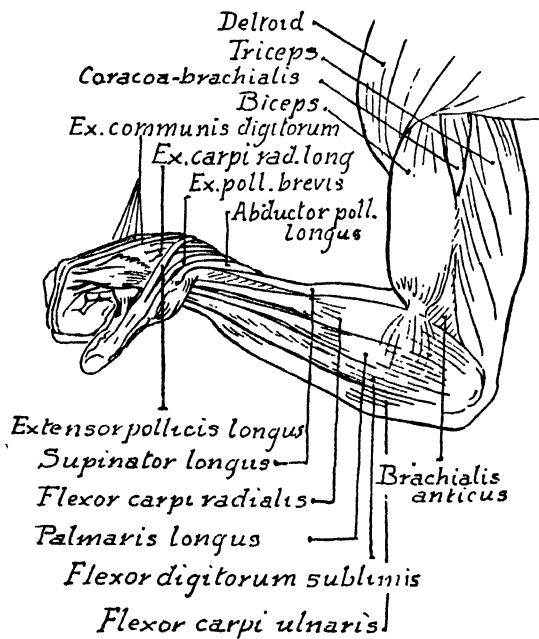
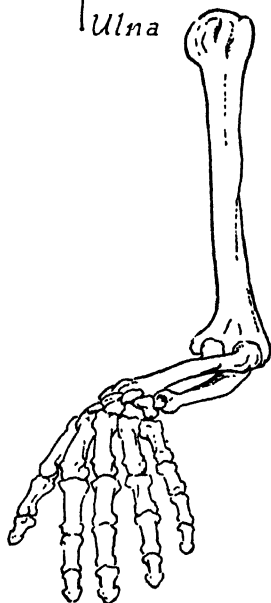


Right arm turned out

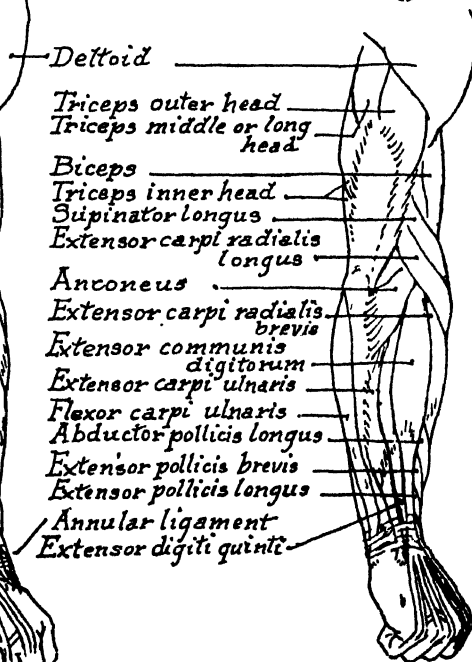
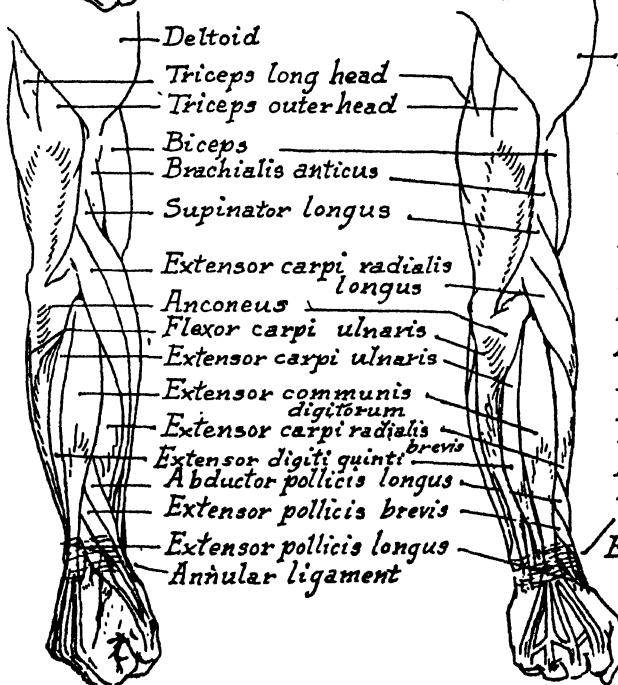
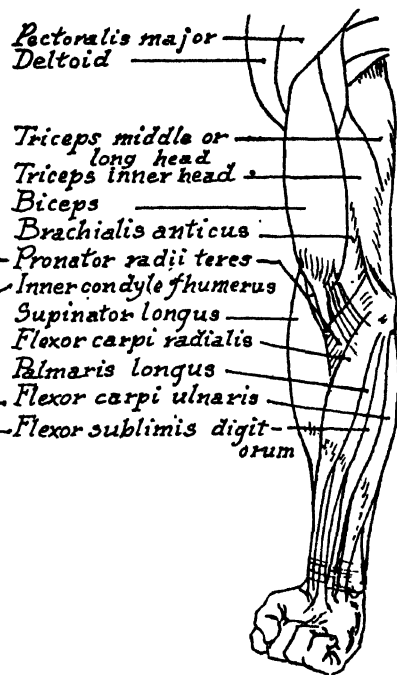
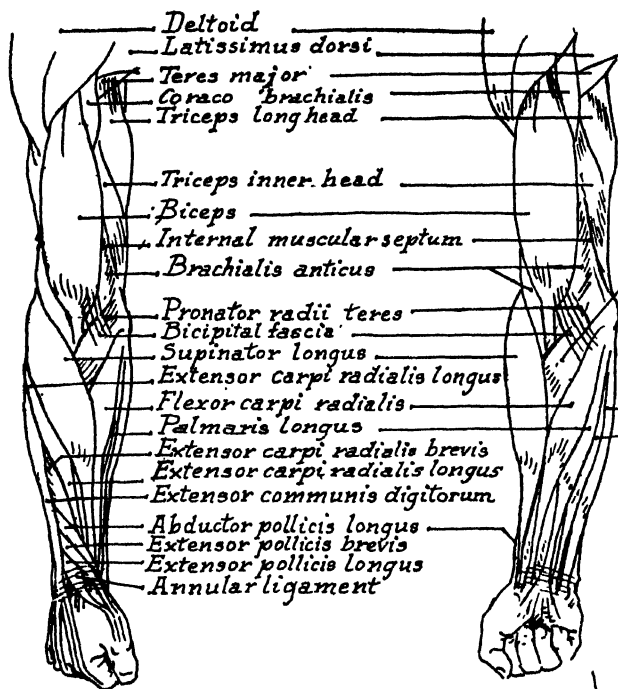


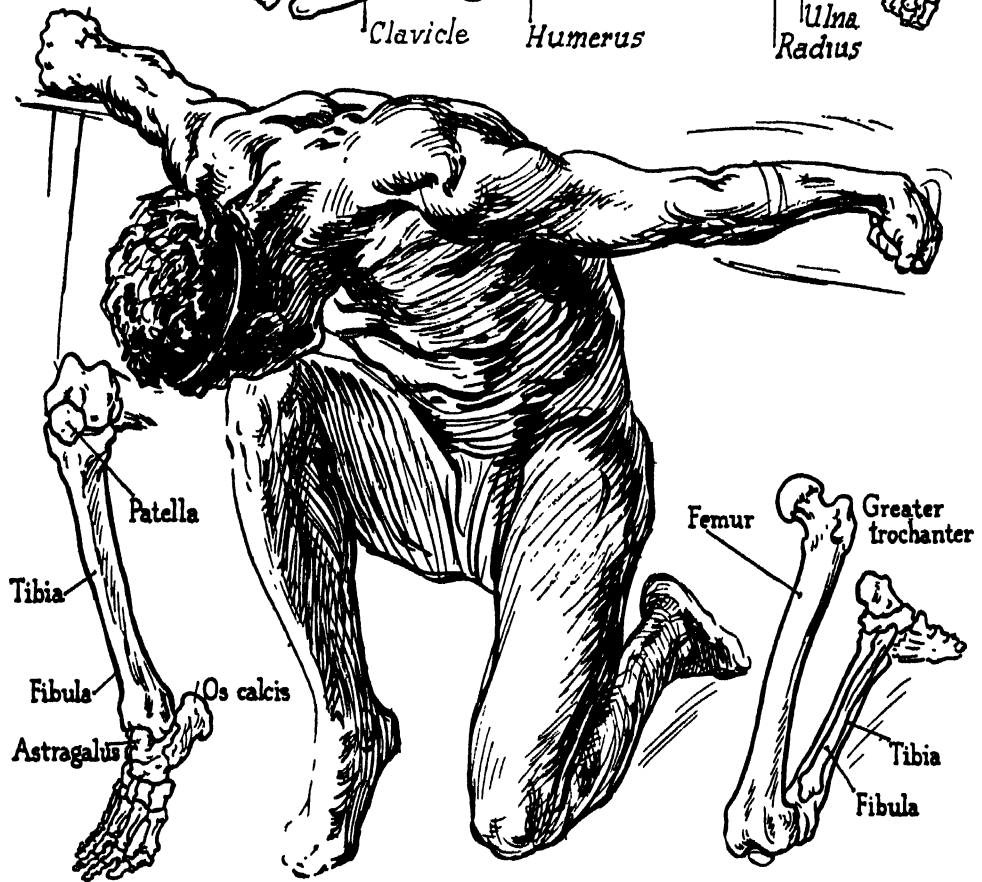
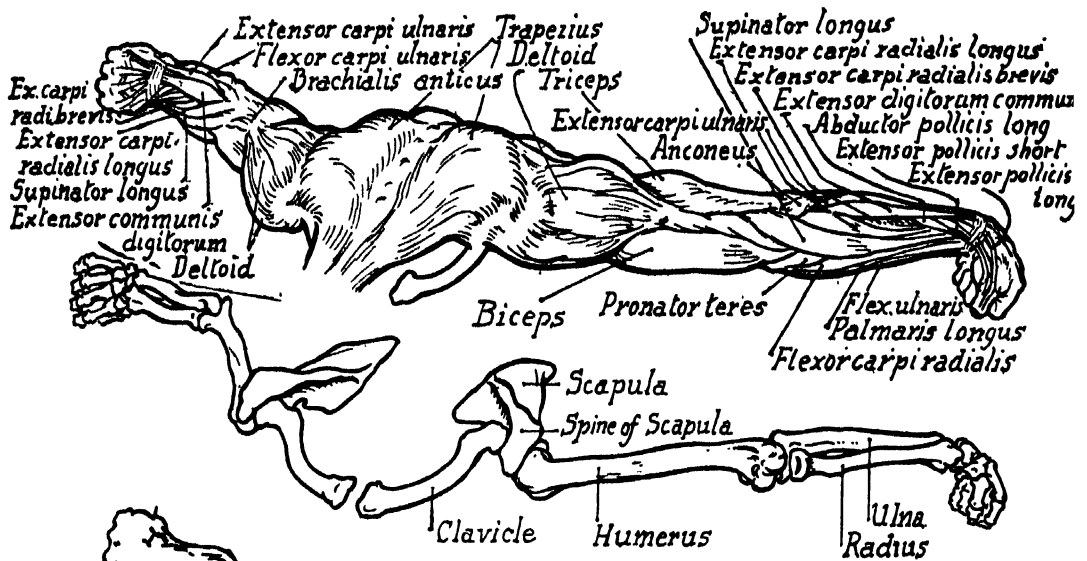


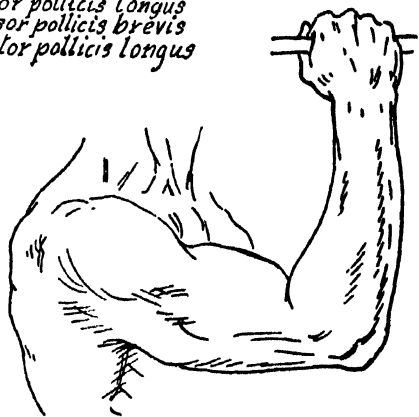
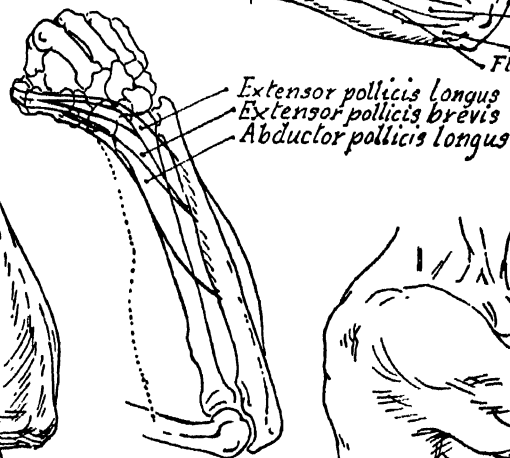
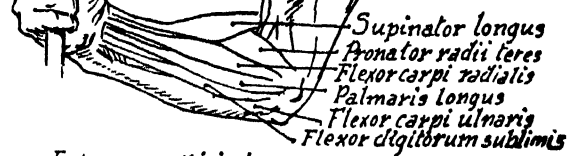
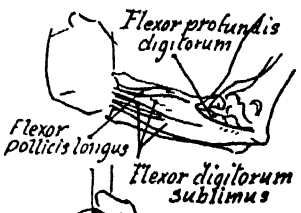
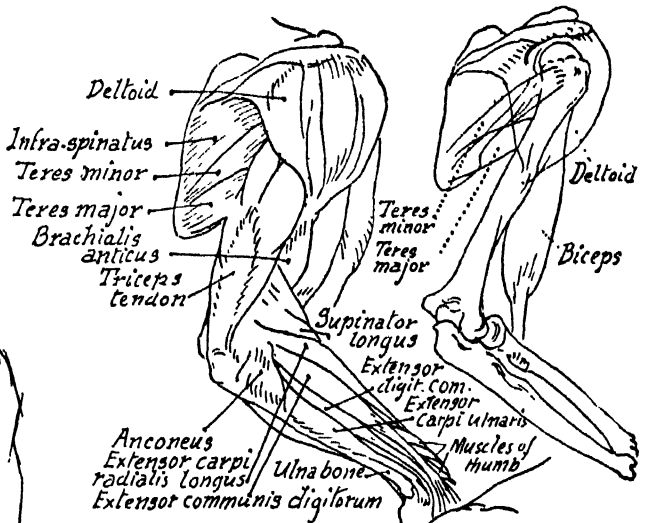
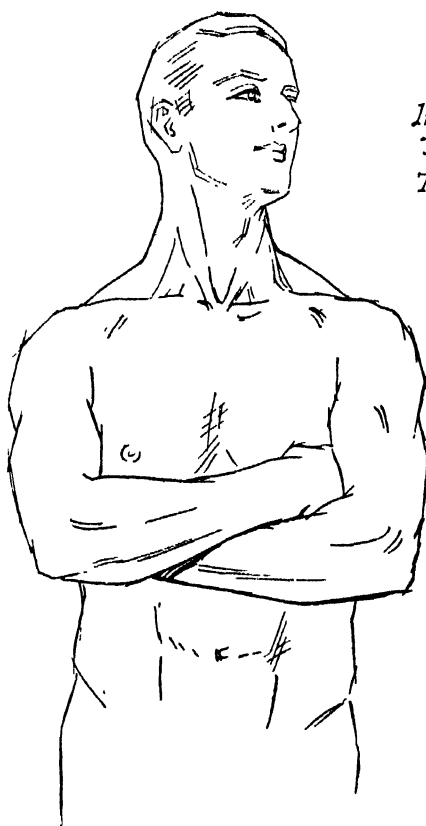
Outer View of Right Arm

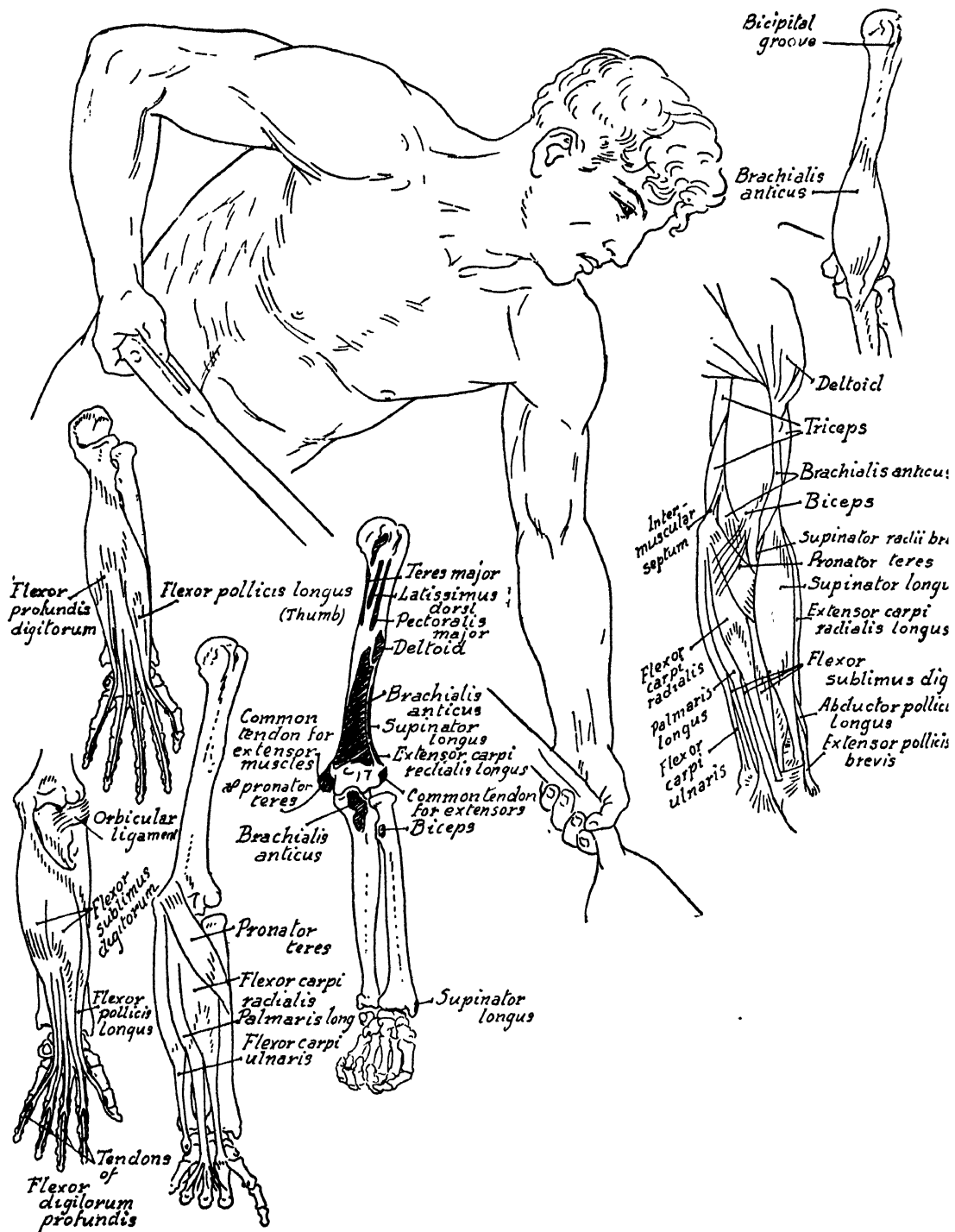


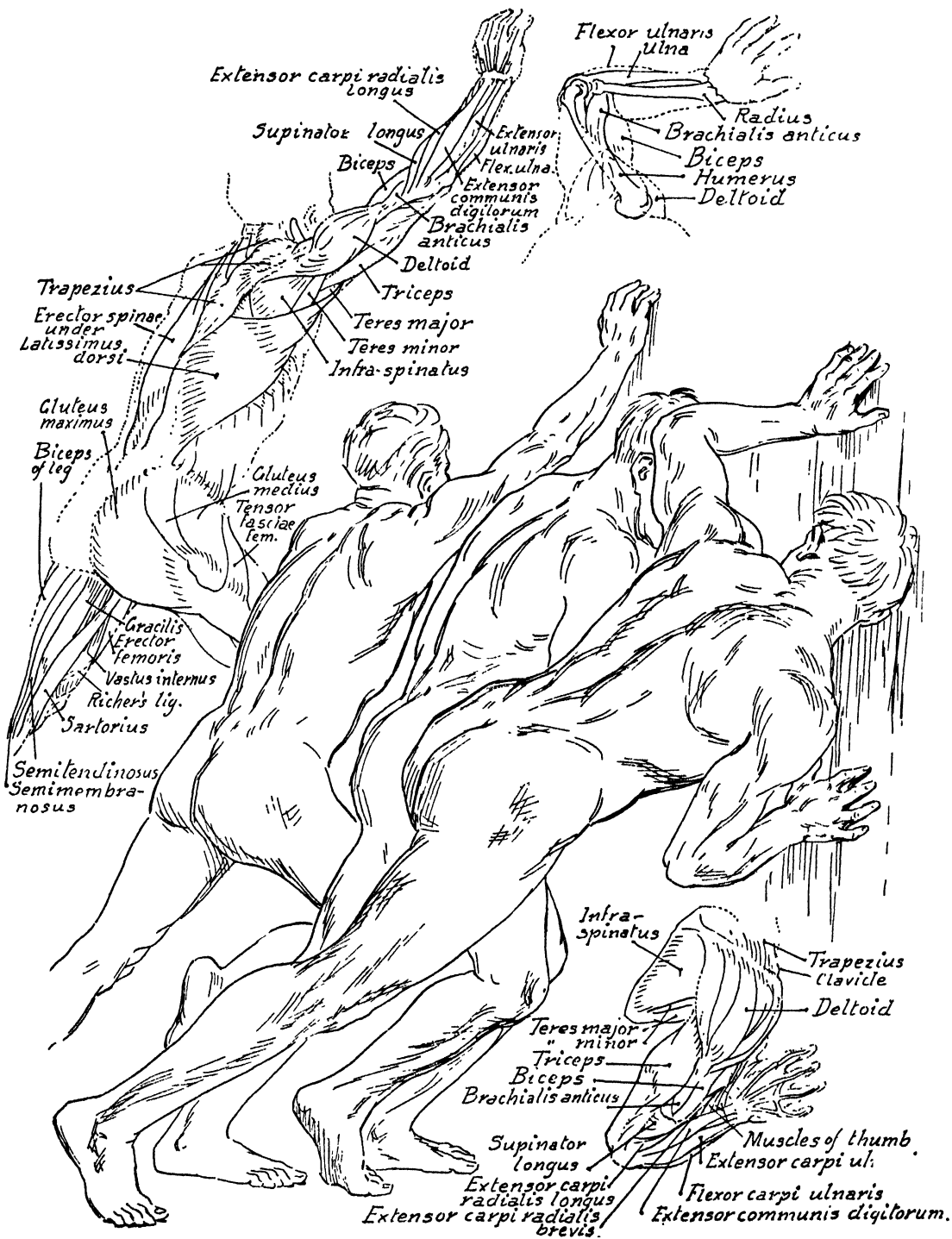
Inner view

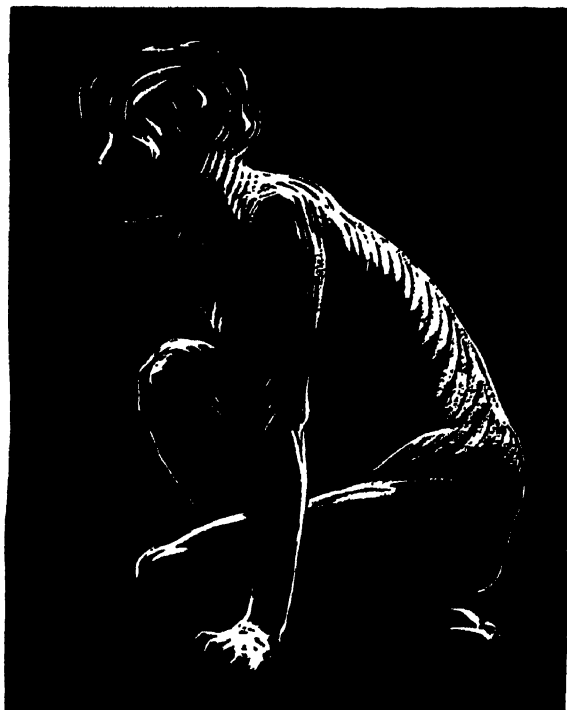






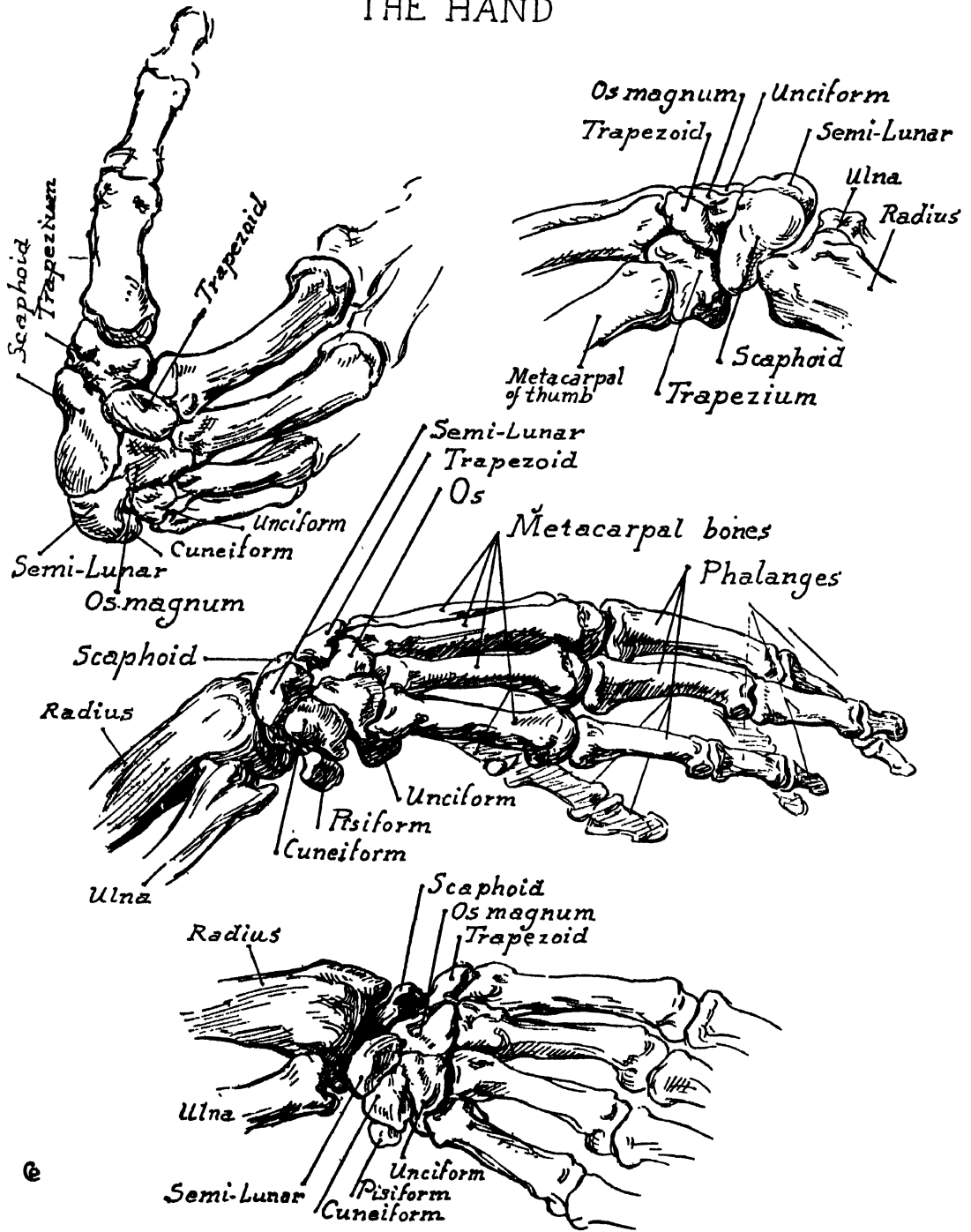


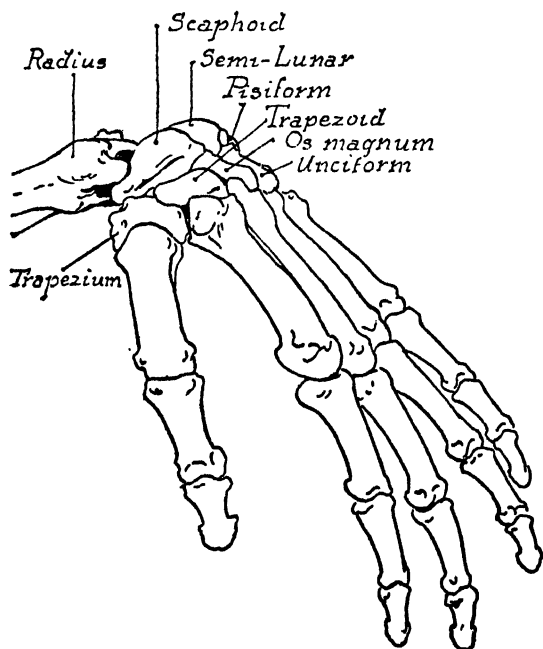
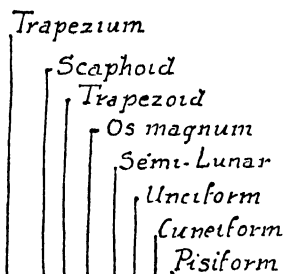
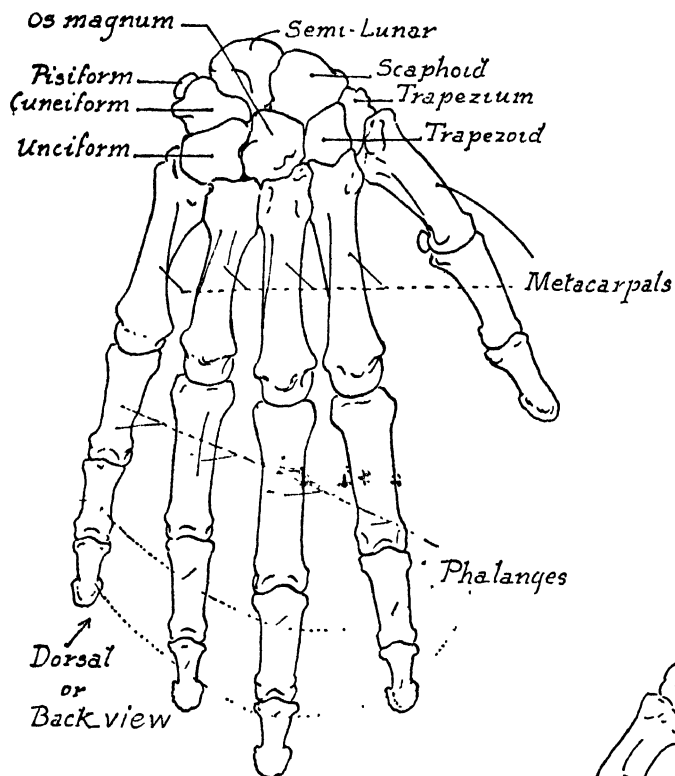


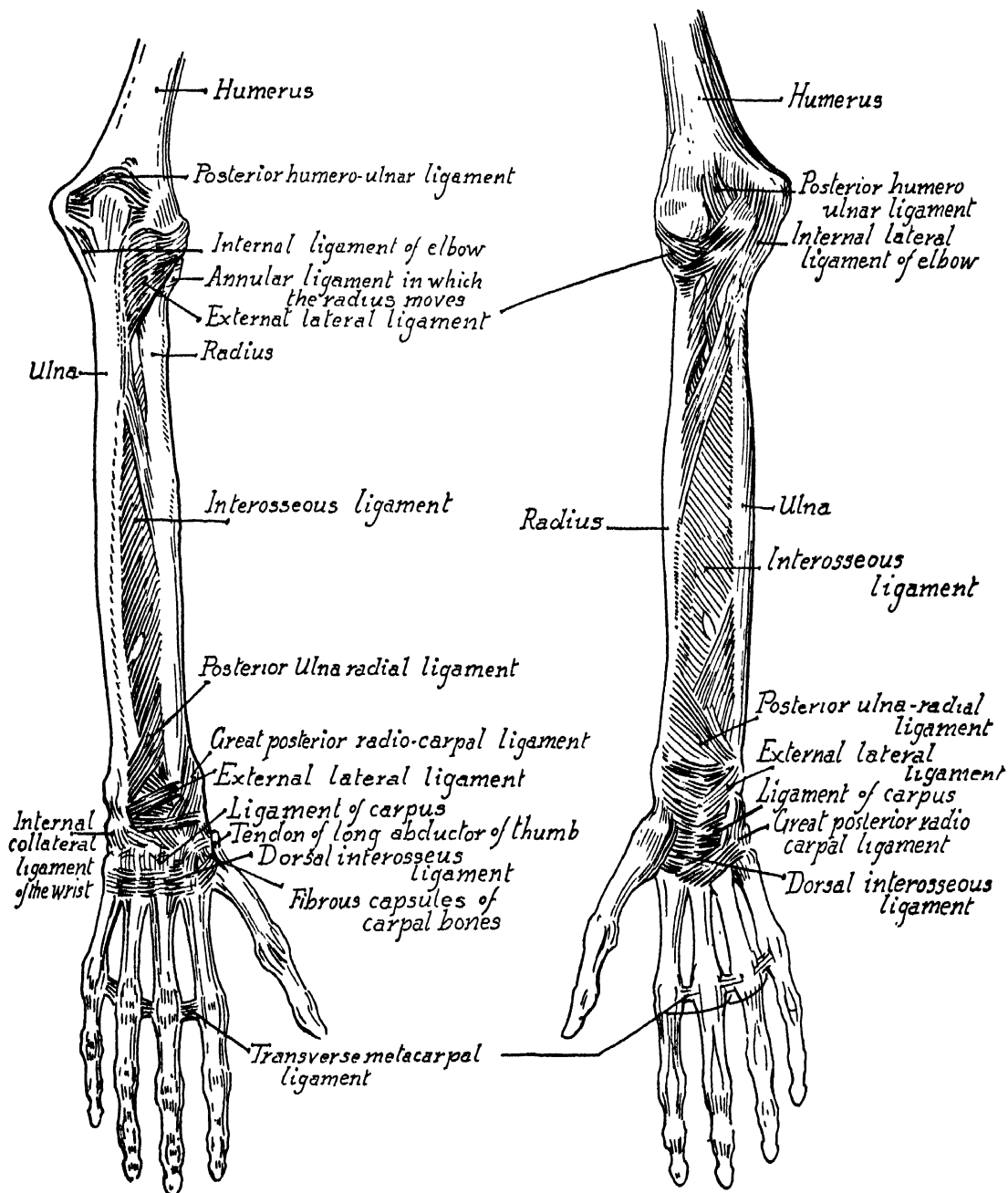


PART VI
THE HAND

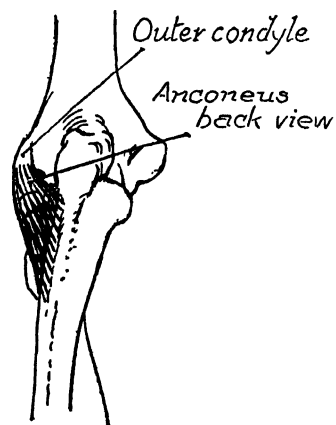
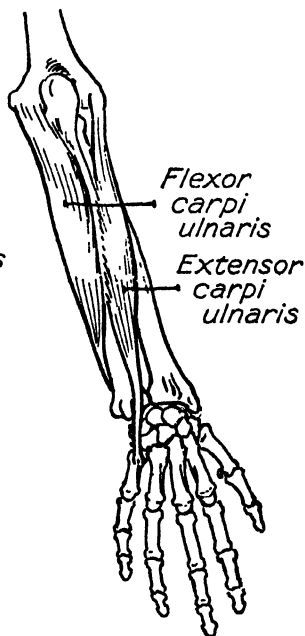
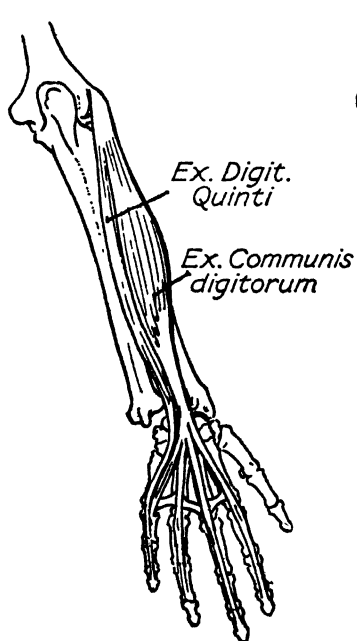
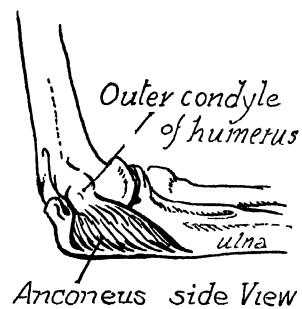
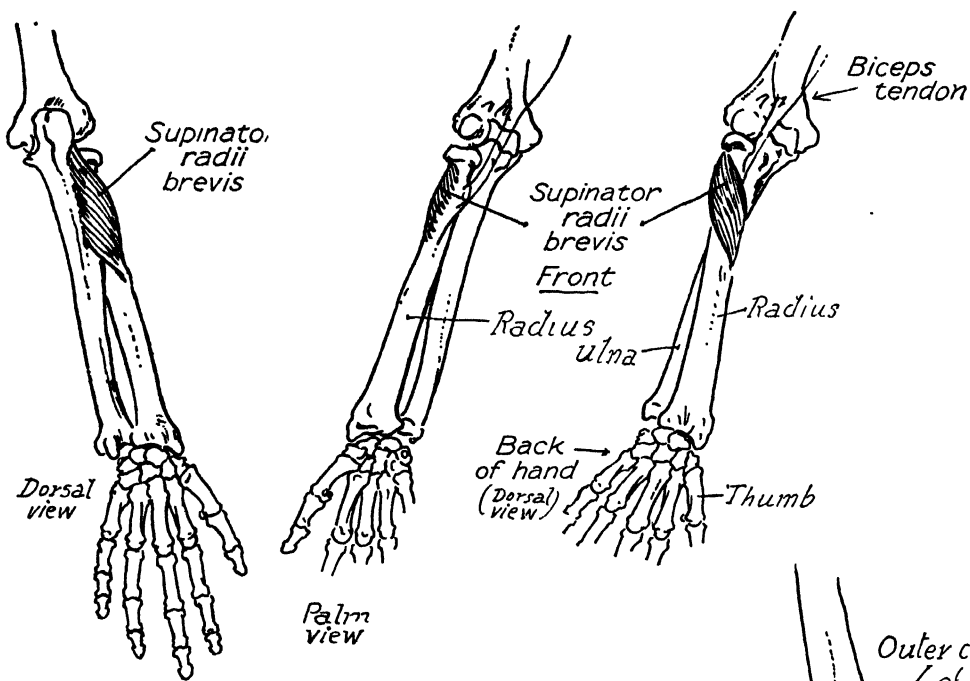
THE HAND

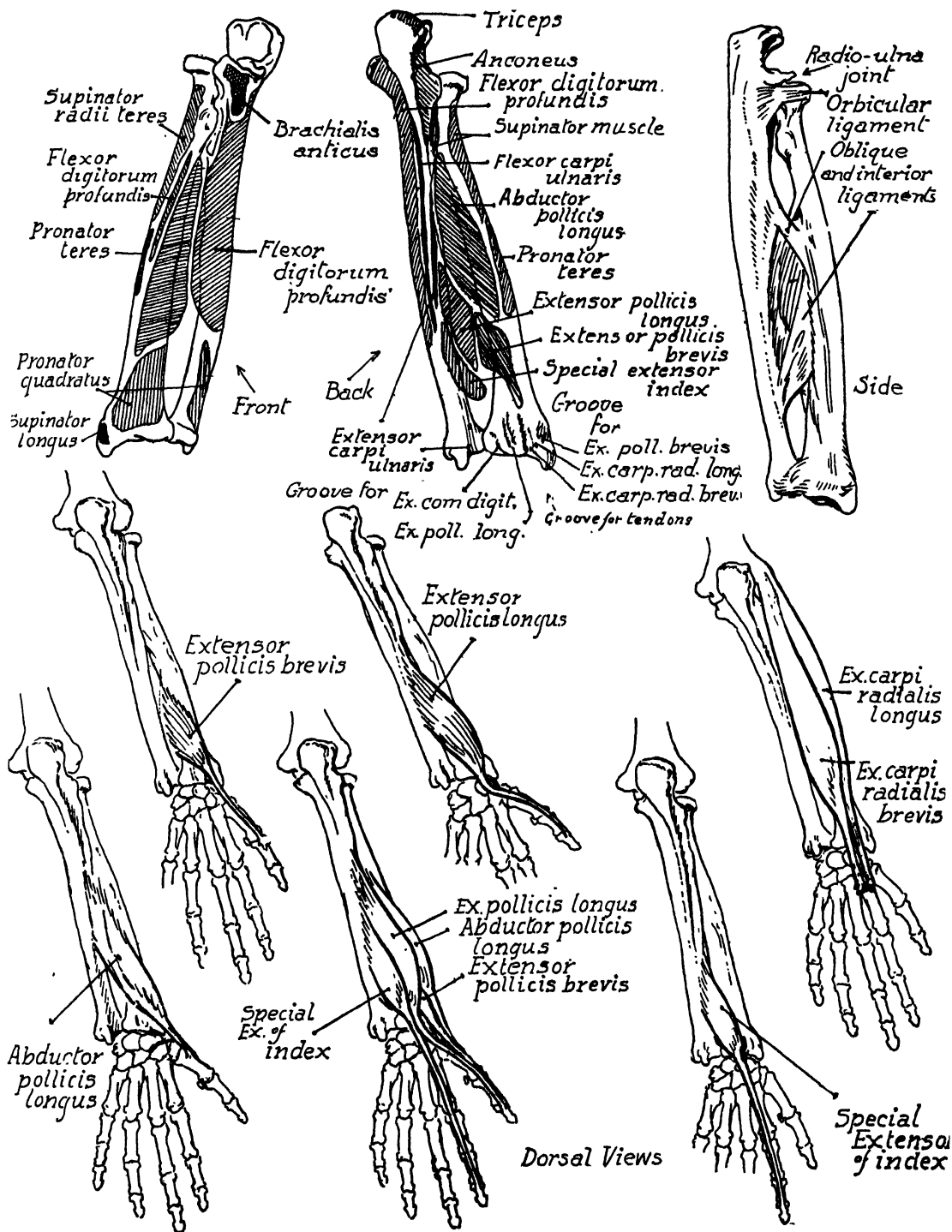


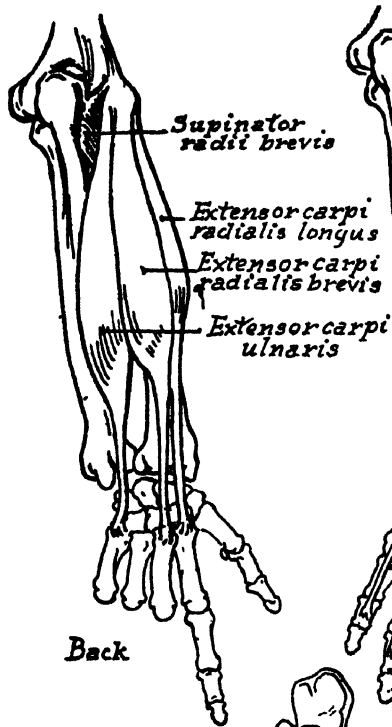




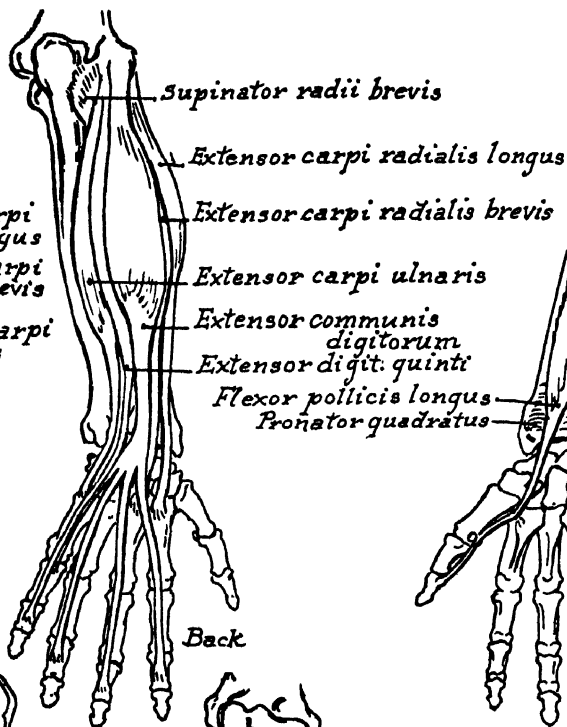
Back Ligaments of Forearm Front



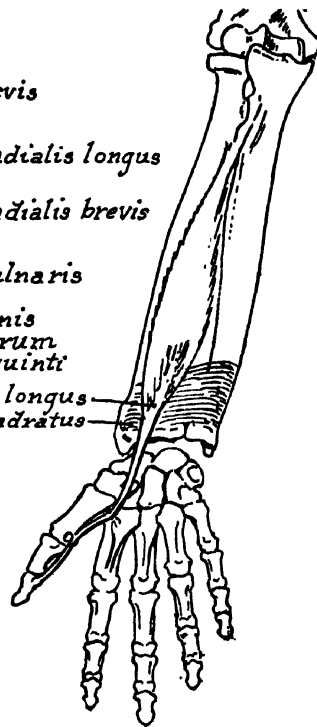




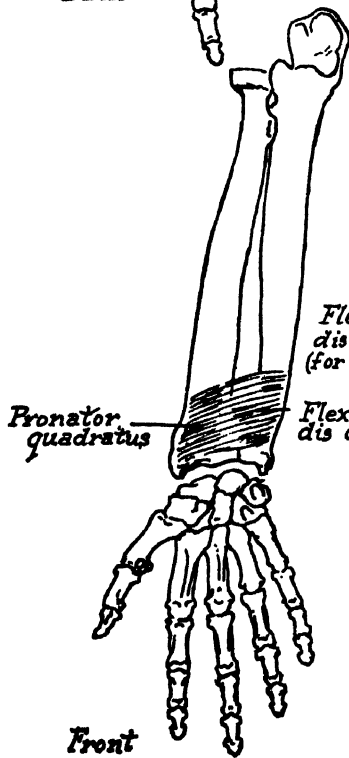
Back



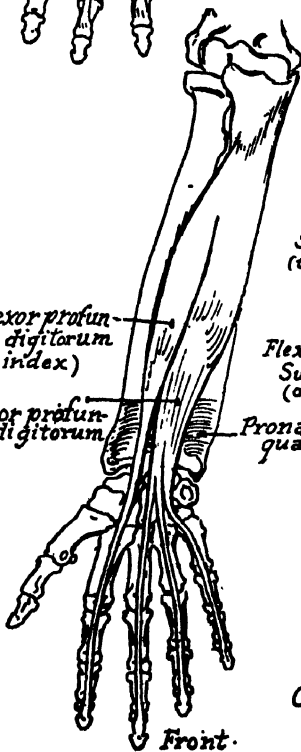
Back



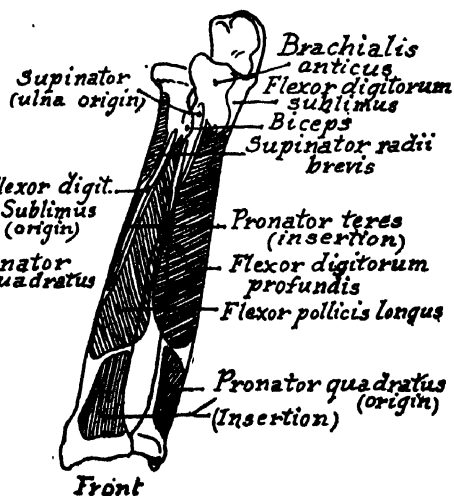
Front



Front

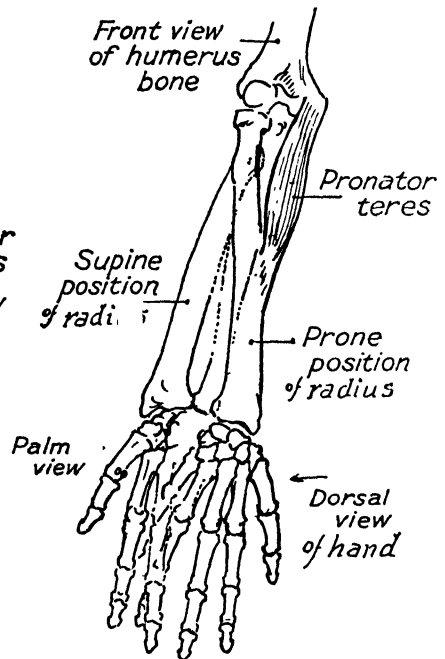
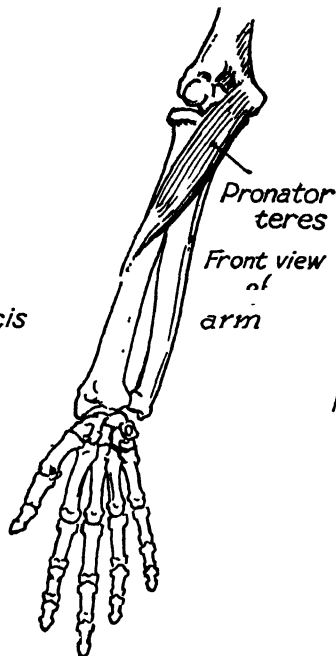
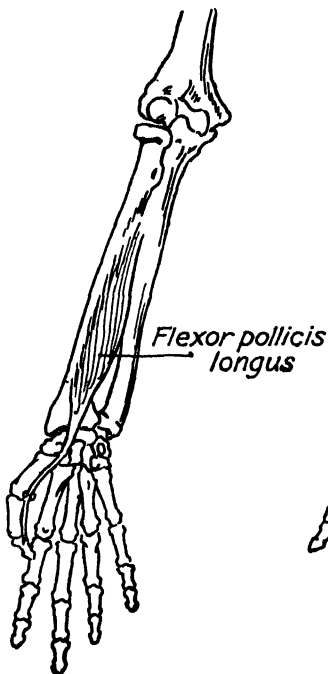
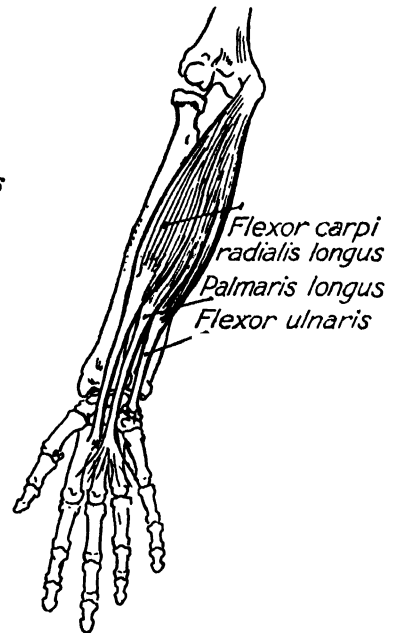
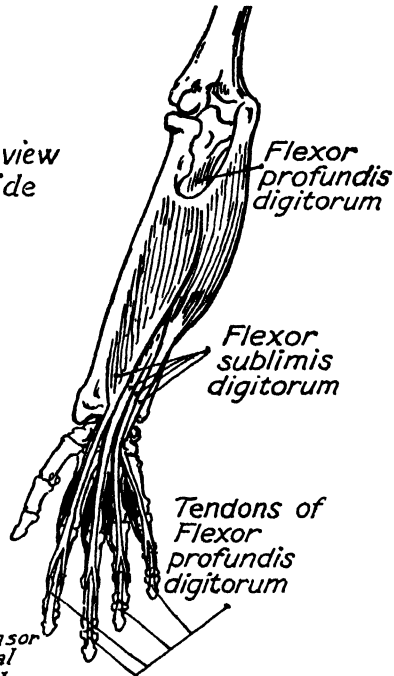
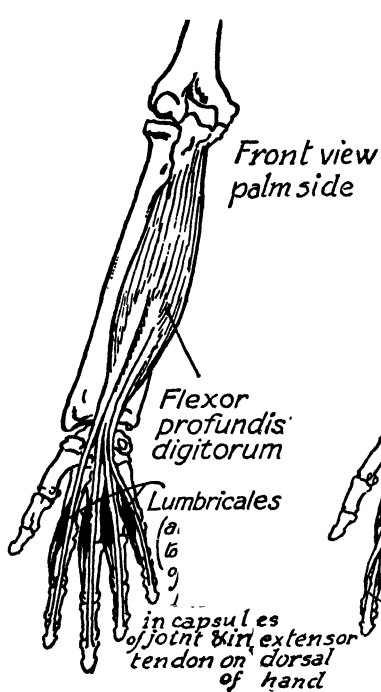


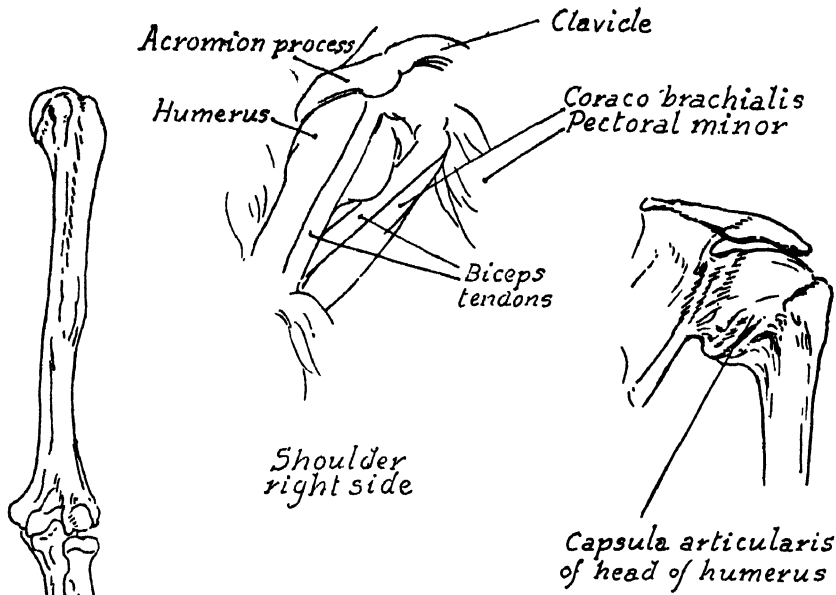
Front



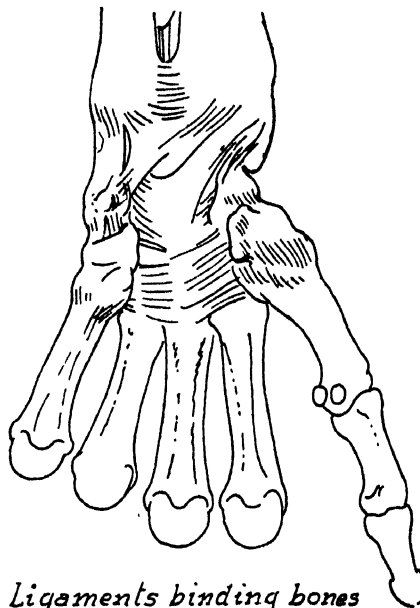
Front

Origin and insertion of muscles

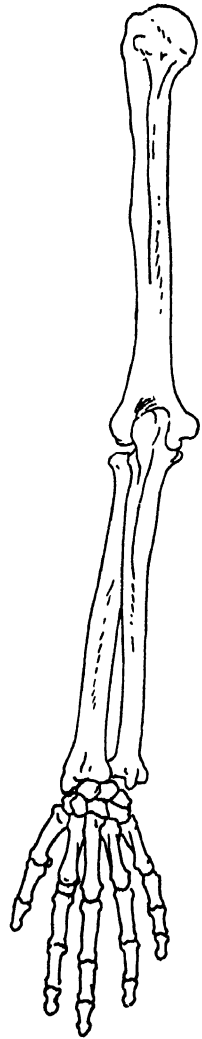


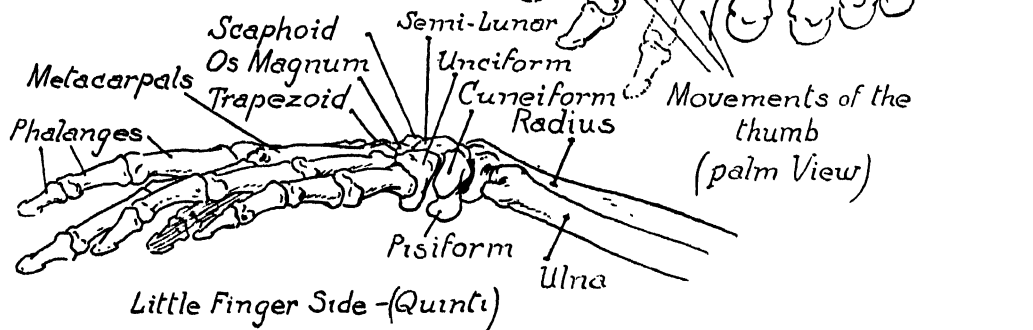
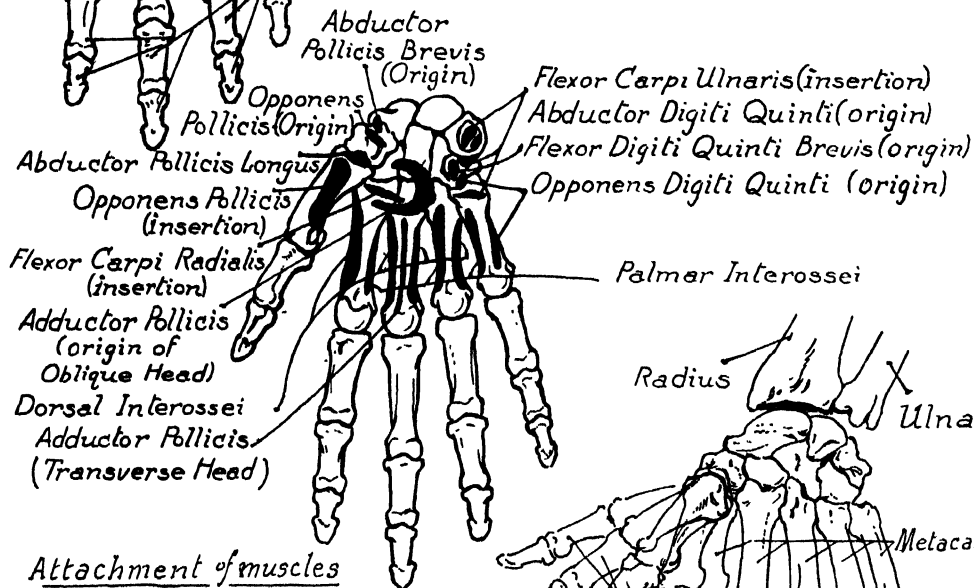
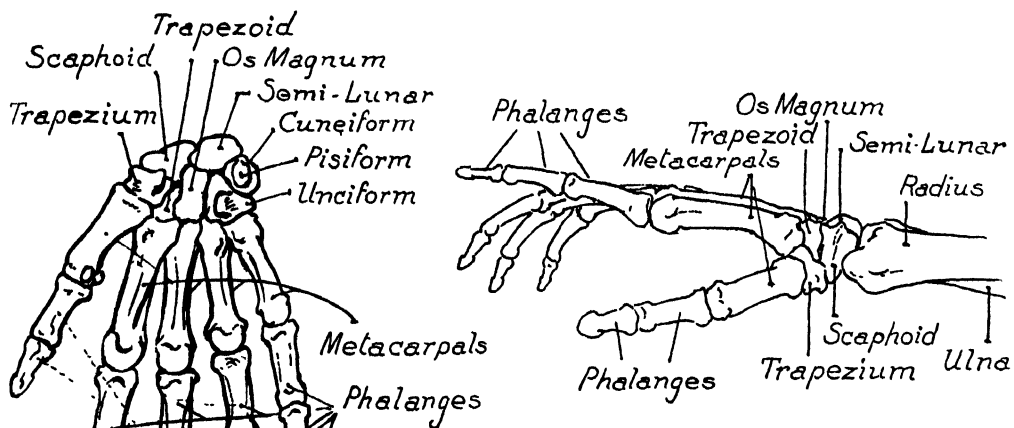


Front view of left arm bones

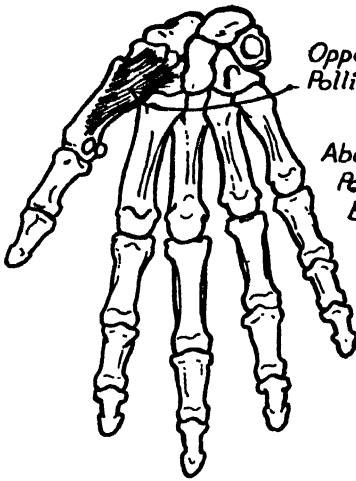


Back view of left arm bones





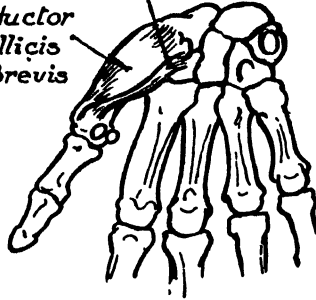
Short muscles of thumb



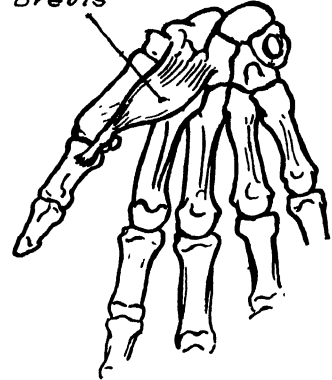
Opponens Pollicis

Opponens Pollicis

Abductor Pollicis Brevis



Flexor Pollicis Brevis

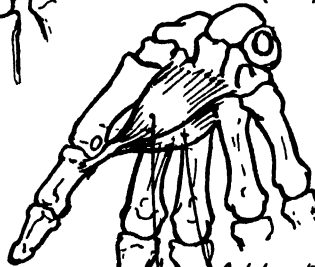


Abductor Pollicis Brevis

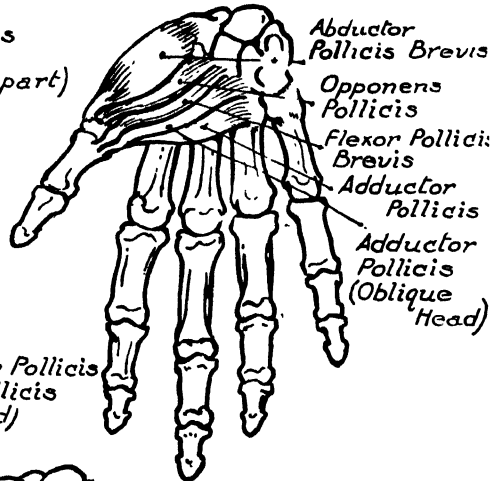
Opponens Pollicis

Flexor Pollicis Brevis

Flexor Pollicis (deep part)



Adductor Pollicis (Oblique Head)



Abductor Pollicis Brevis

Opponens Pollicis

Flexor Pollicis Brevis

Adductor Pollicis (Oblique Head)

Adductor Pollicis (Oblique Head)

Adductor Pollicis (Oblique Head)

Adductor Pollicis (Oblique Head)

Adductor Pollicis (Oblique Head)

Adductor Pollicis (Oblique Head)

Adductor Pollicis (Oblique Head)

Adductor Pollicis (Oblique Head)

Adductor Pollicis (Oblique Head)

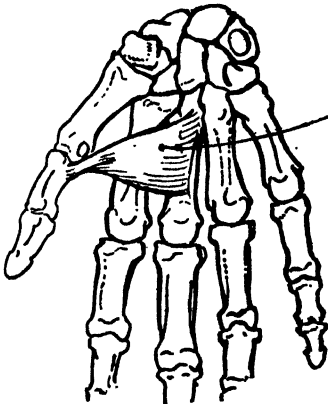
Adductor Pollicis (Oblique Head)

Adductor Pollicis (Oblique Head)

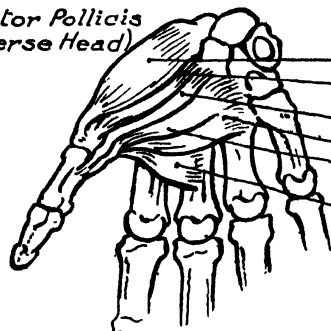
Adductor Pollicis (Oblique Head)

Adductor Pollicis (Oblique Head)

Adductor Pollicis (Oblique Head)



Adductor Pollicis (Transverse Head)



Abductor Pollicis Brevis

Opponens Pollicis

Flexor Pollicis Brevis

Adductor Pollicis (Oblique Head)

Adductor Pollicis (Oblique Head)

Adductor Pollicis (Oblique Head)

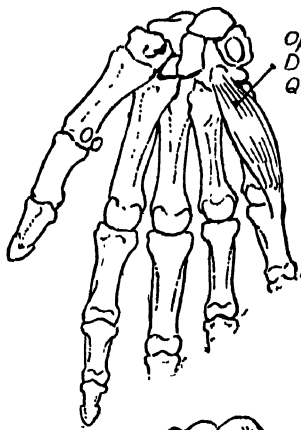
Adductor Pollicis (Oblique Head)

Adductor Pollicis (Oblique Head)

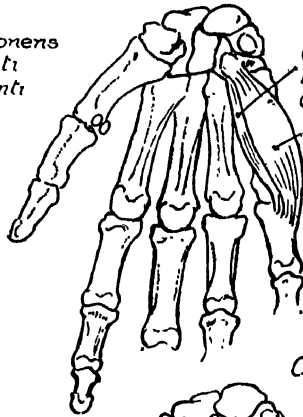
Adductor Pollicis (Oblique Head)

Adductor Pollicis (Oblique Head)

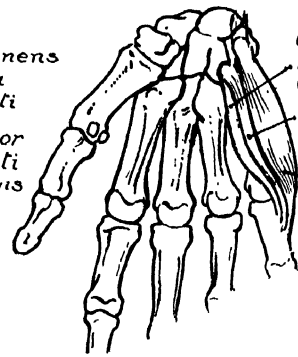
Adductor Pollicis (Oblique Head)



Opponens
Digiti
Quinti

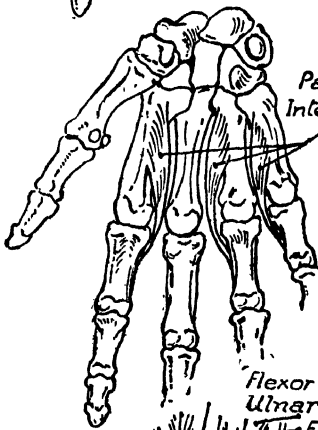


Opponens
Digiti
Quinti
Flexor
Digiti
Brevis

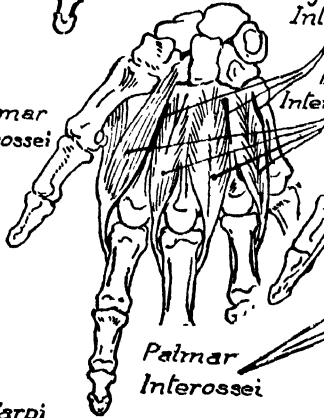


Opponens
Digiti
Quinti
Flexor
Digiti
Quinti
Abductor
Digiti
Quinti

Origin-Palmar
Interossei

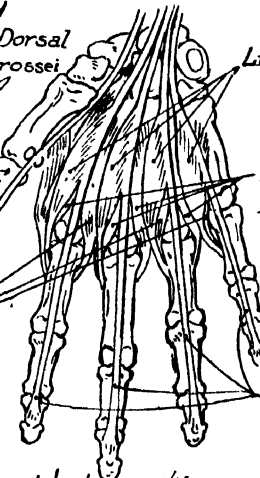


Palmar
Interossei



Dorsal
Interossei

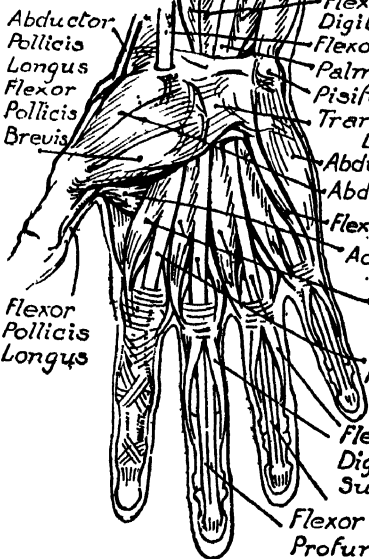
Palmar
Interossei



Lubricals

Dorsal
Interossei

Flexor
Longus
Profundus
Digitorum

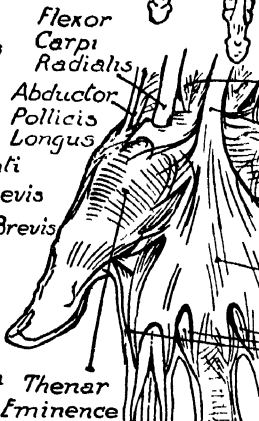


Abductor
Pollicis
Longus
Flexor
Pollicis
Brevis

Flexor
Pollicis
Longus

Flexor
Digitorum Sublimis
Flexor Carpi Radialis
Palmaris Longus
Pisiform Bone
Transverse Carpal
Ligament
Abductor Digiti Quinti
Abductor Pollicis Brevis
Flexor Digiti Quinti Brevis

Adductor Pollicis
Lubrical
Muscles
Tendons of
Flexor Digitorum
Sublimis
Flexor
Digitorum
Sublimis
Flexor Digitorum
Profundus

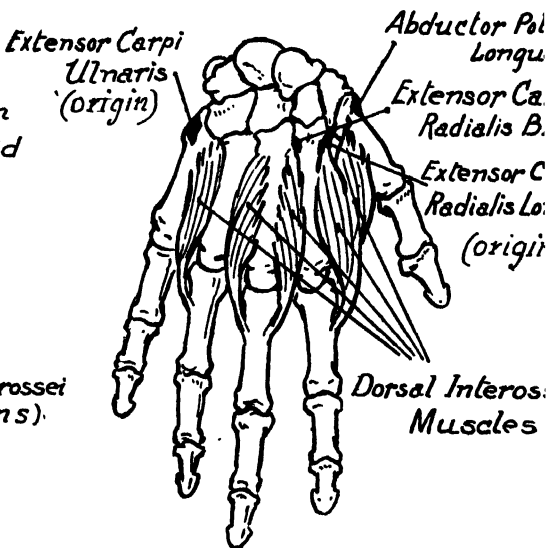
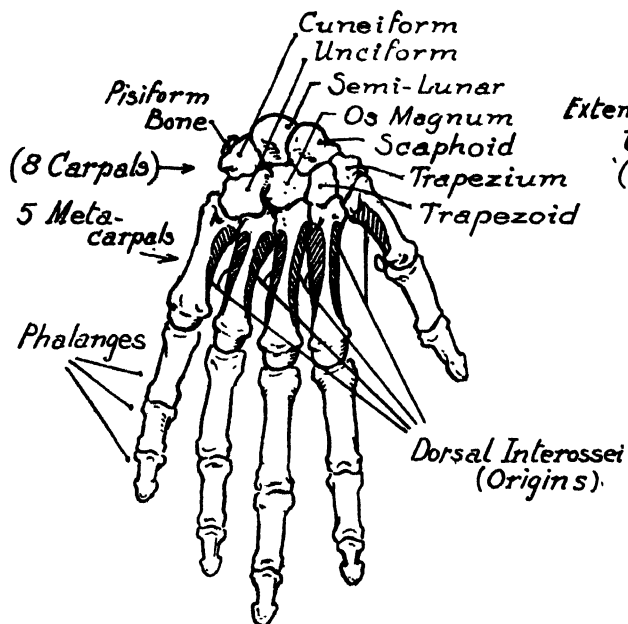


Flexor
Carpi
Radialis
Abductor
Pollicis
Longus

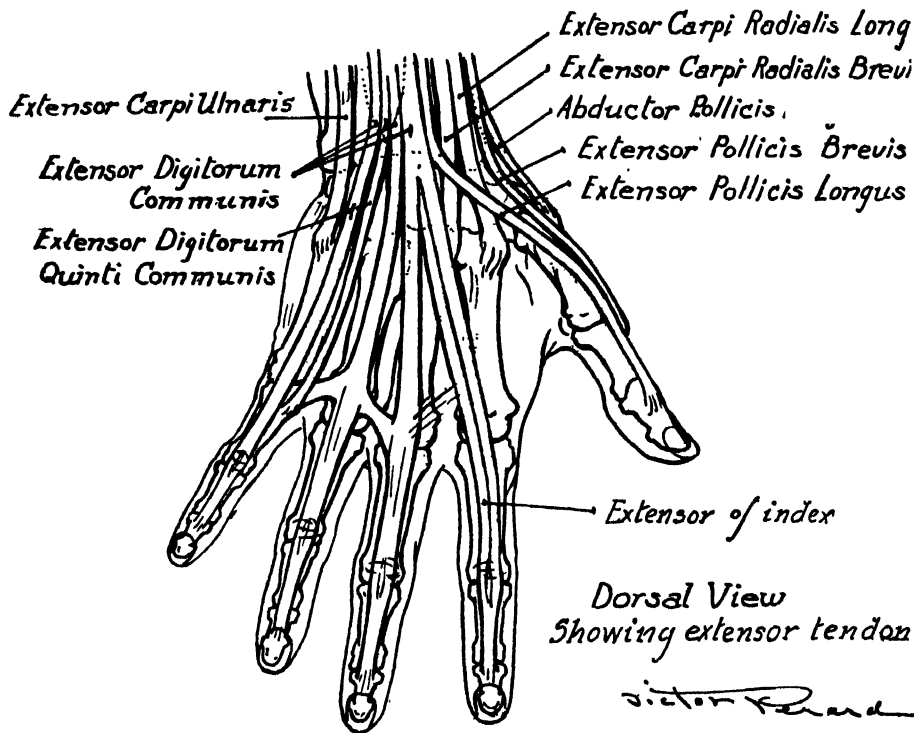
Flexor
Digitorum
Profundus

Flexor Carpi Ulnaris
Flexor Digitorum
Sublimis
Palmaris Longus
Transverse
Carpal Ligament
Palmaris Brevis
Hypothenar
Eminence
Palmar
Aponeurosis
Lubrical
Muscles

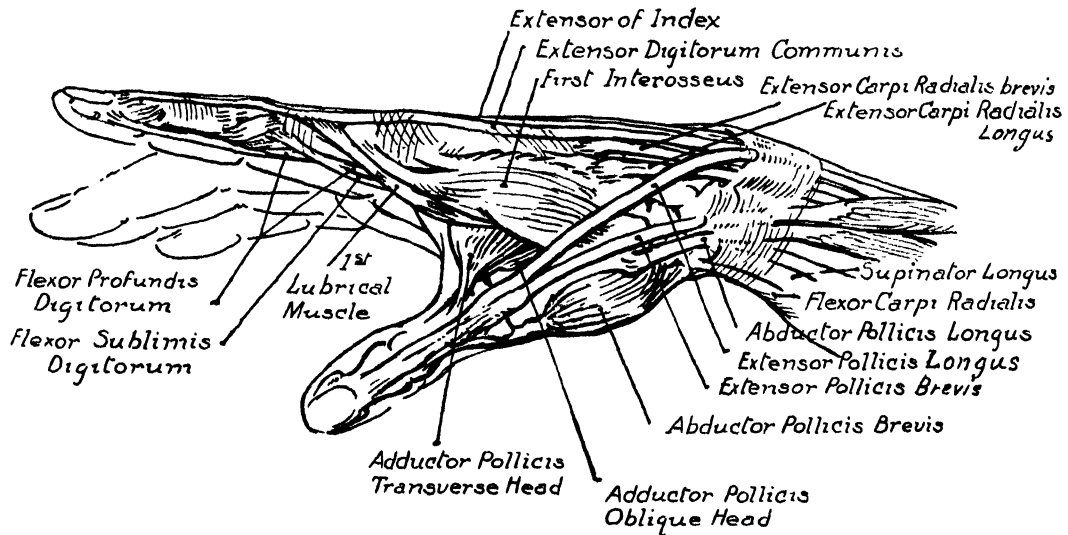
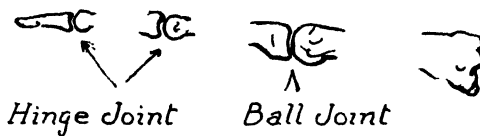
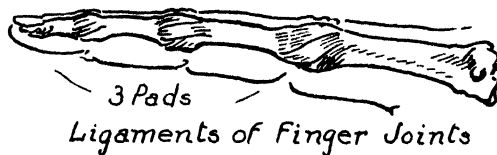
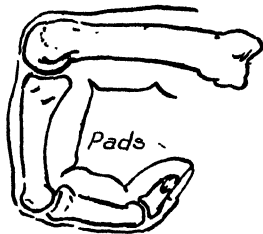
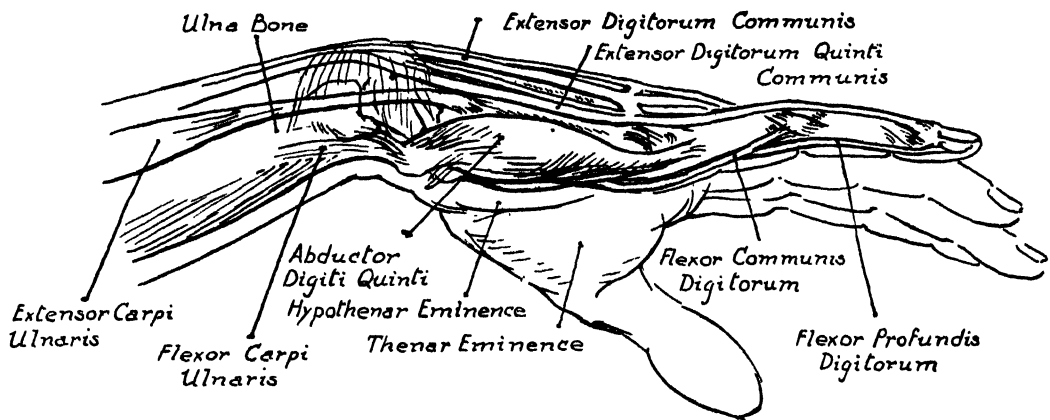
Digital Sheath



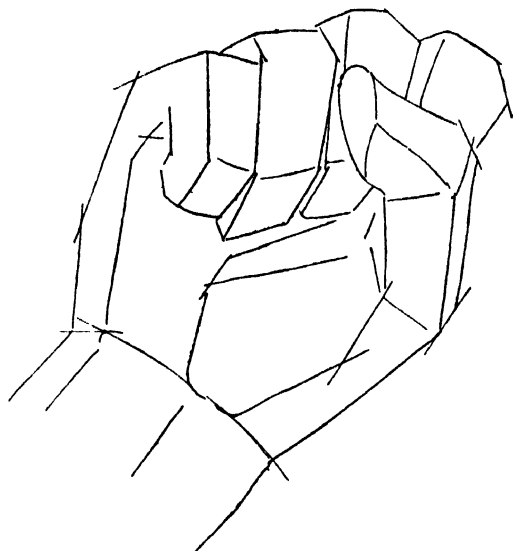
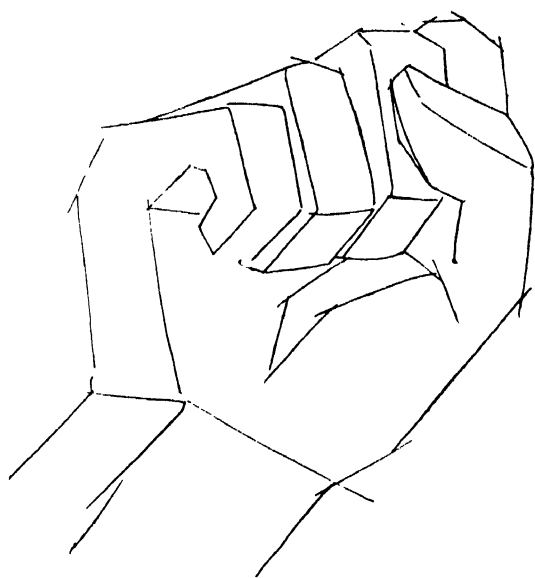
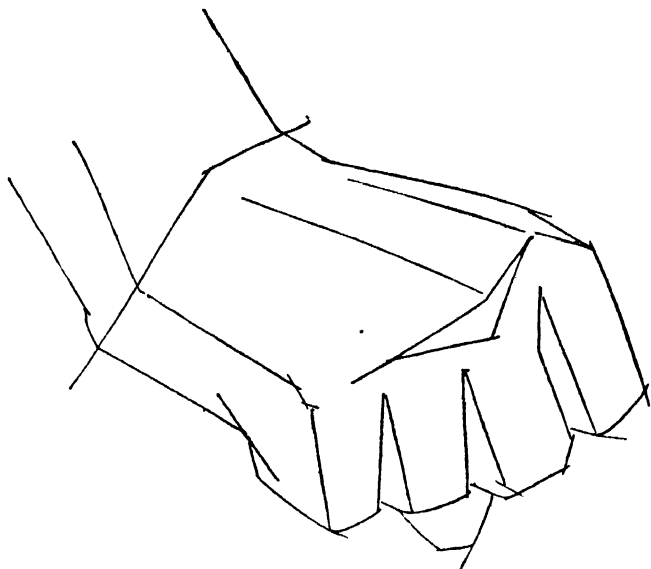
Dorsal View (t

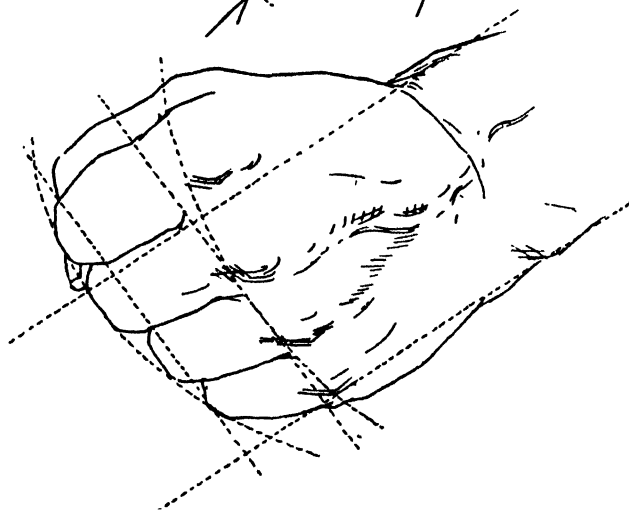
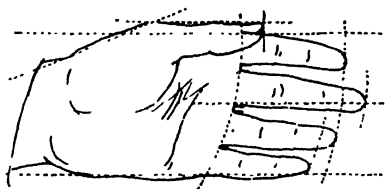
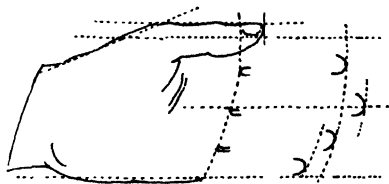
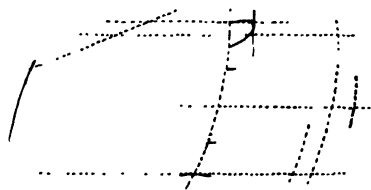
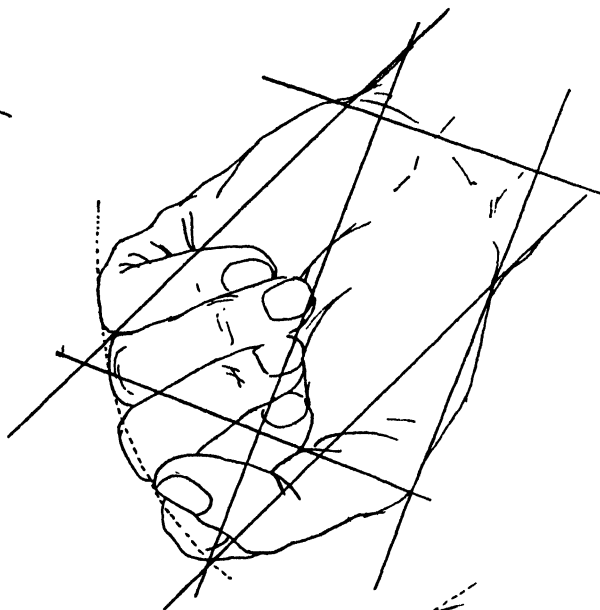
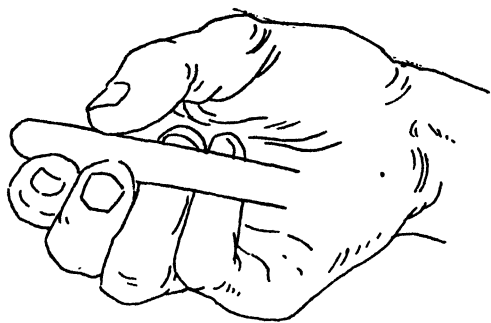


Victor R. R.

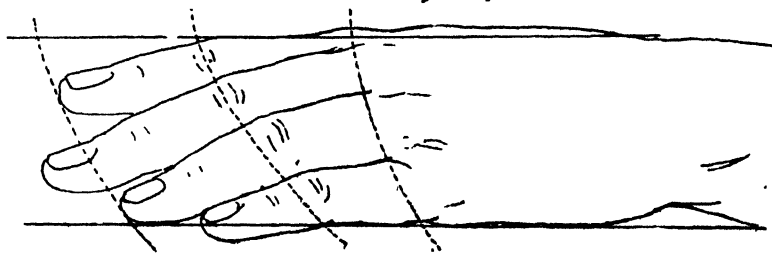


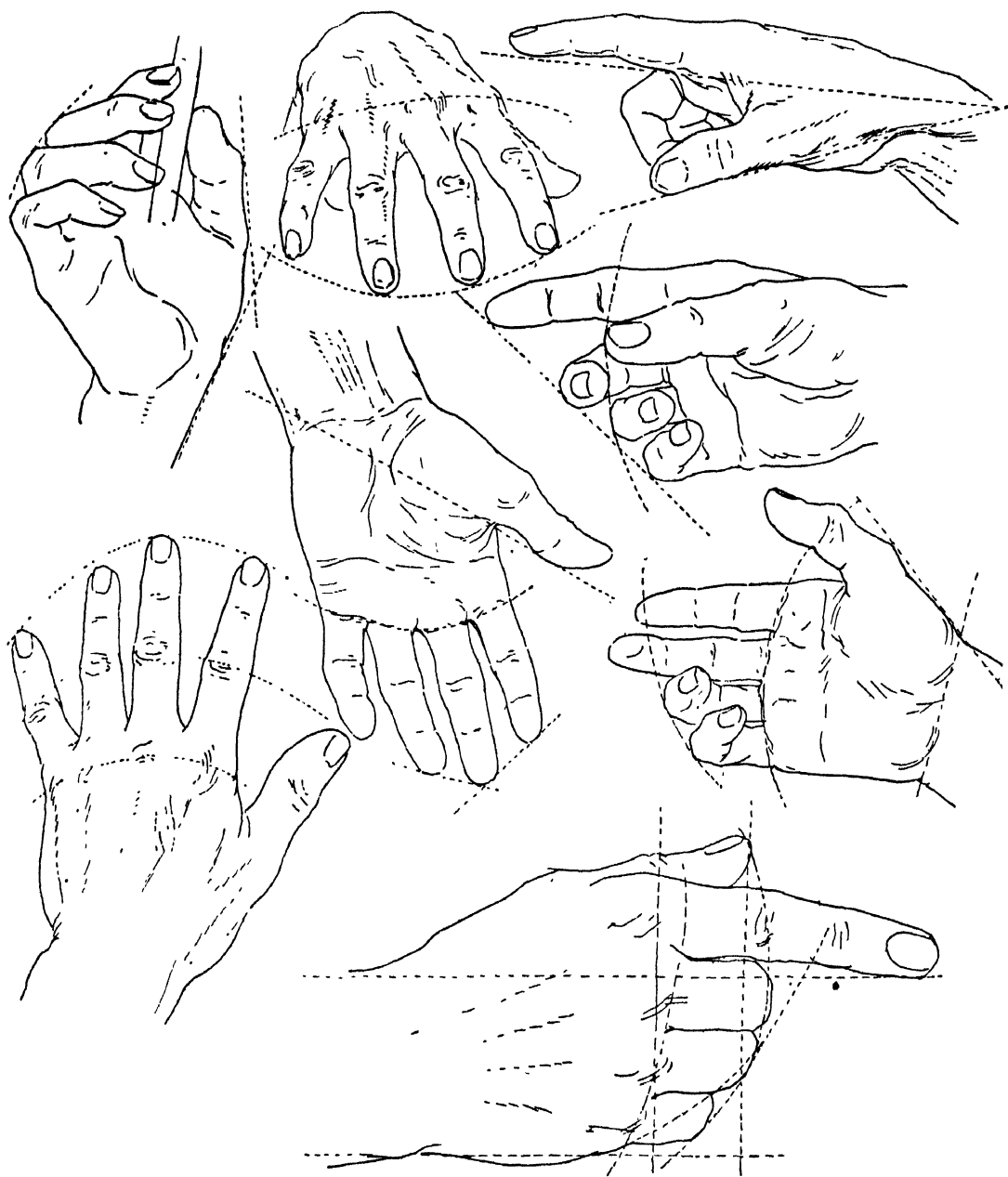
*Studies of
hands
Method of
blocking*



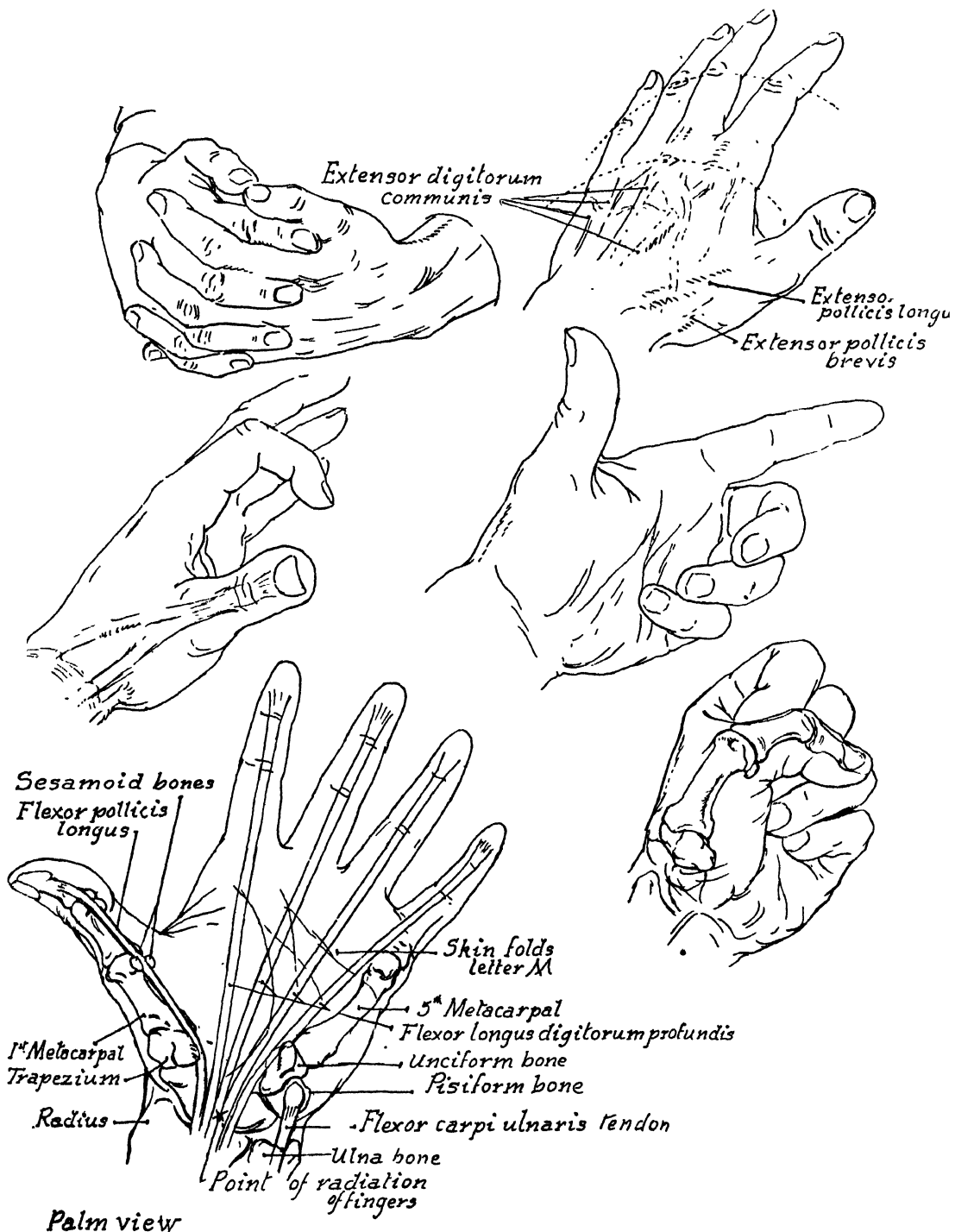


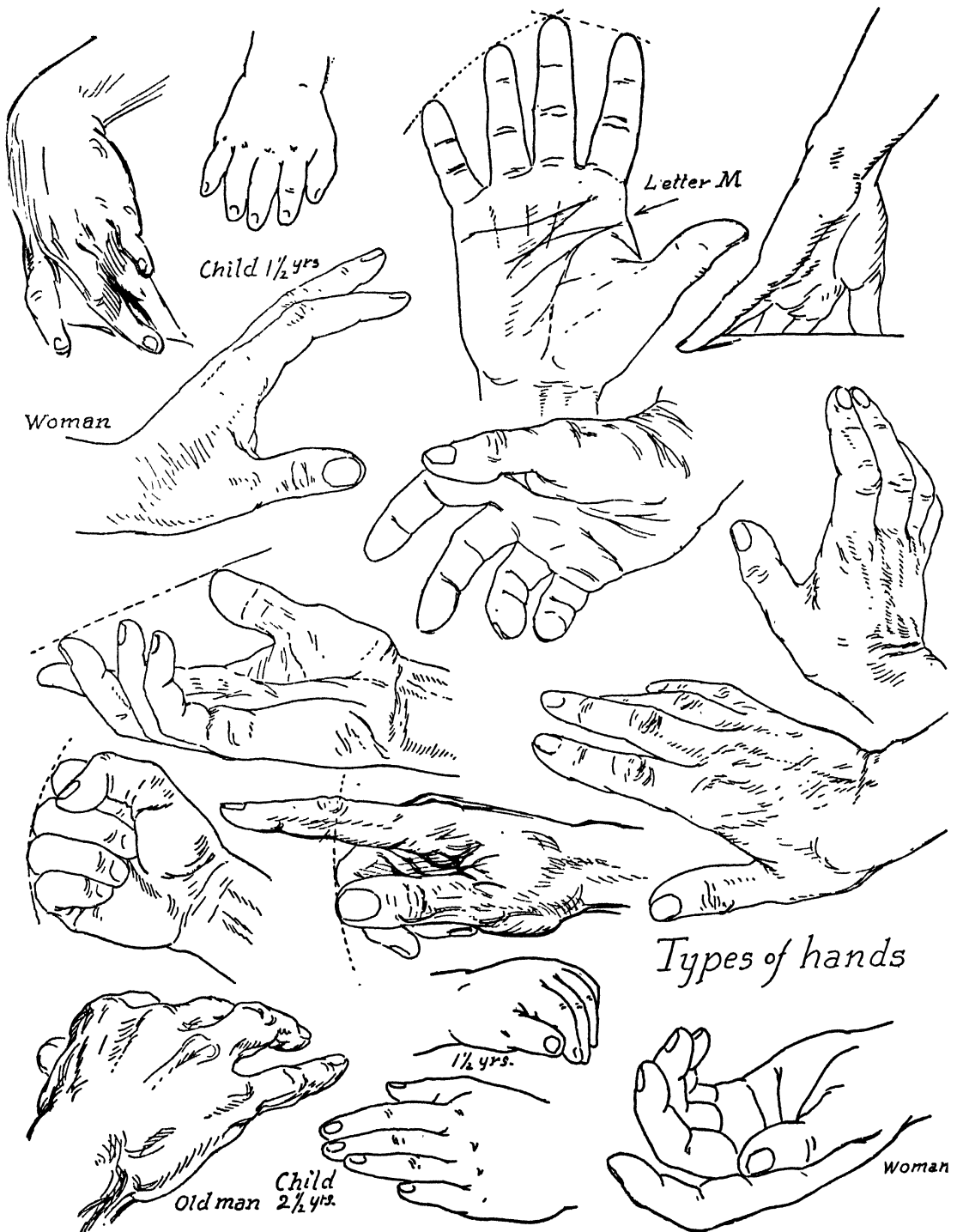
*Showing the use of imaginary lines
to obtain proportion*

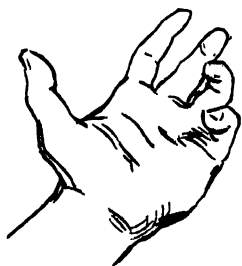
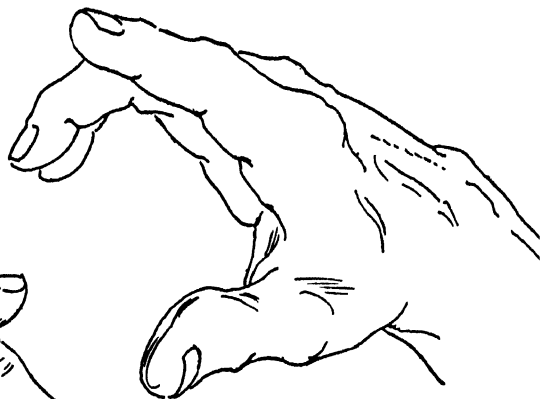
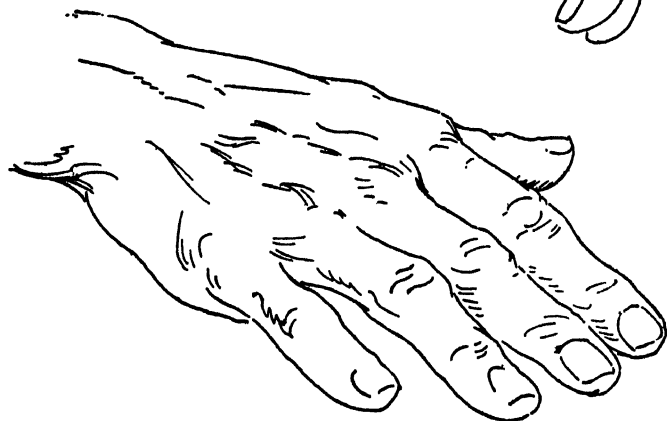
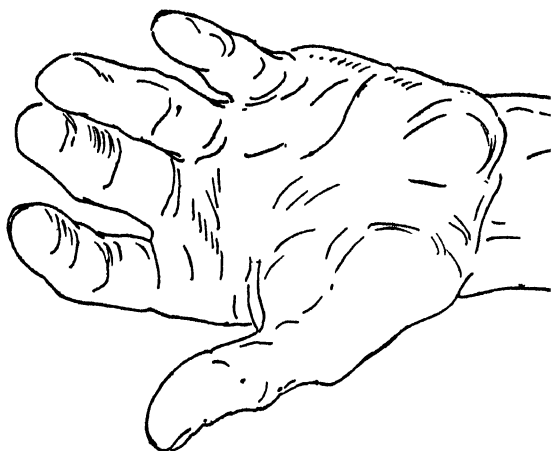
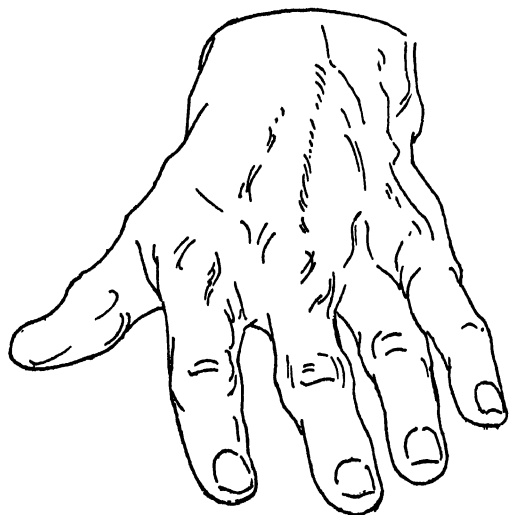


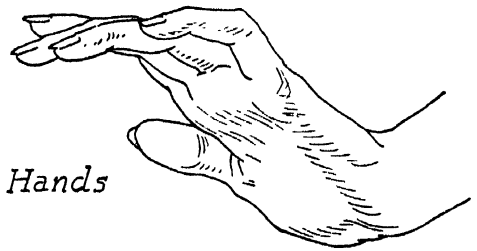
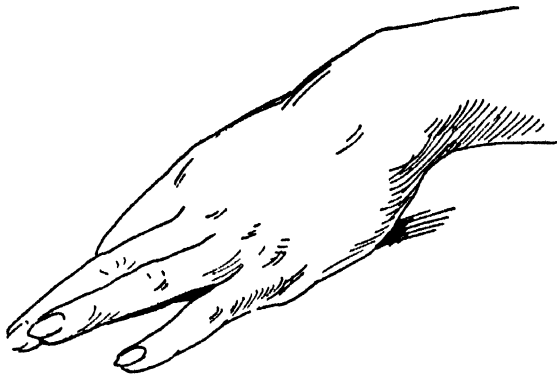


*Studies of hands with use of imaginary line.
for proportion*

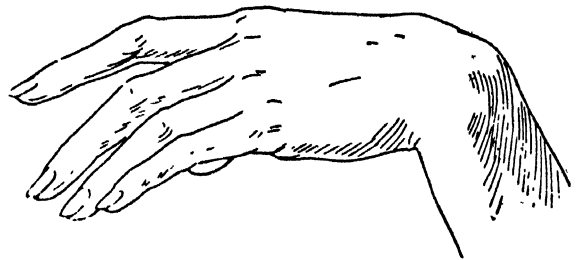
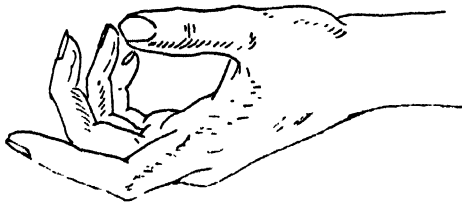


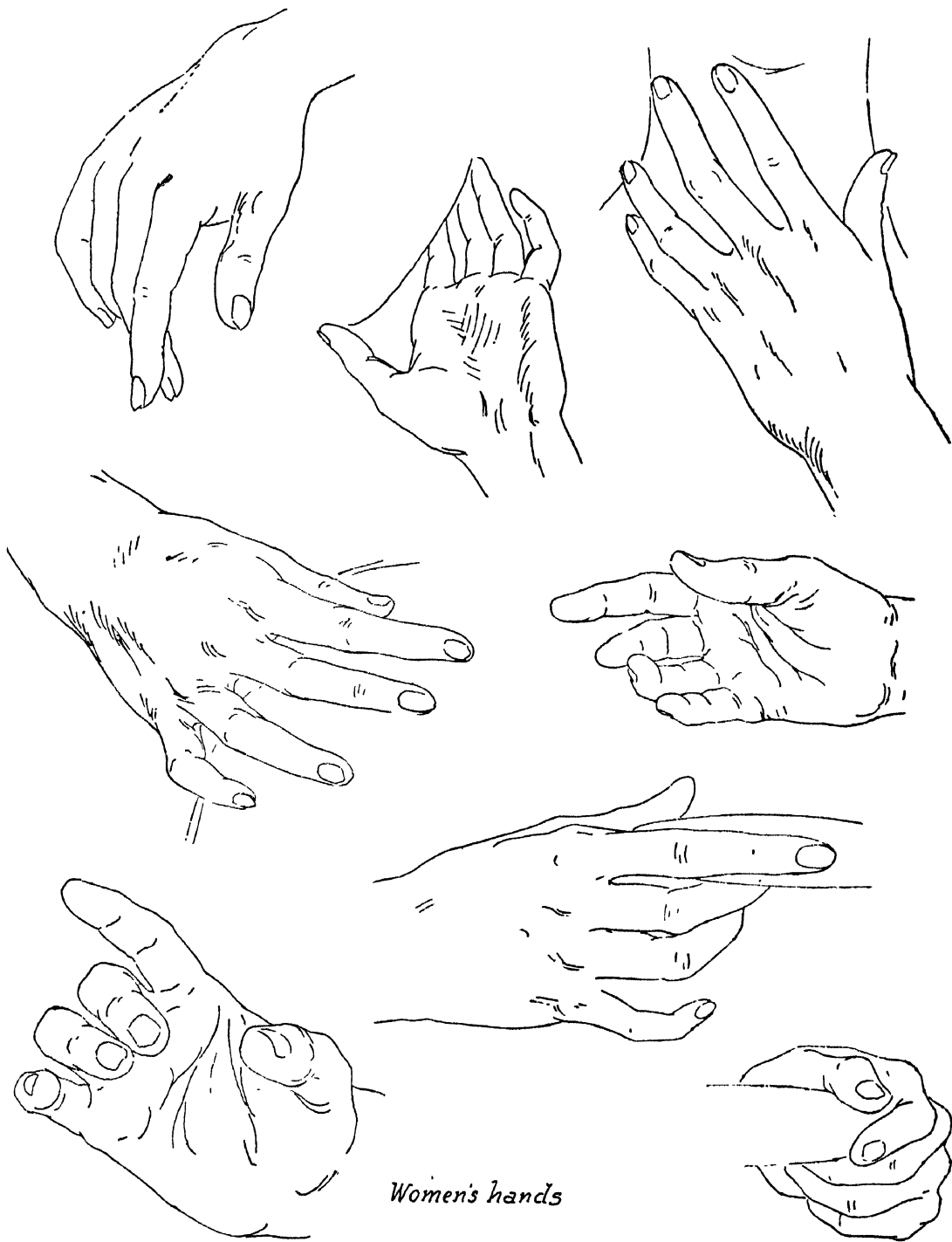






Studies of Women's Hands

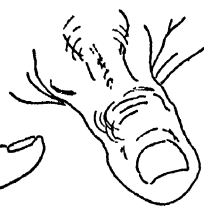
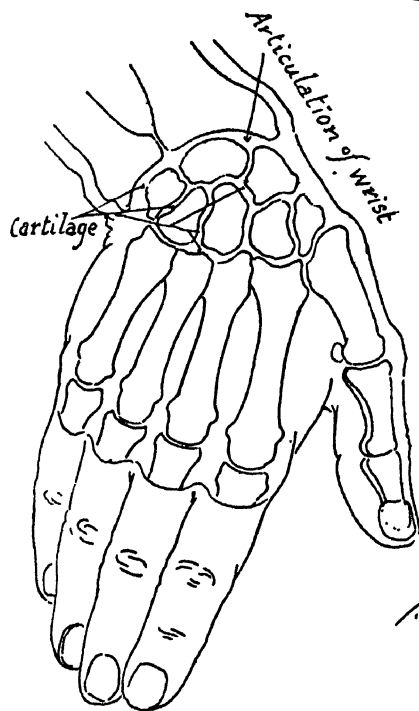
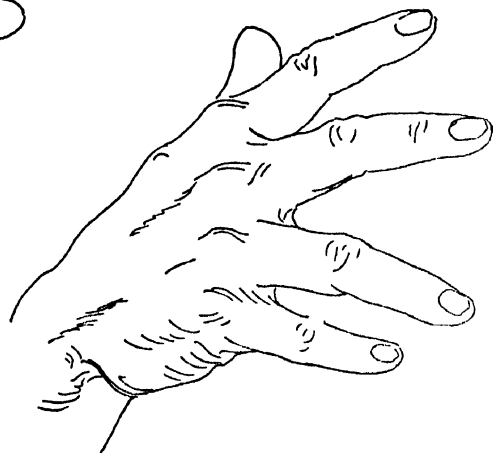




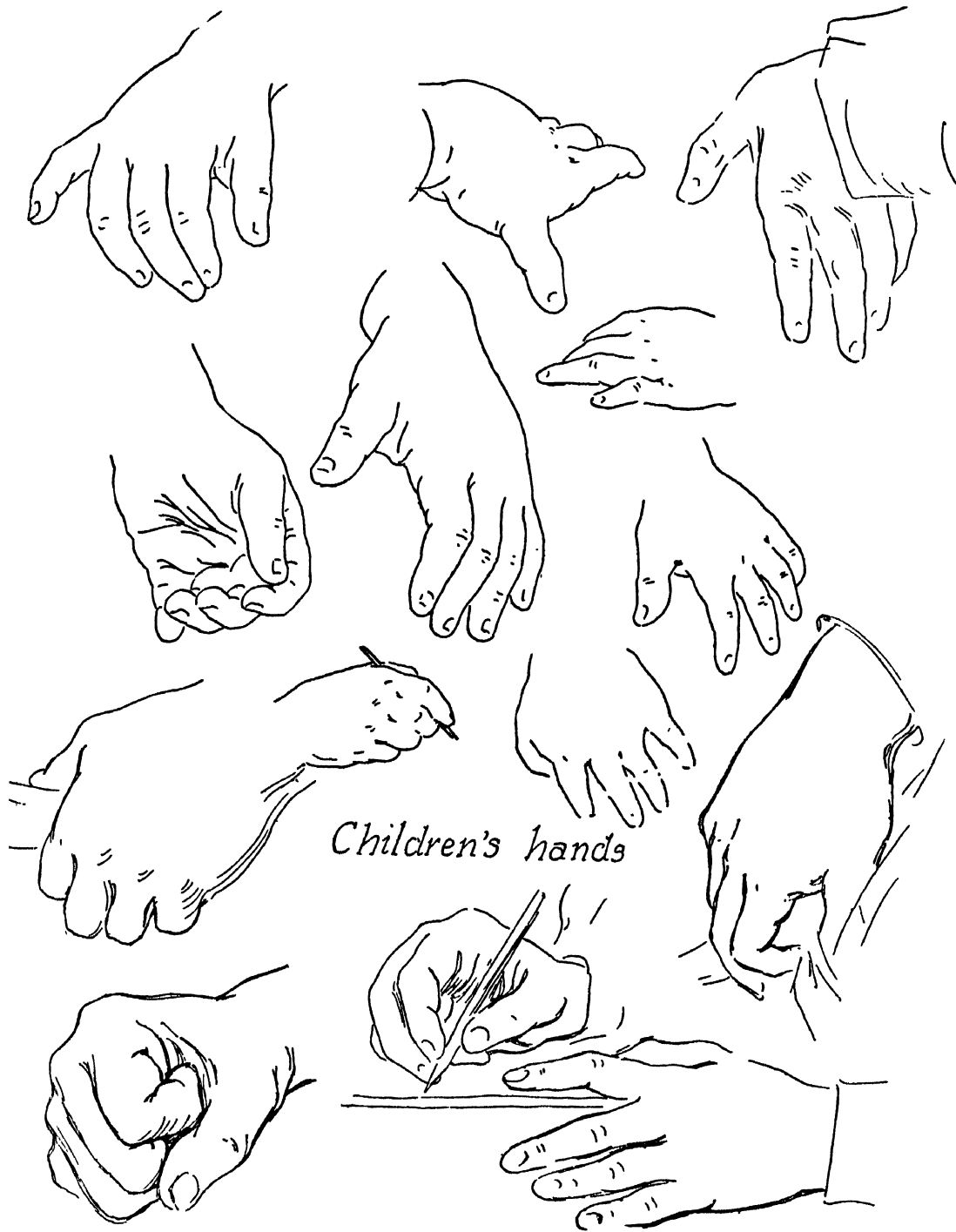
Women's hands



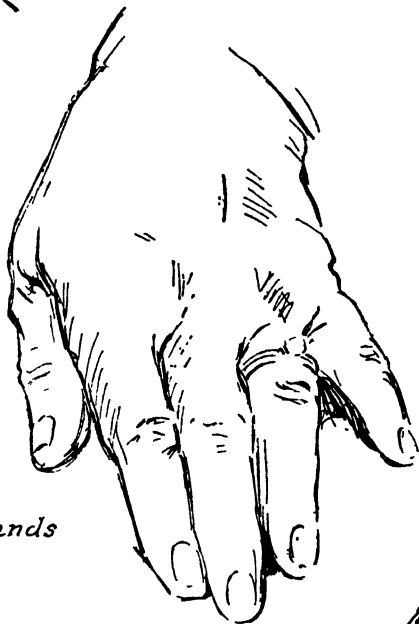
Woman's hands



Men's hands

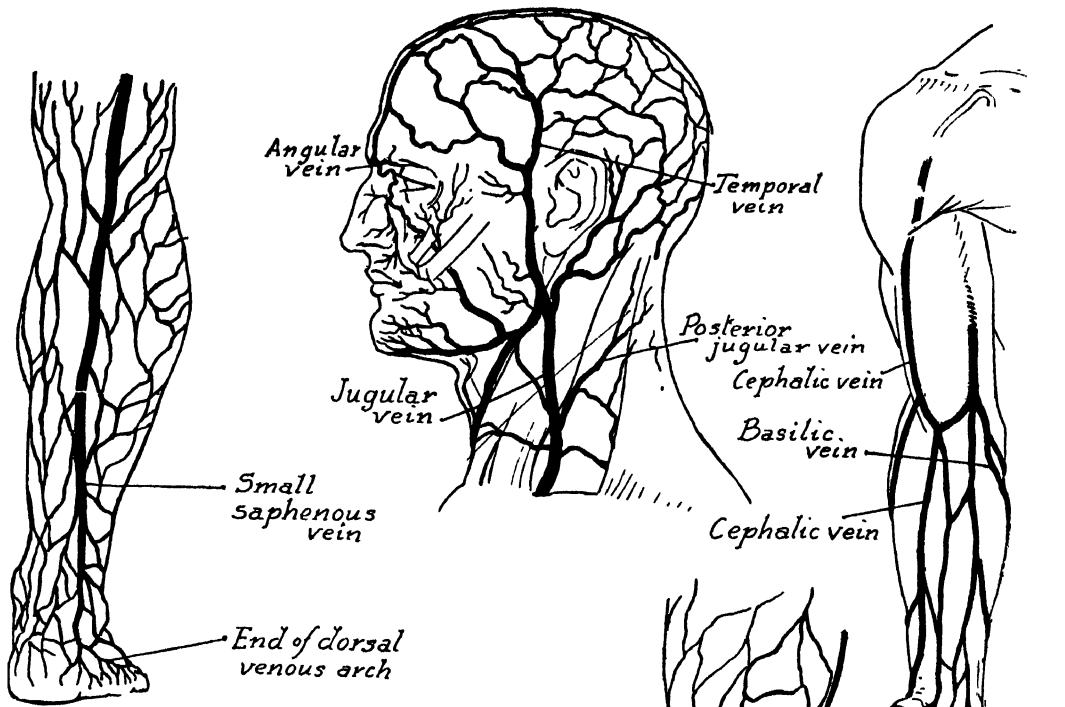


Children's hands

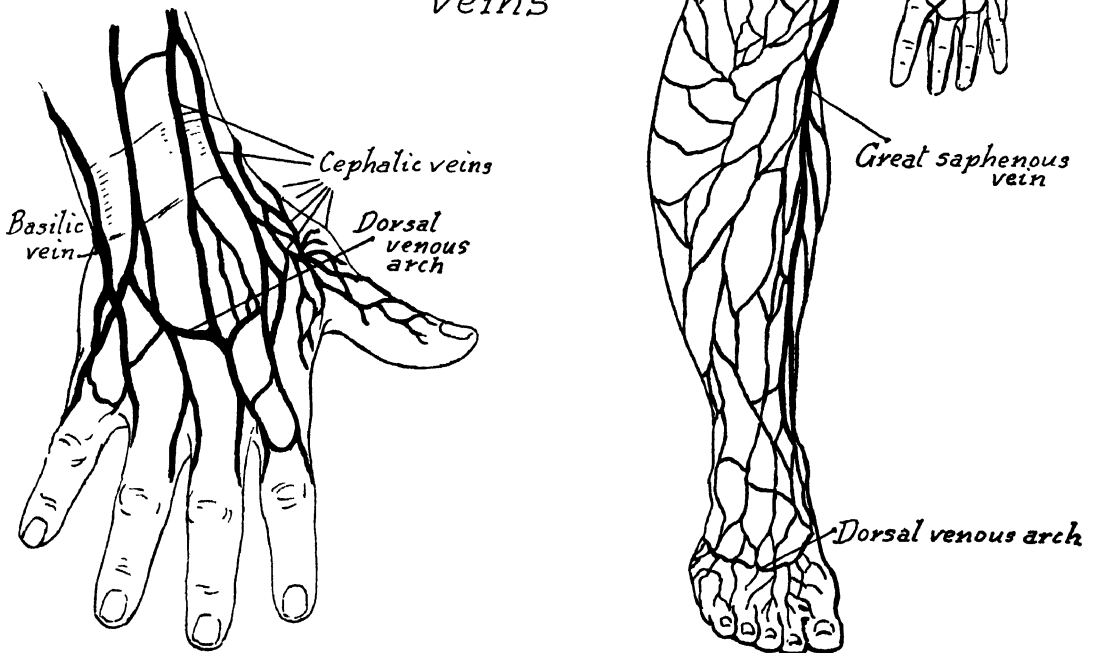


Types of hands



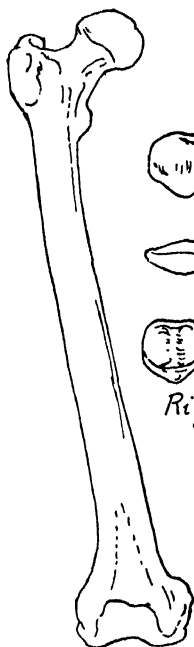


Superficial veins





PART VII
THE LEG



*Front of femur
Right leg*



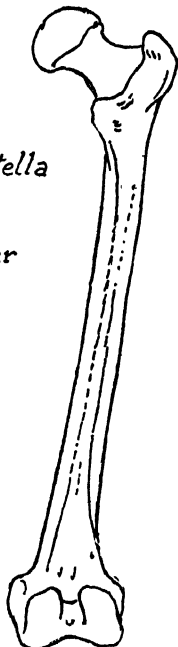
-Front of patella



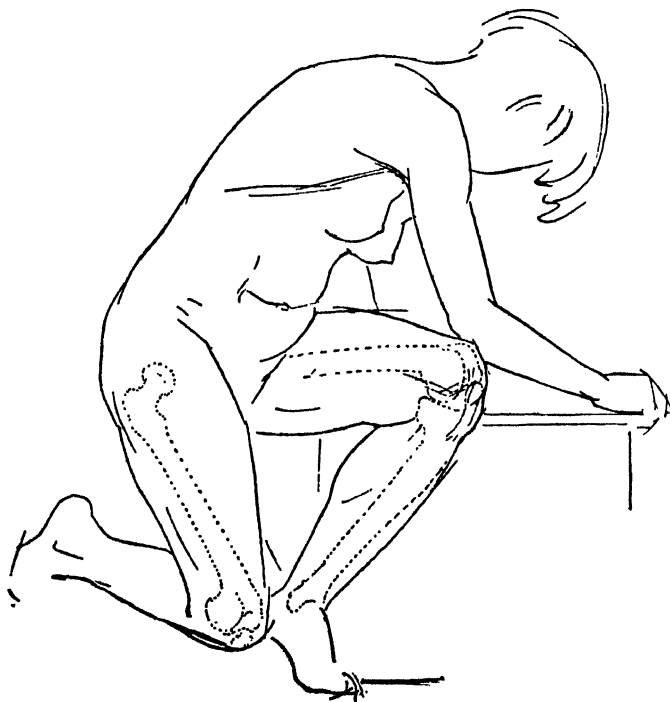
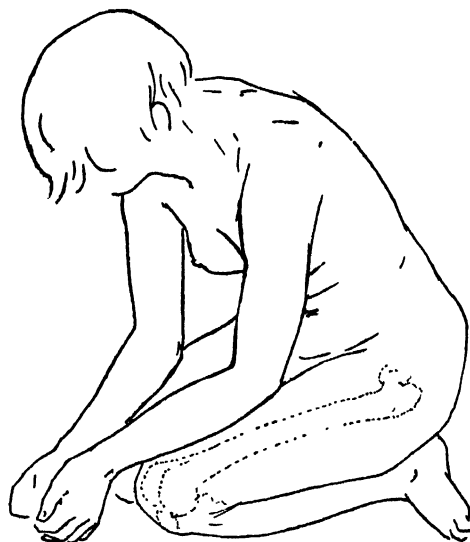
Upper border



*Articular
surface
Right patella*



*Back of right
femur*

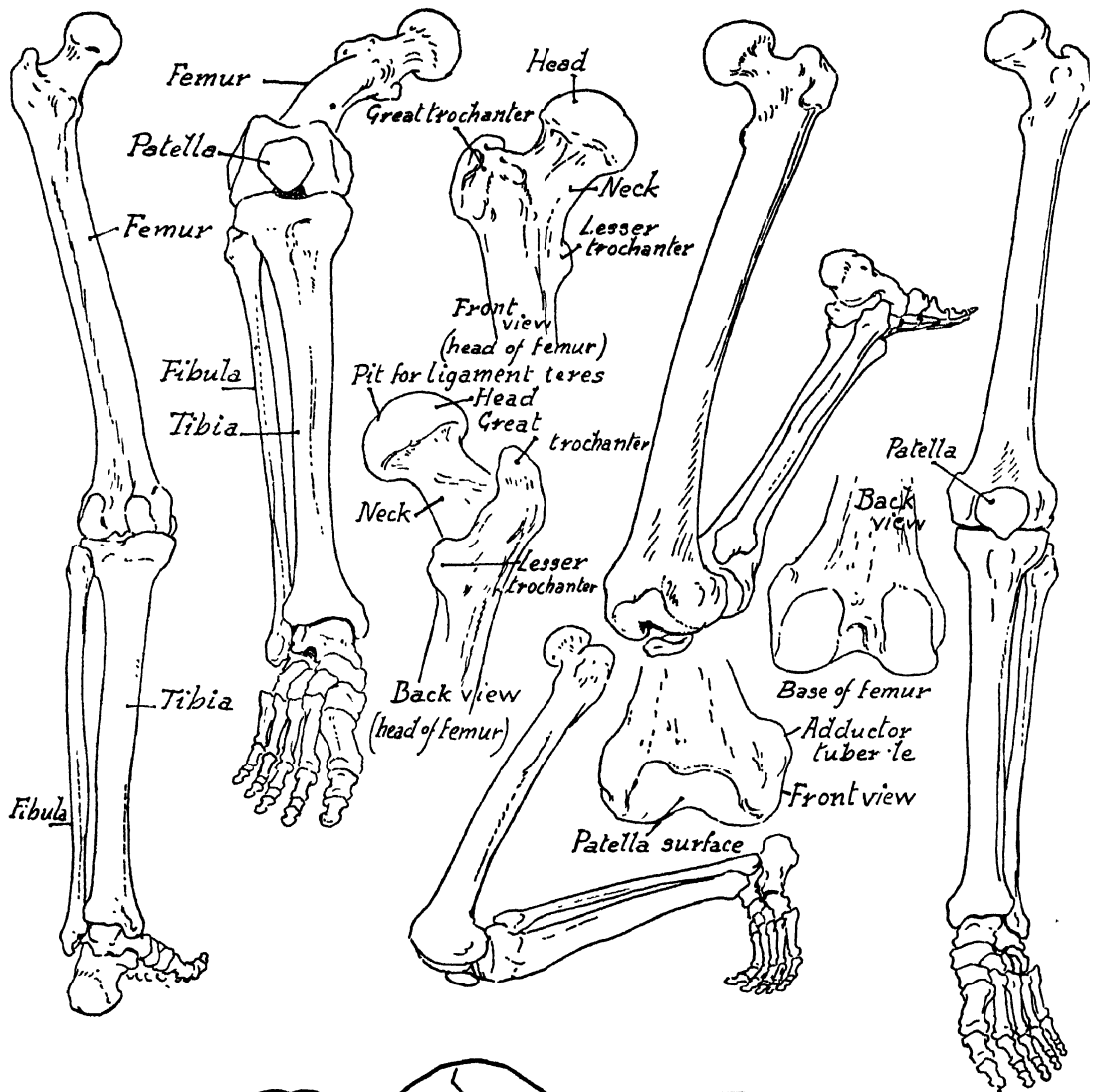


.....Left femur.....

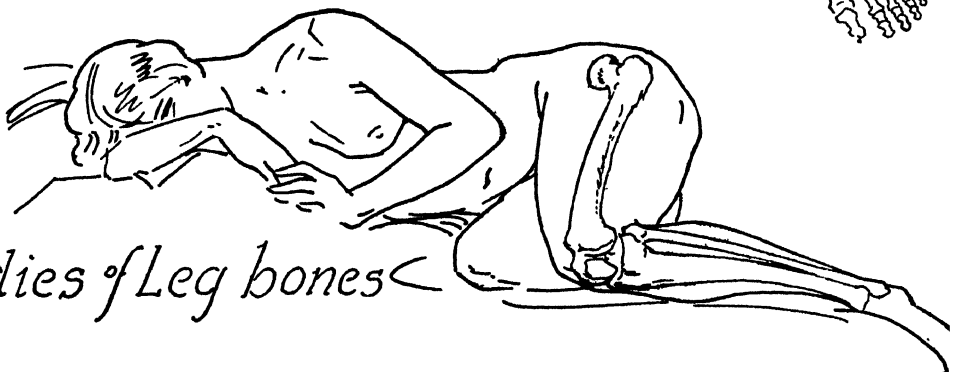
Outer view

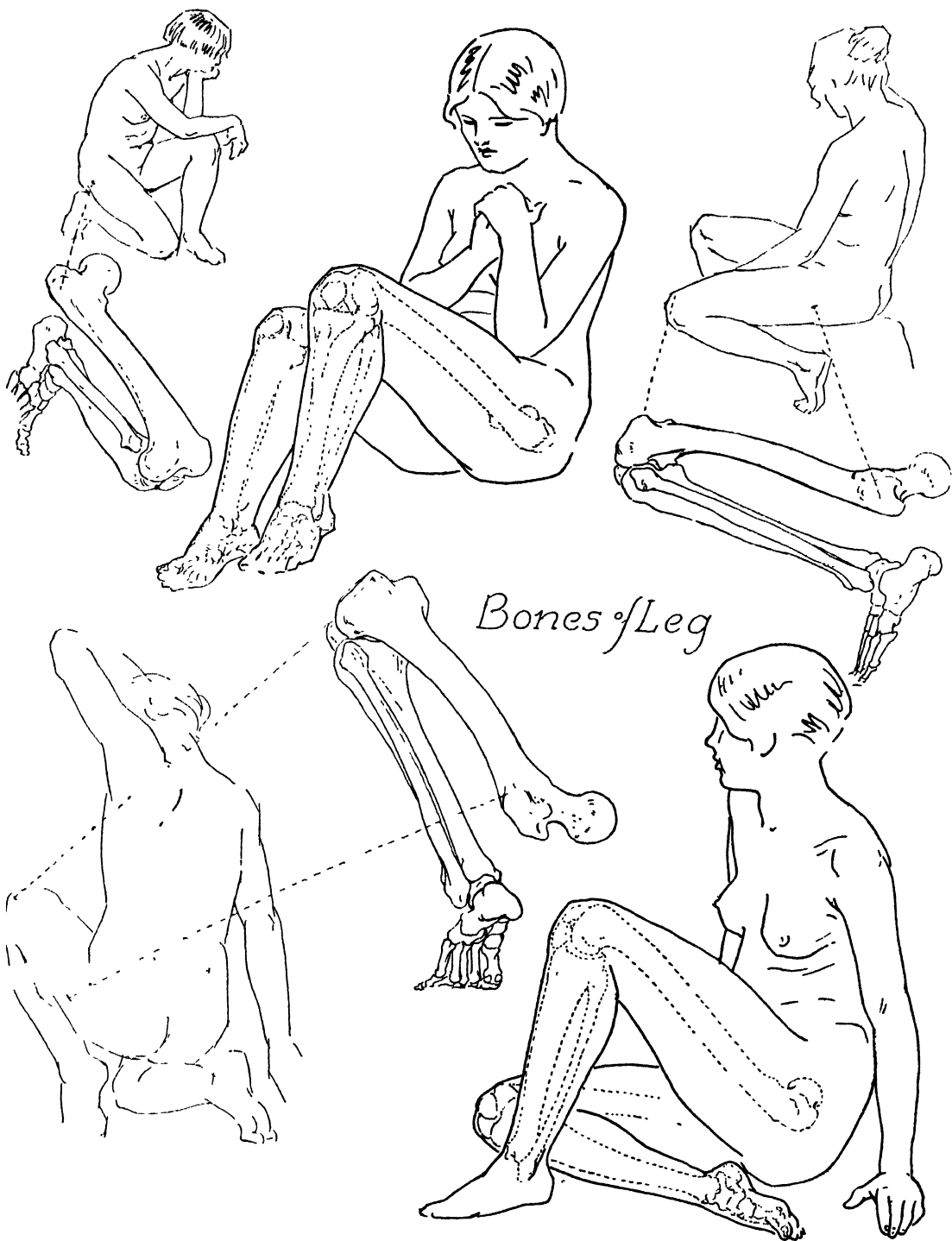


Inner view

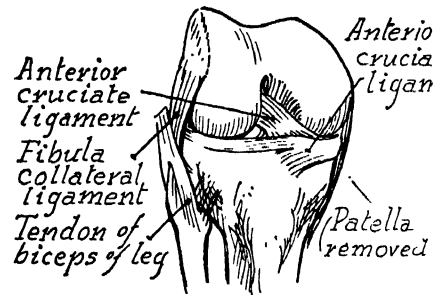
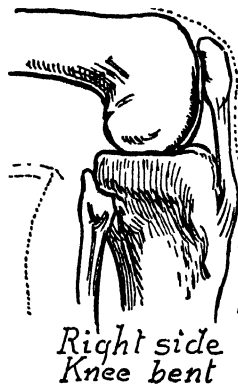
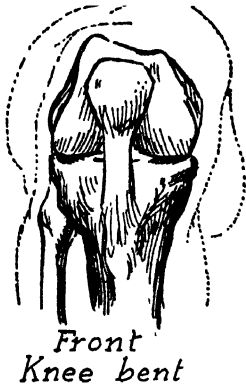
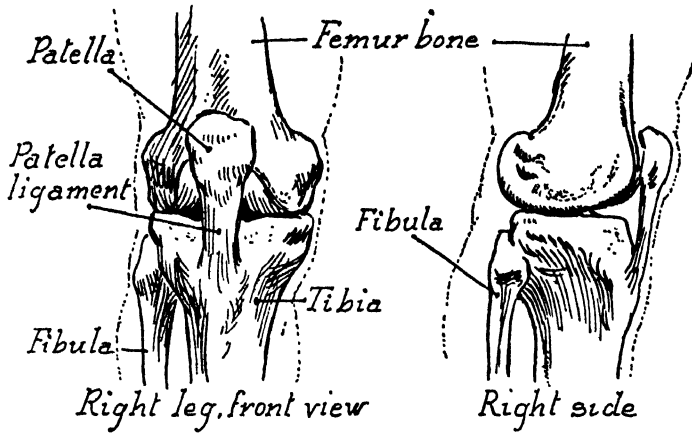


Studies of Leg bones

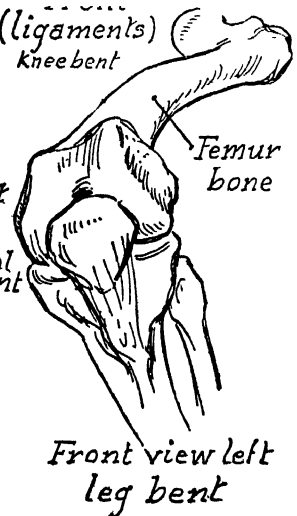
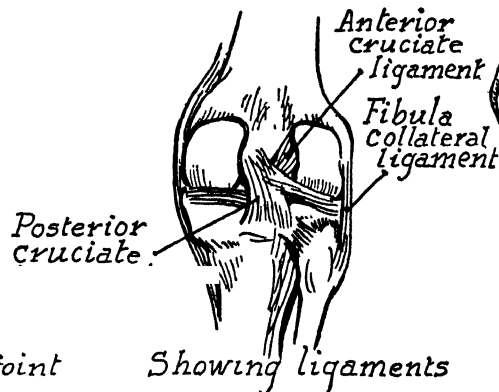
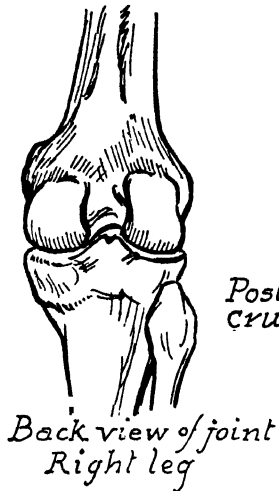


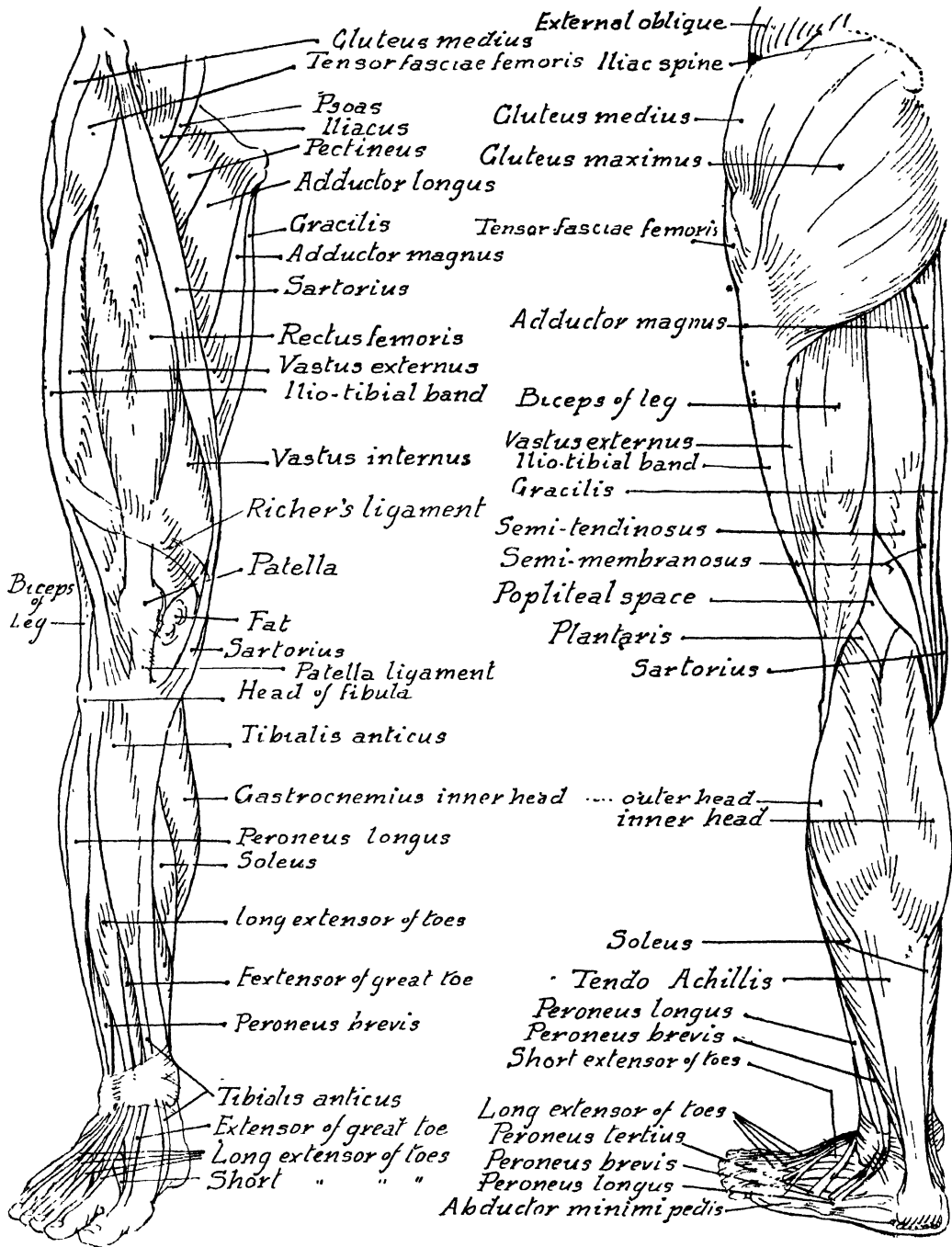


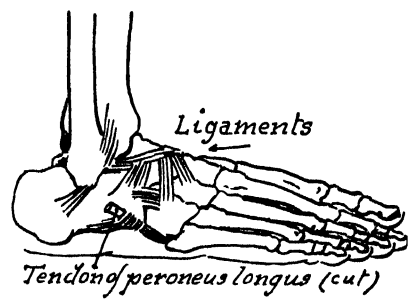
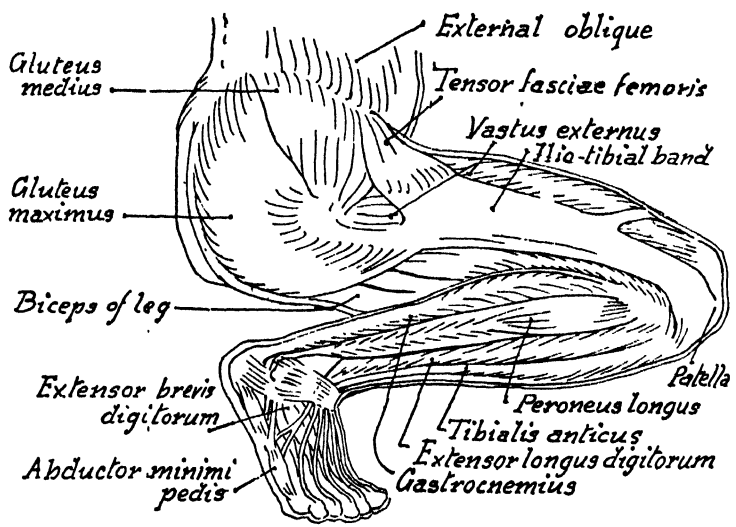
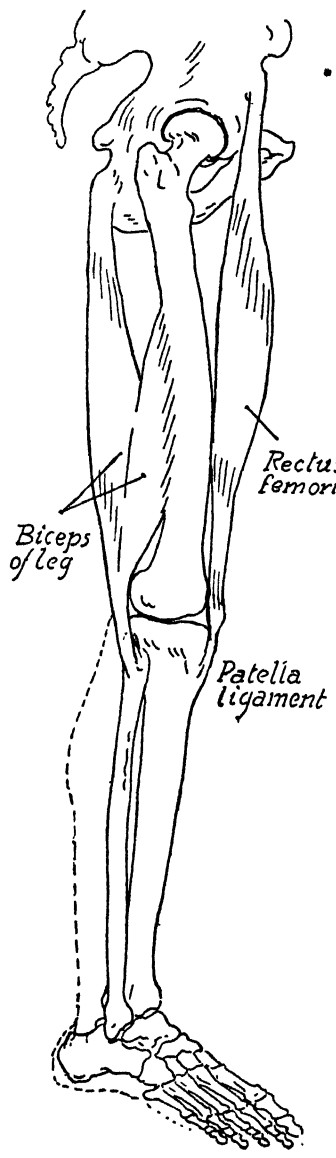
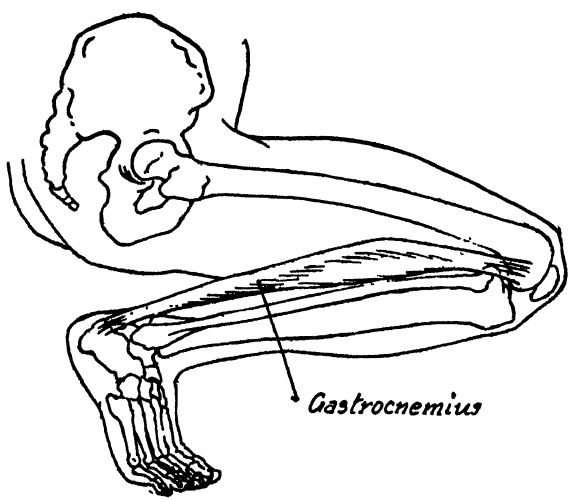
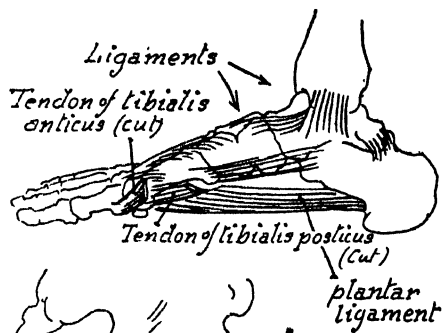
The Knee Joint

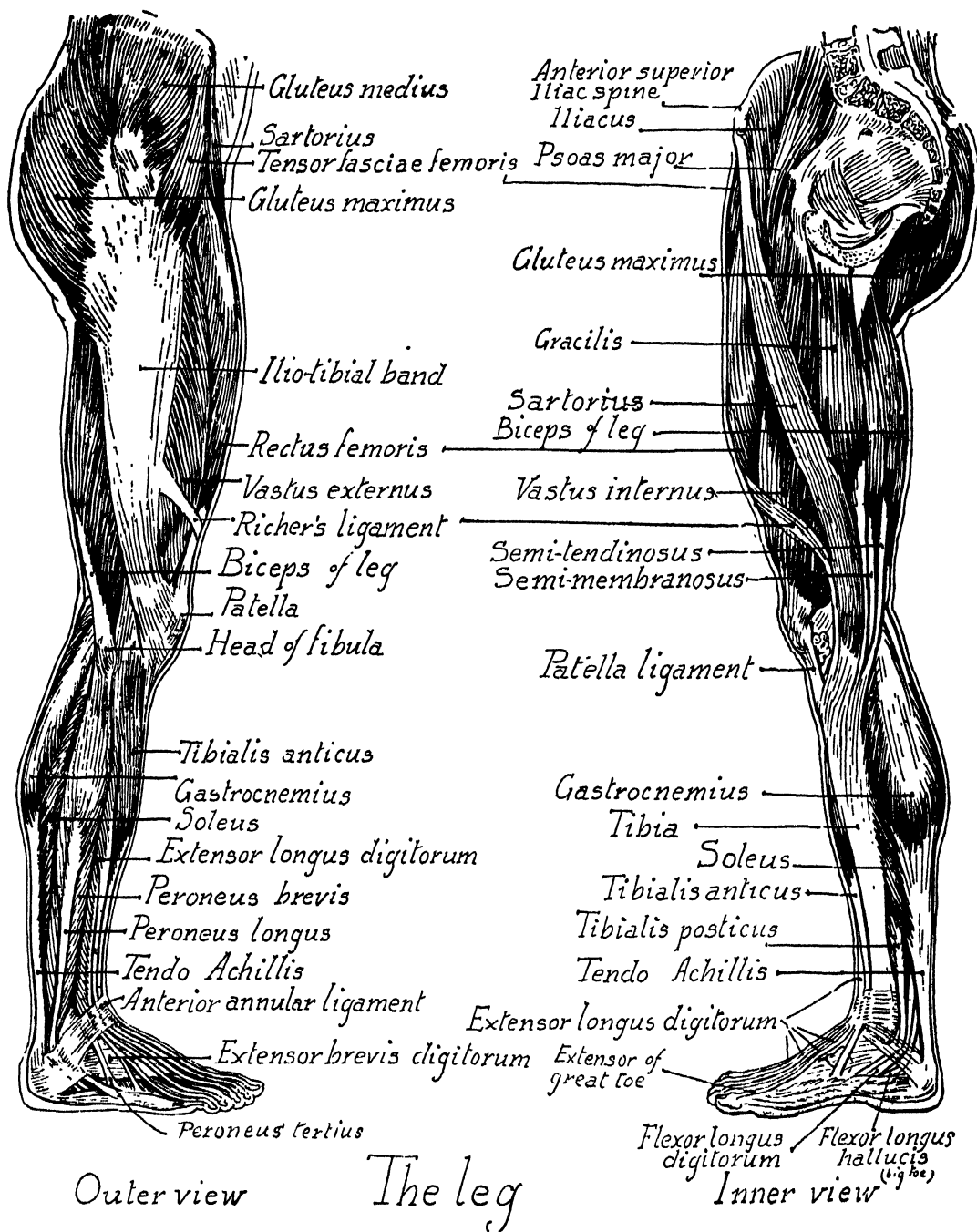


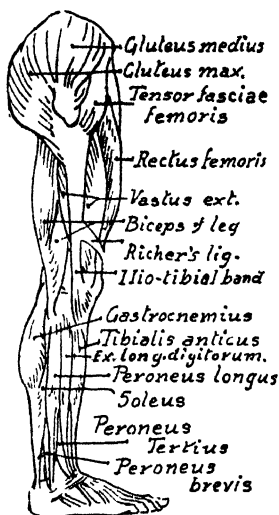
(ligaments)
knee bent



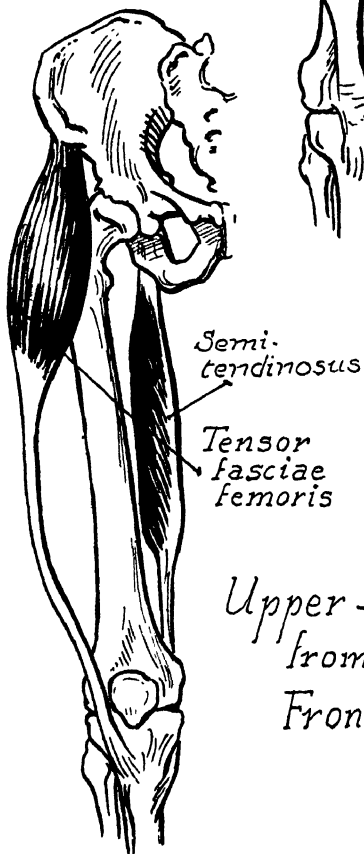
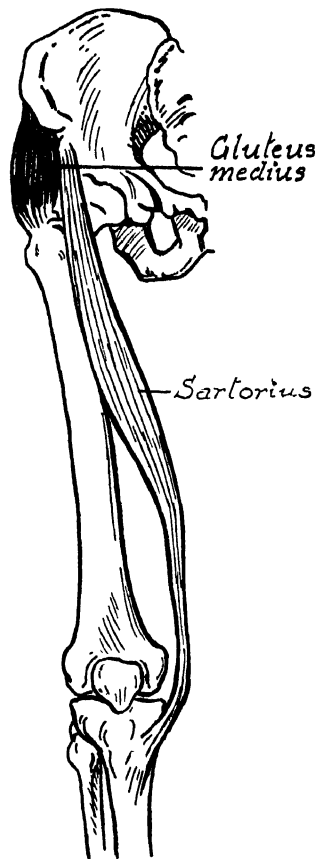
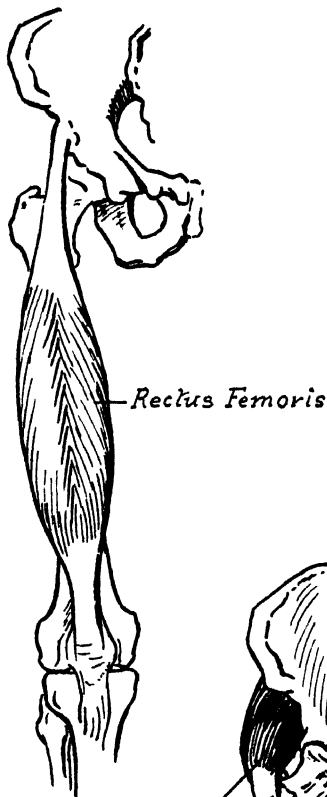




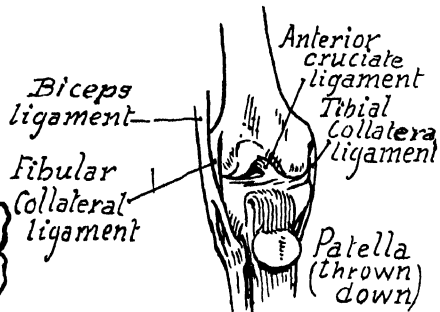
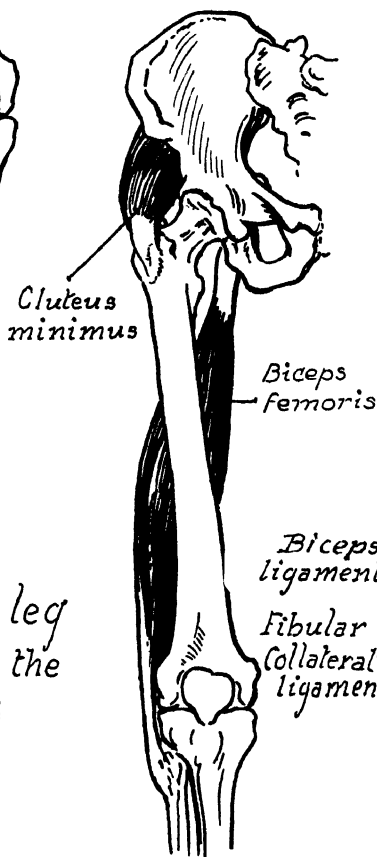


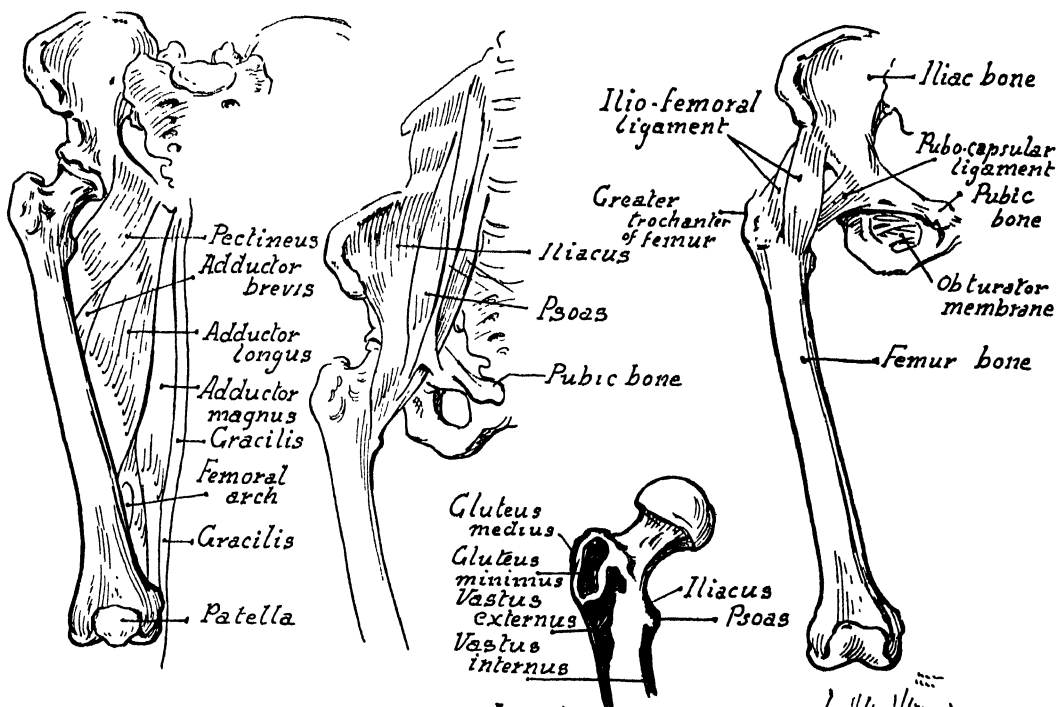


Side View

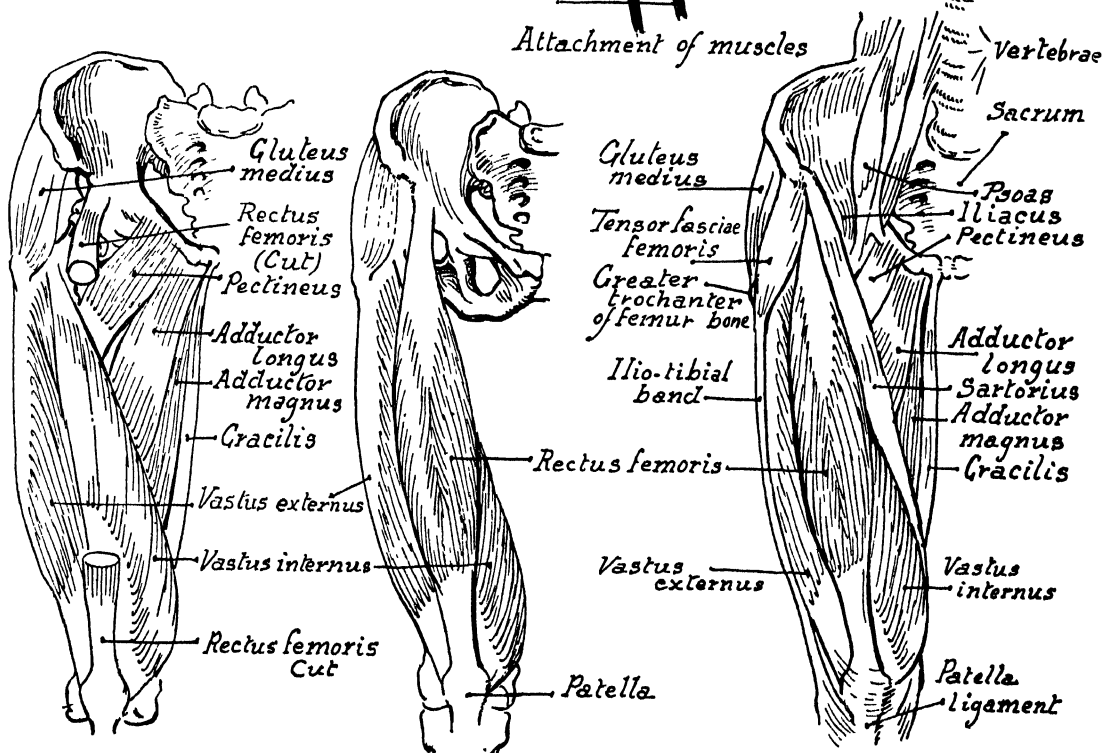


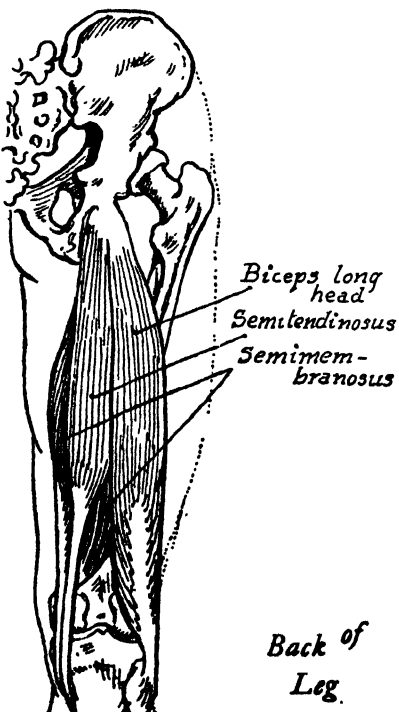
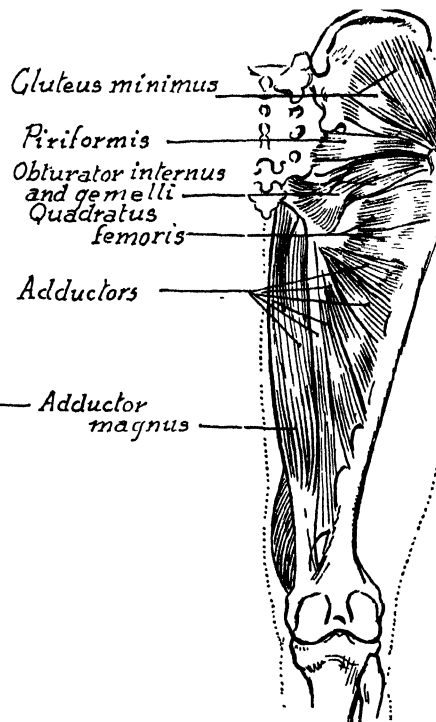
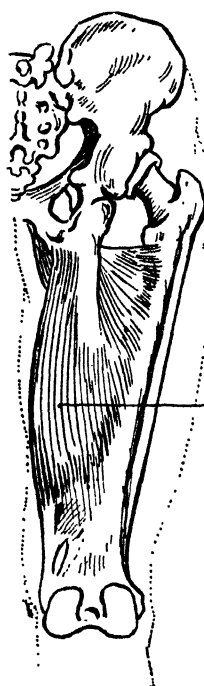
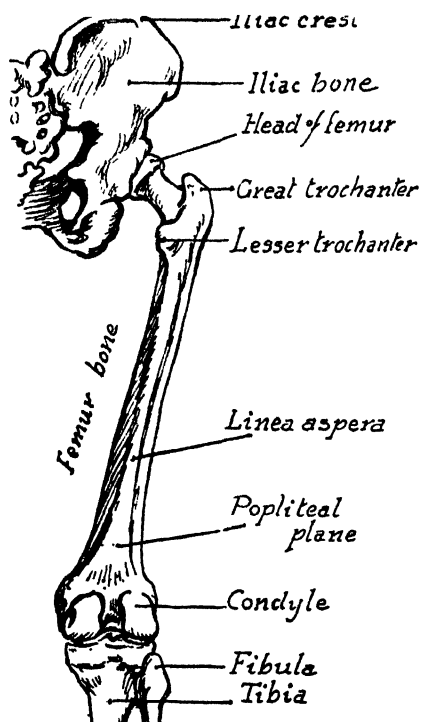
Upper-leg
 from the
 Front



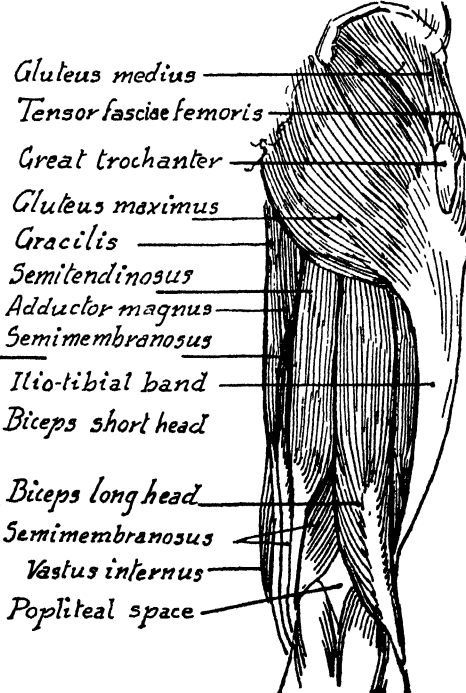


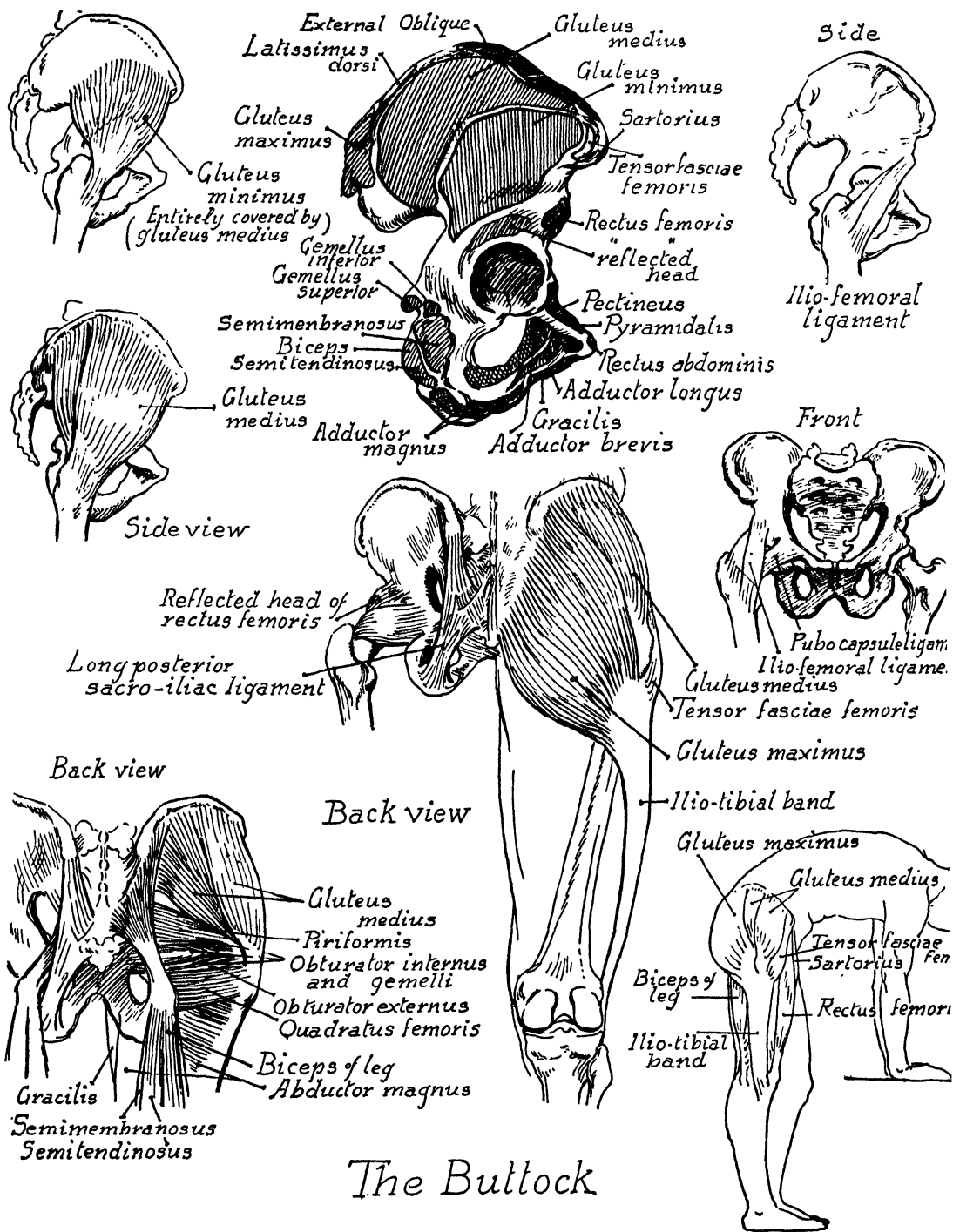
Attachment of muscles



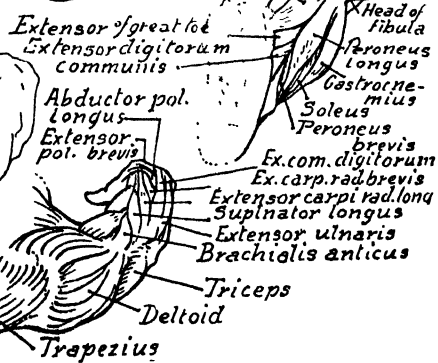
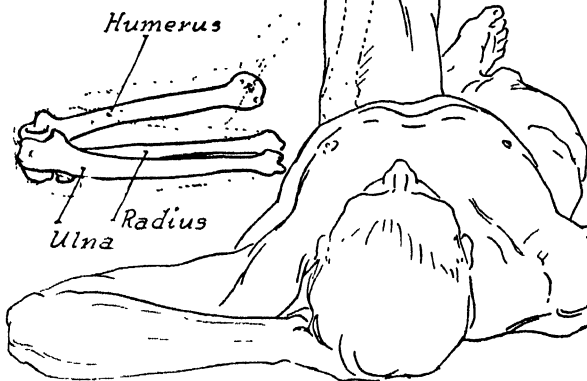
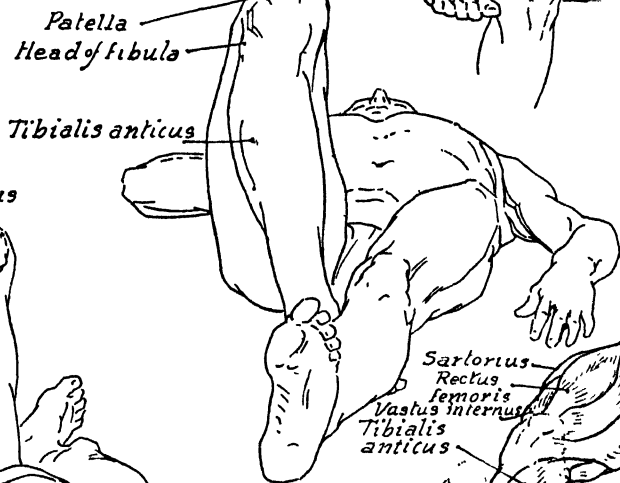
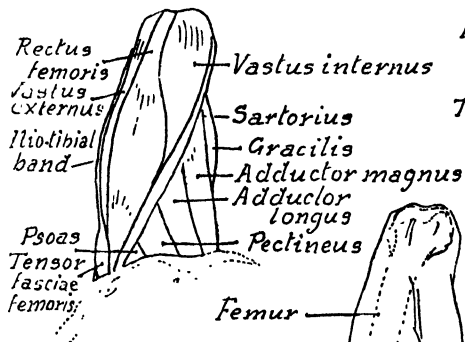
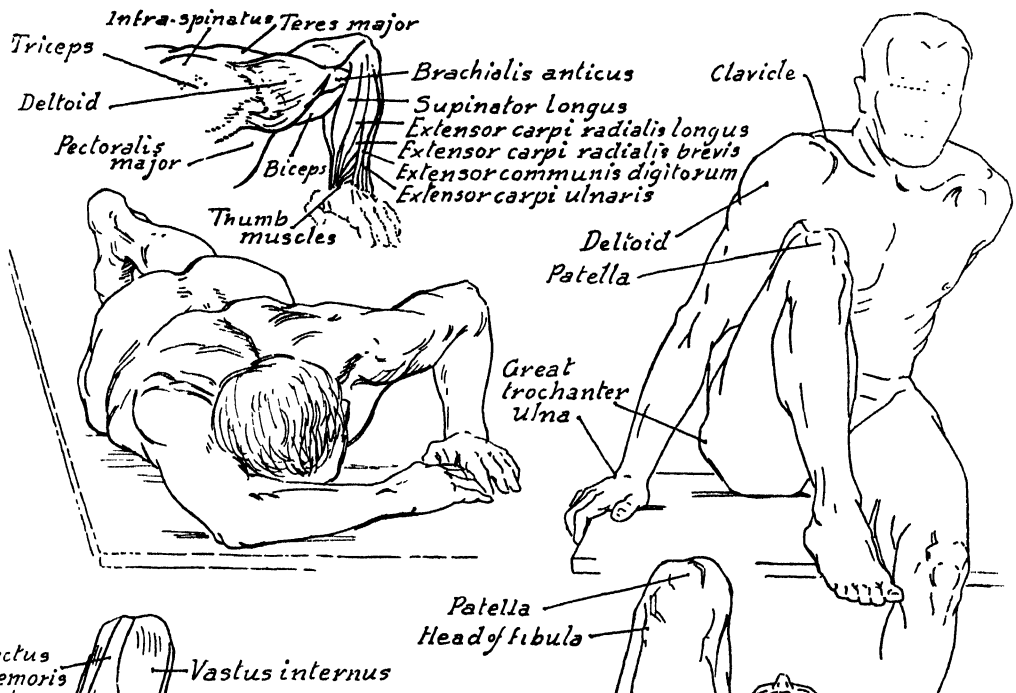


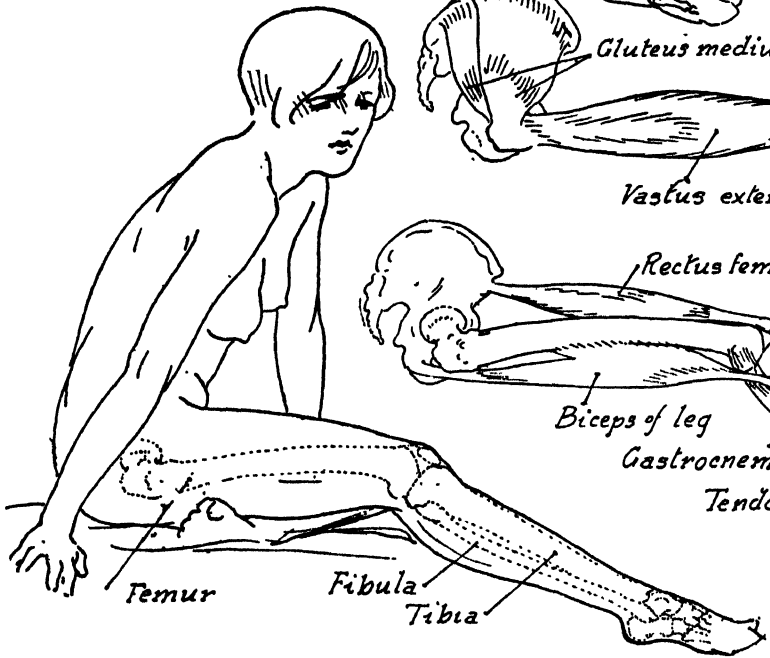
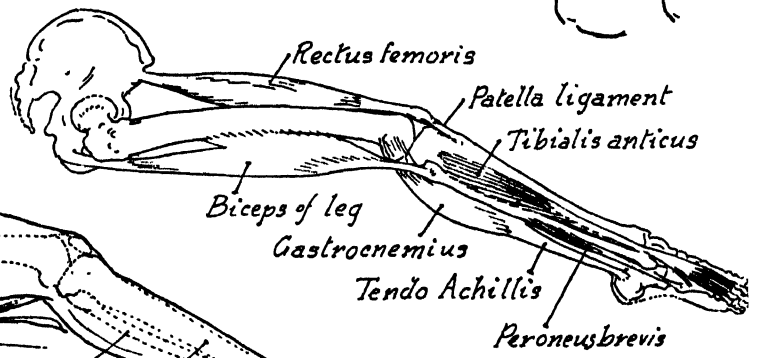
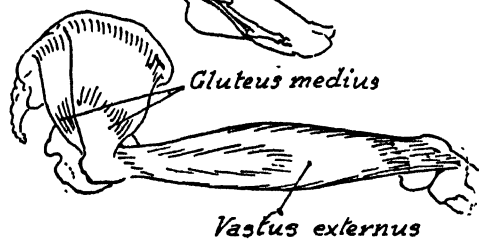
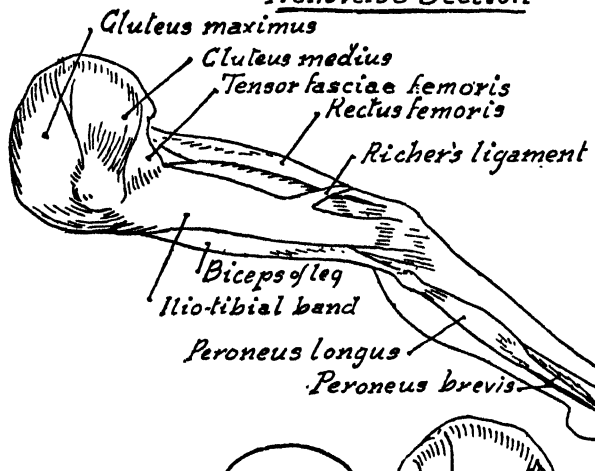
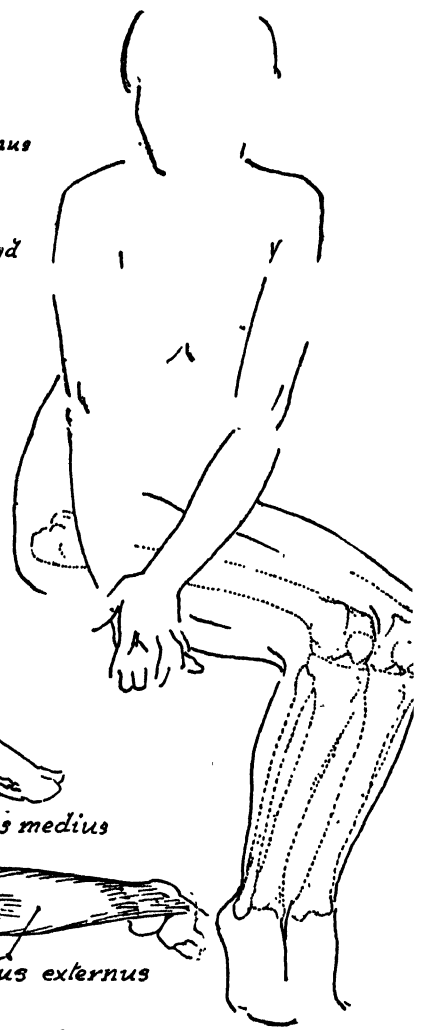
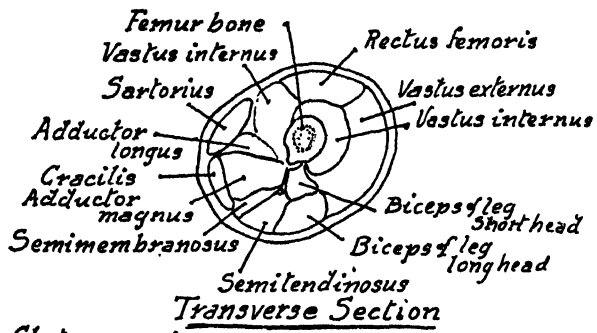
Back of
 Leg.











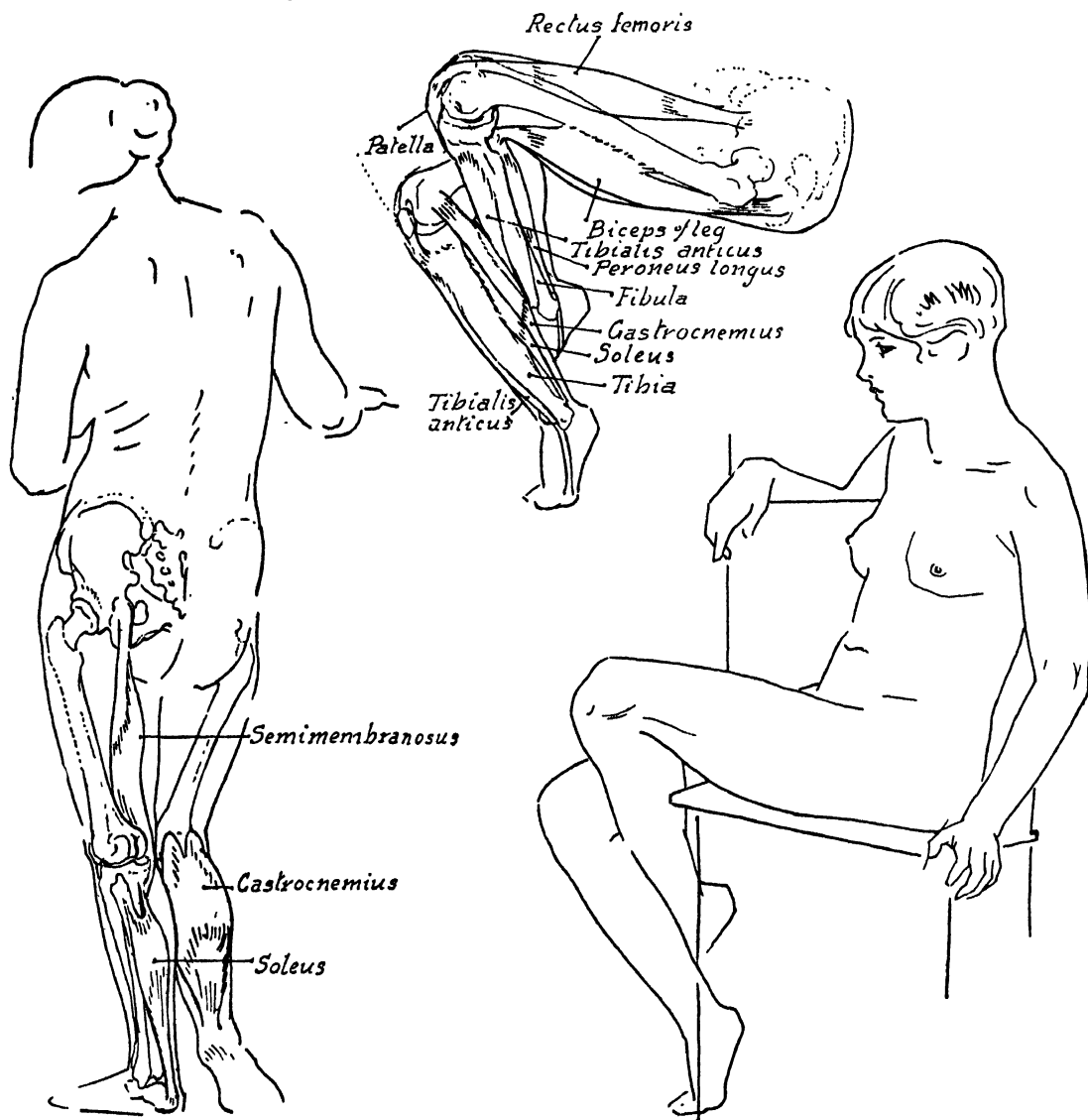
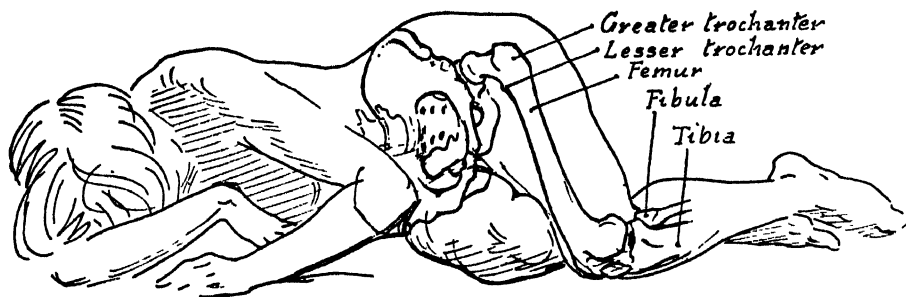
Femur
Fibula
Tibia

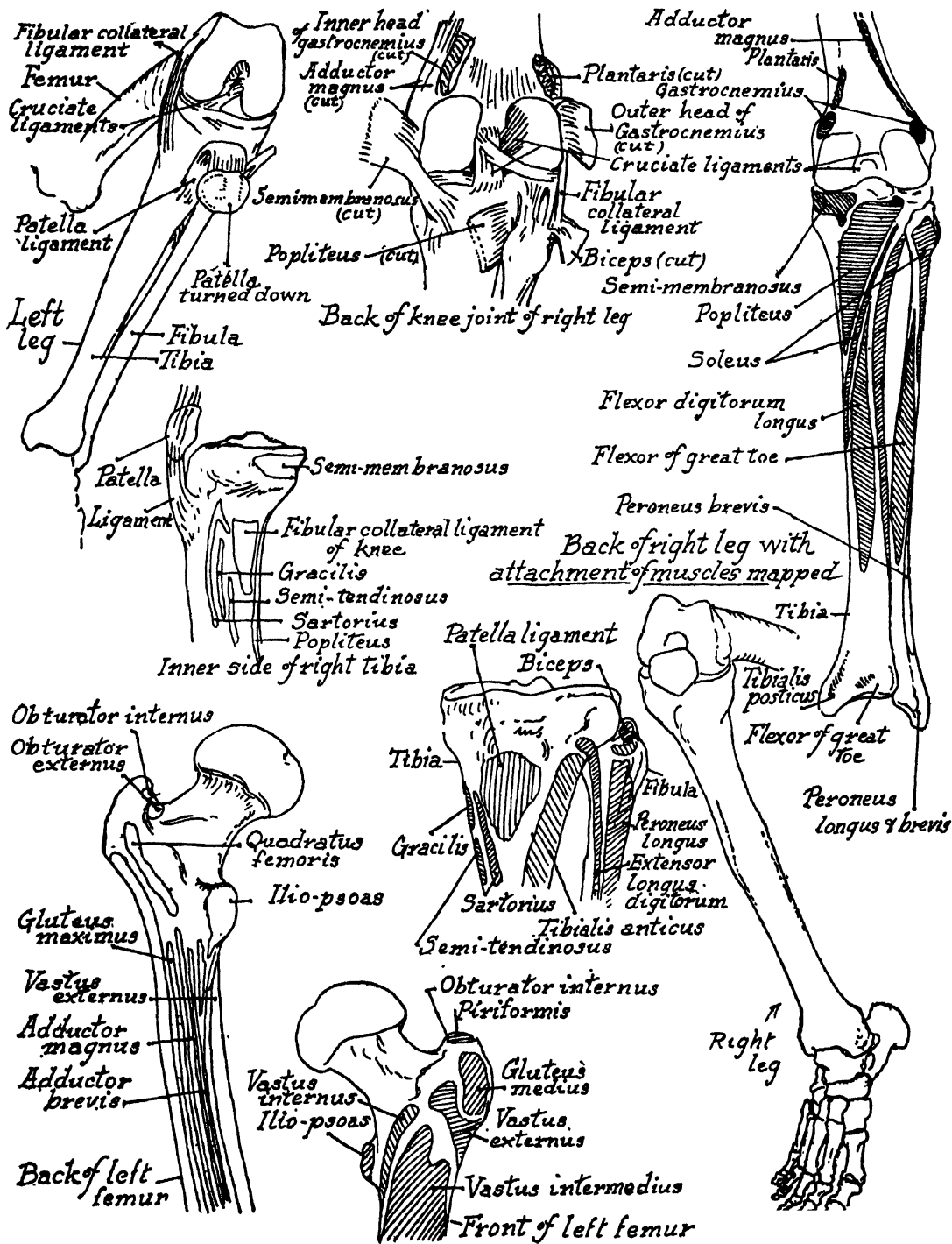
Rectus femoris
Patella ligament
Tibialis anticus
Biceps of leg
Gastrocnemius
Tendo Achillis
Peroneus brevis

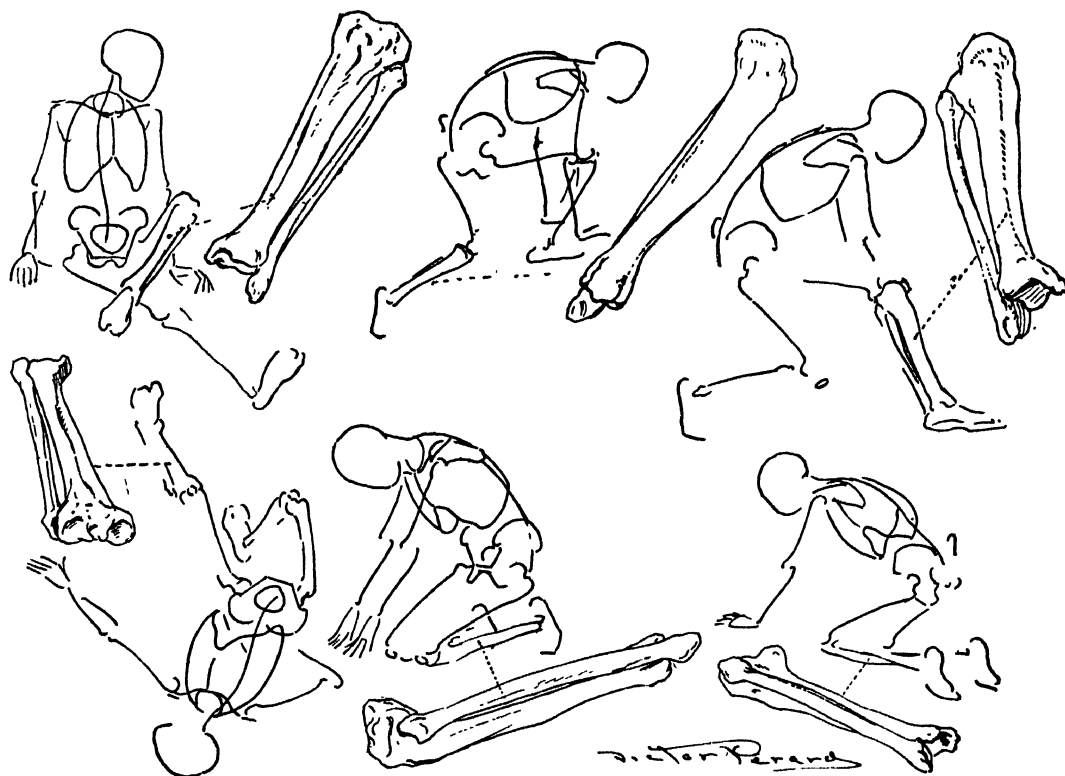
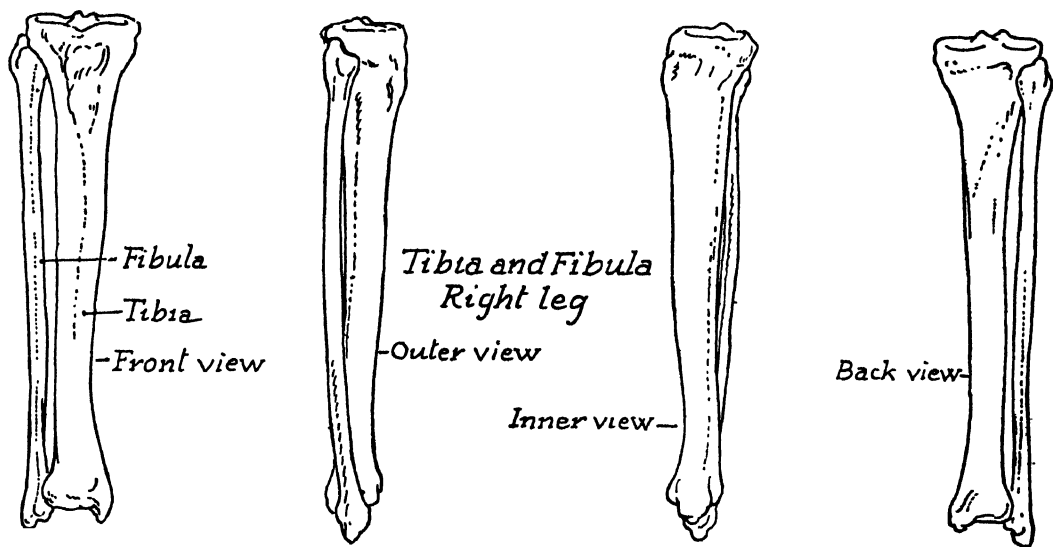
Gluteus maximus
Gluteus medius
Tensor fasciae femoris
Rectus femoris
Richer's ligament
Biceps of leg
Ilio-tibial band
Peroneus longus
Peroneus brevis

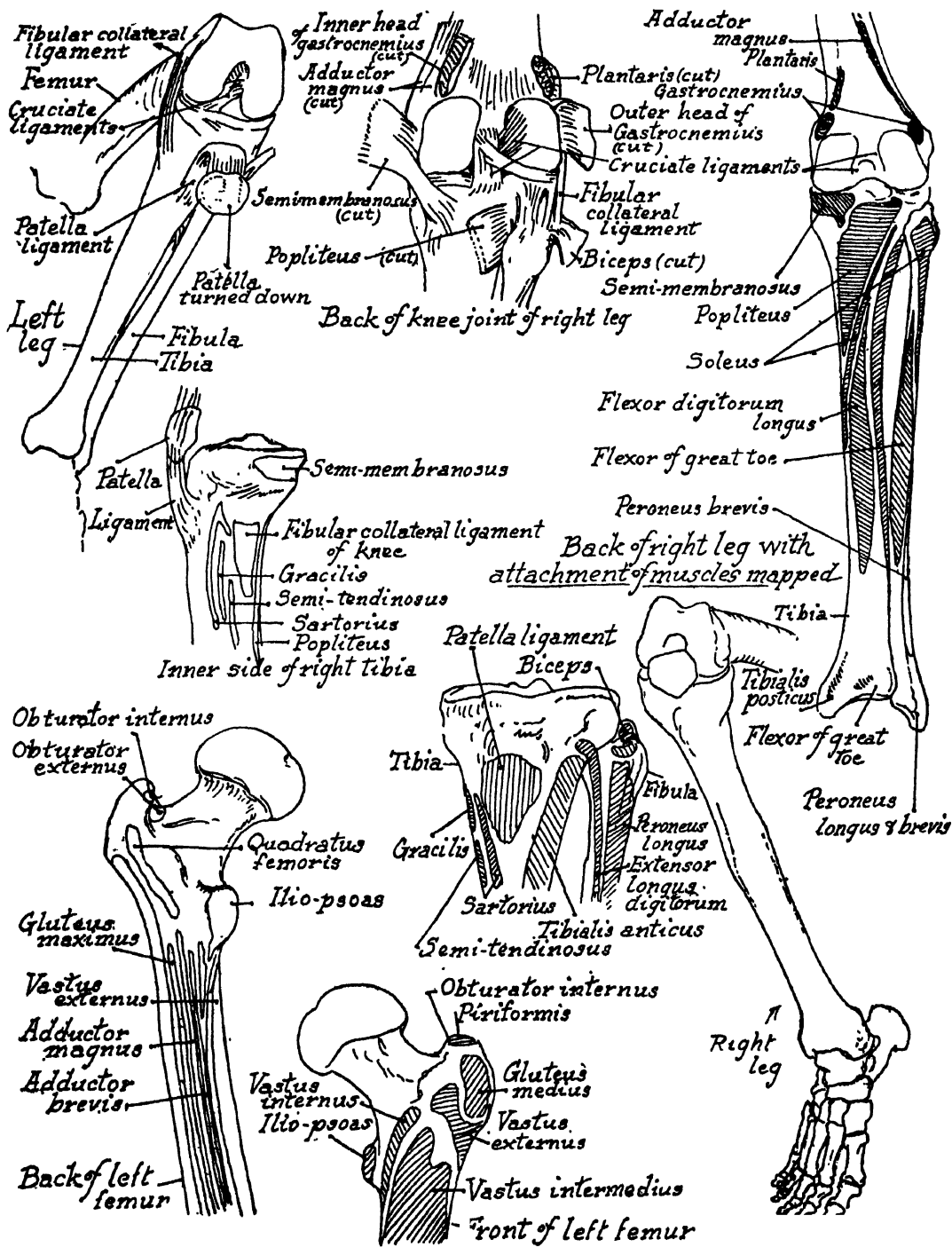
Gluteus medius

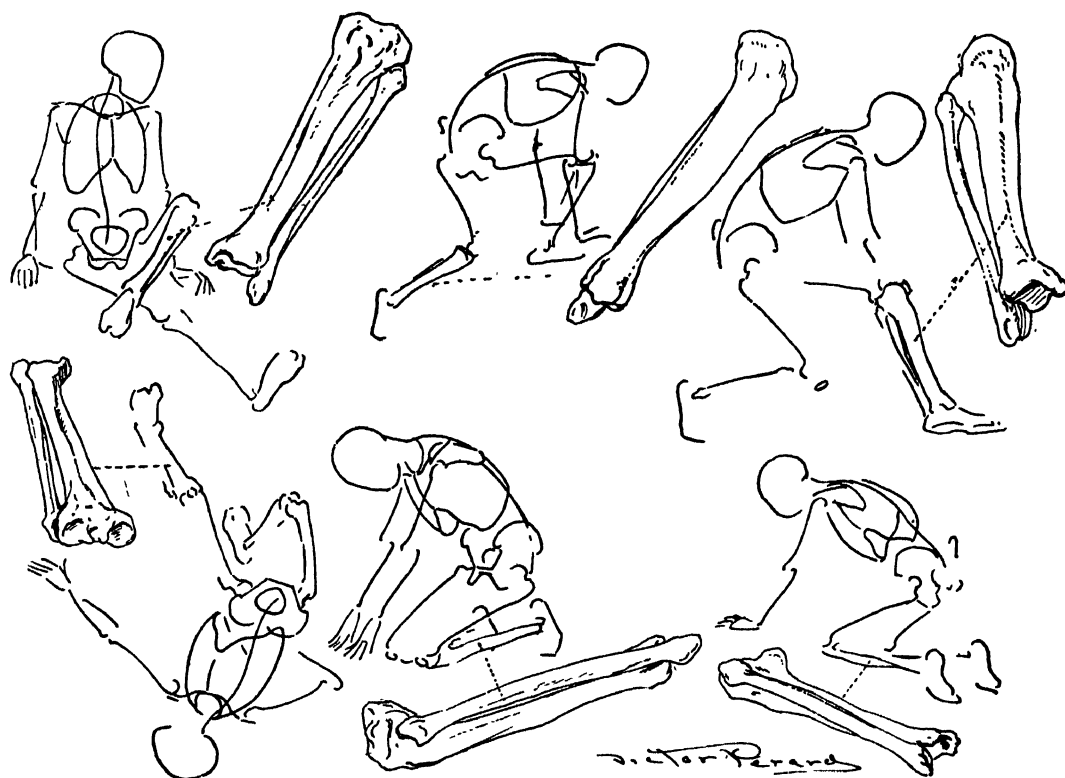
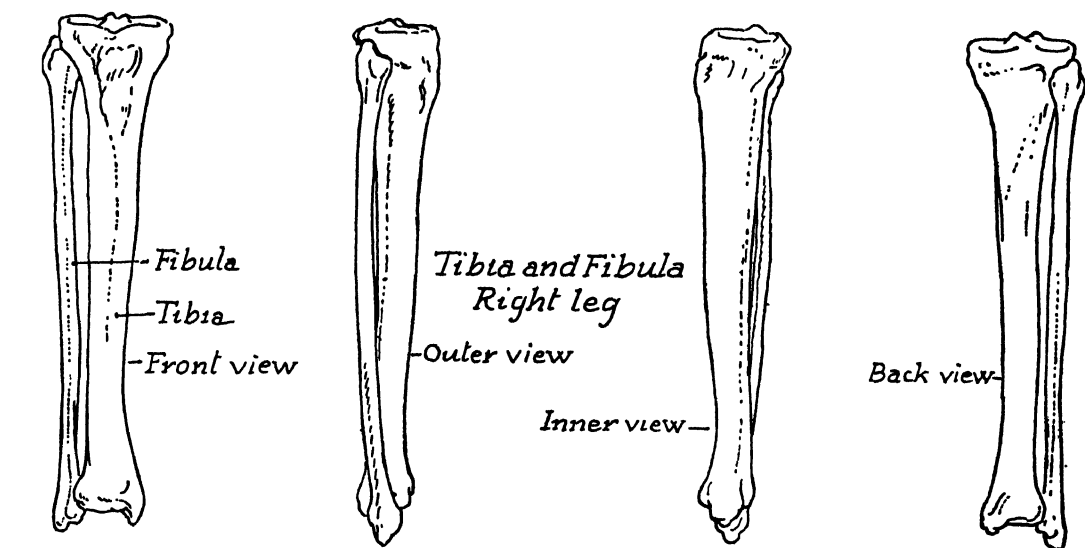
Vastus externus

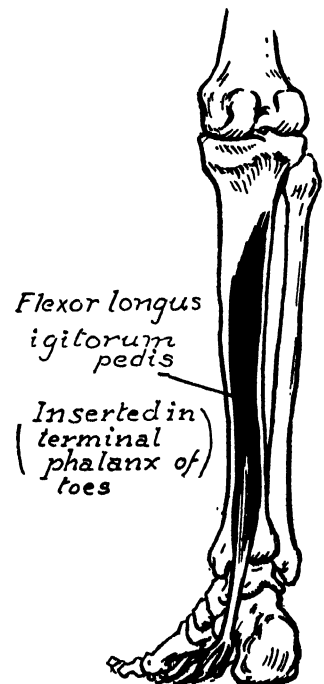
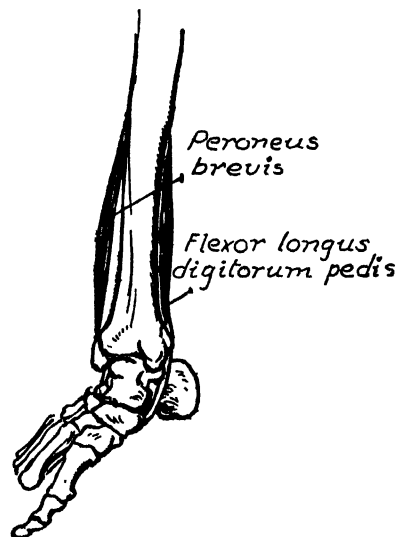
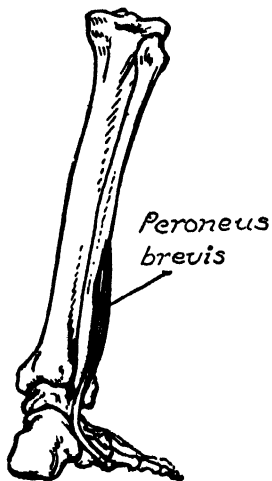
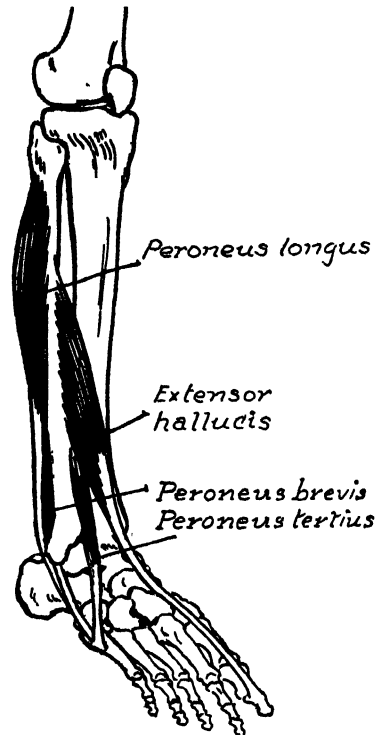
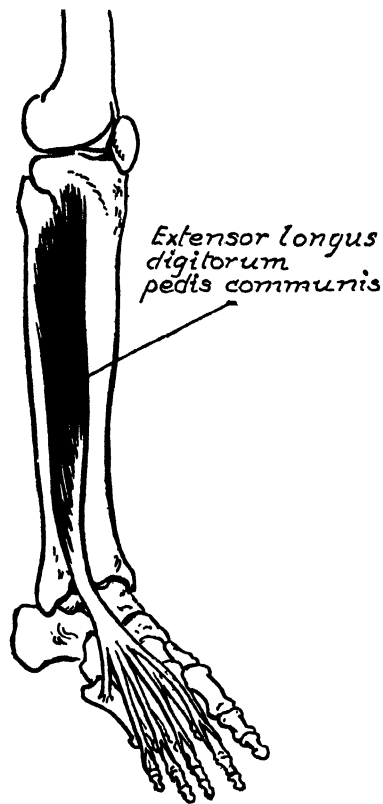
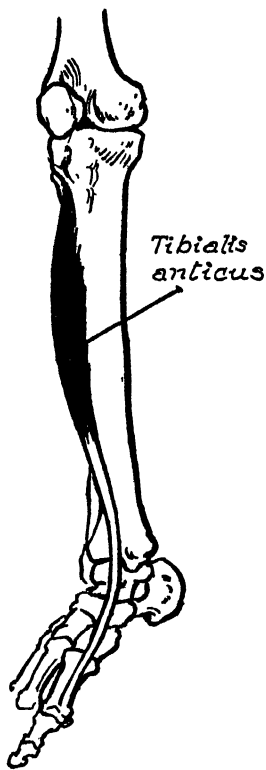


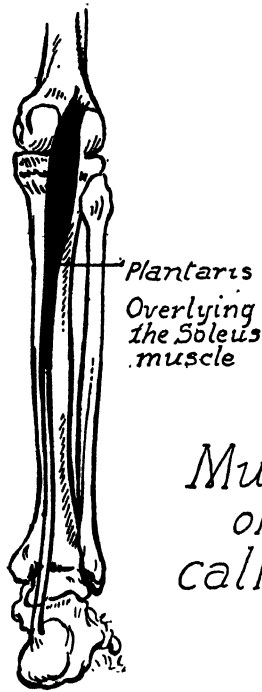
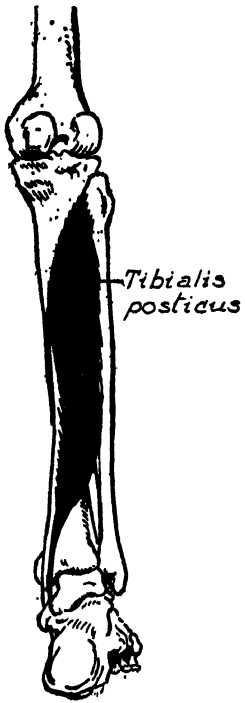




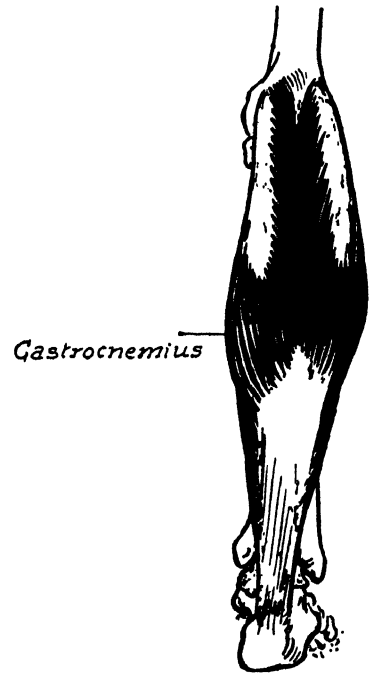
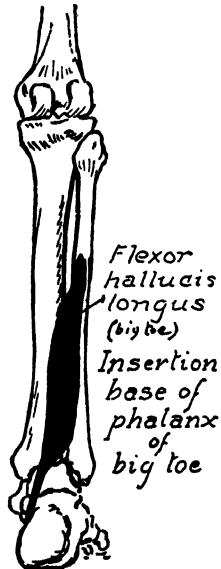
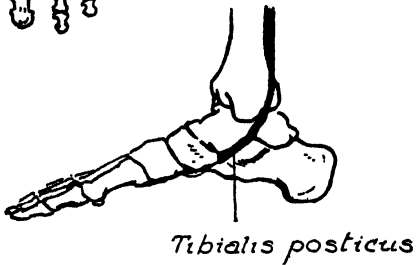
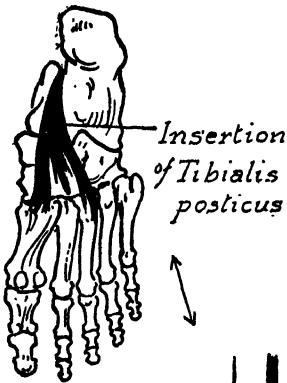
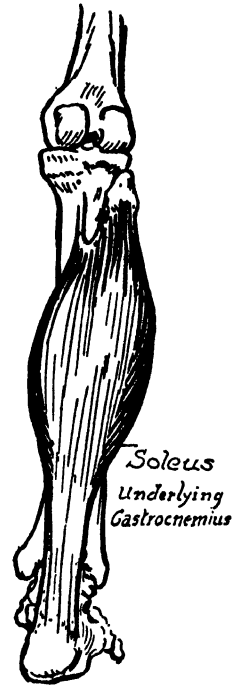






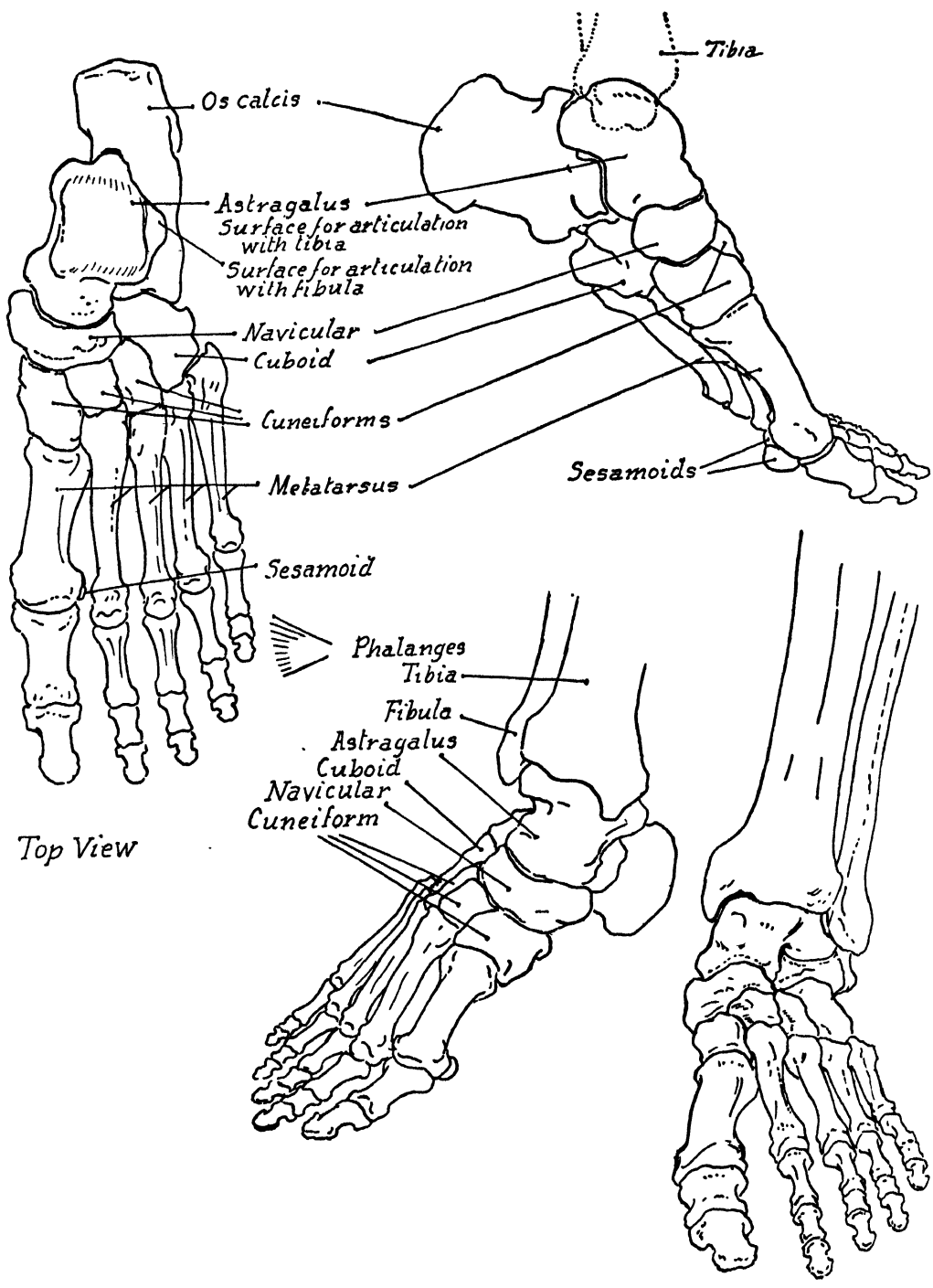


Muscles of the calf of leg





PART VIII THE FOOT



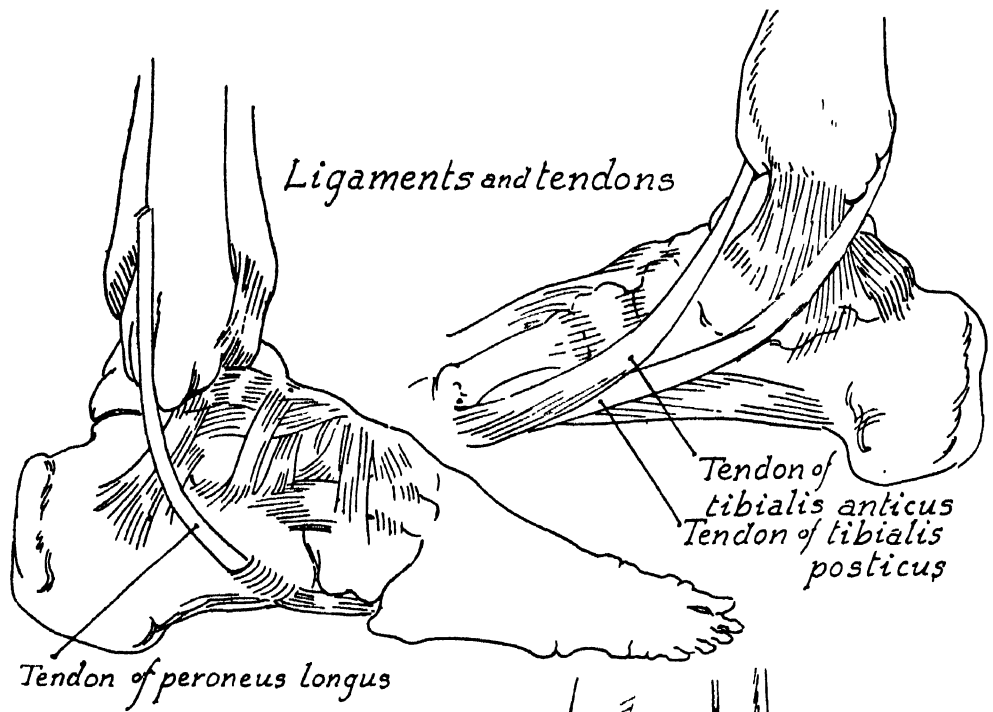


Diagram of the arch of the foot

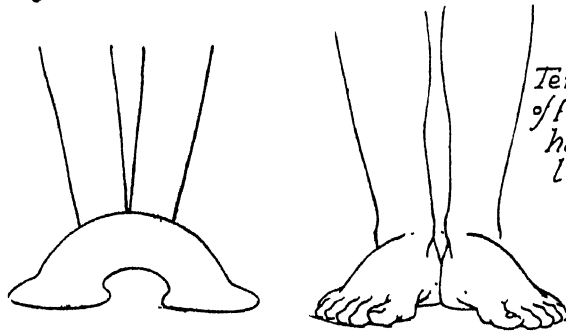
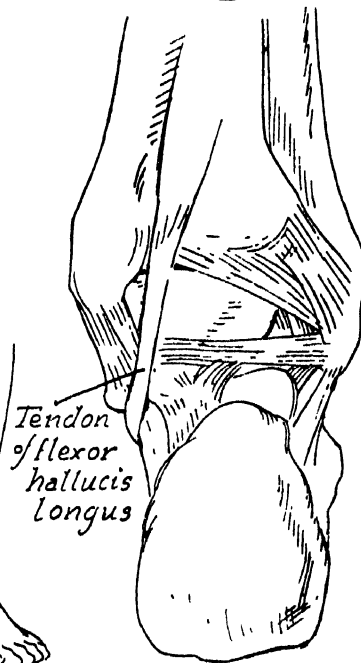
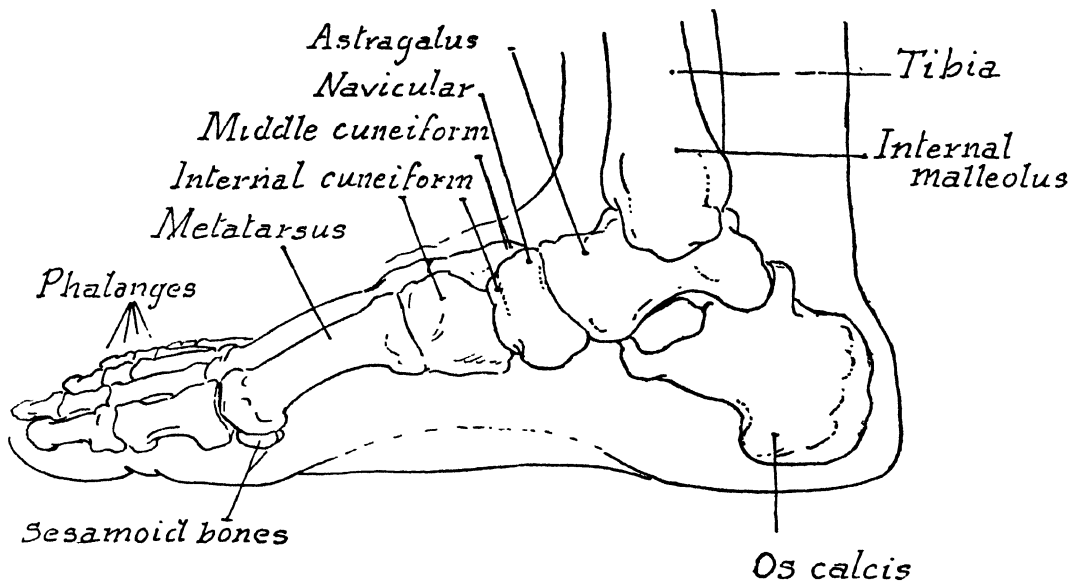
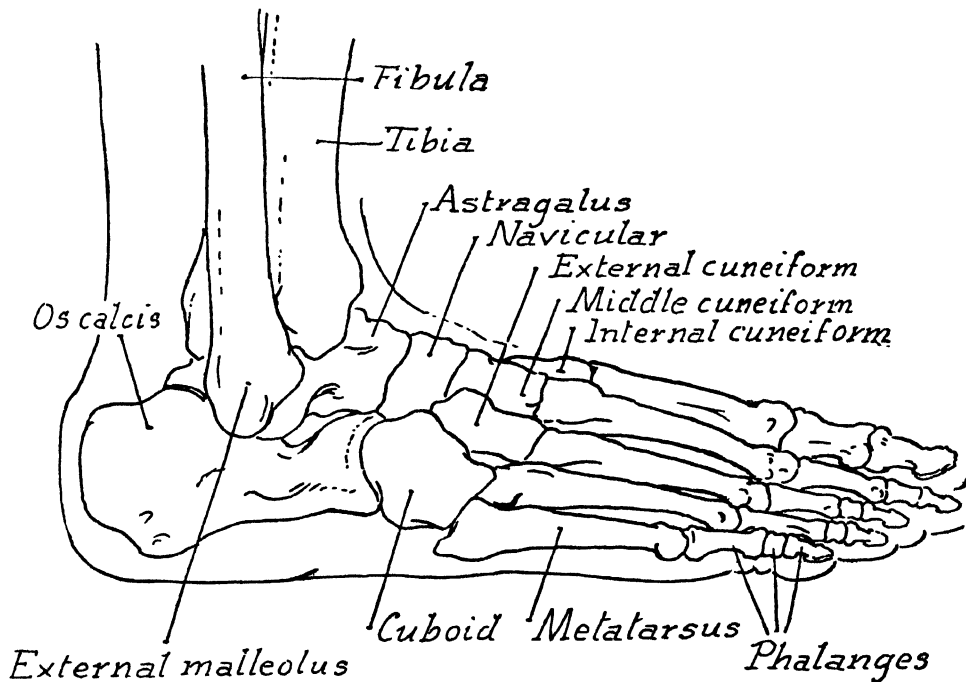


Diagram of the arches of the feet
(The arches of feet act as springs)

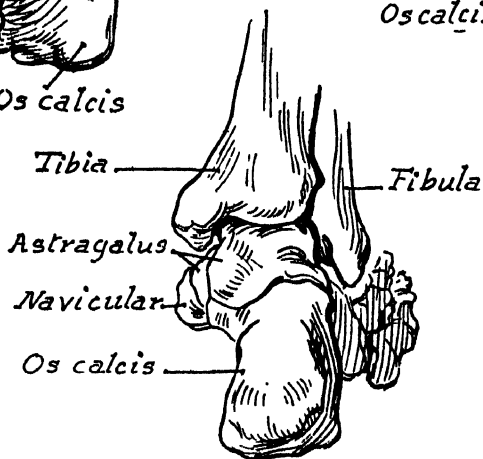
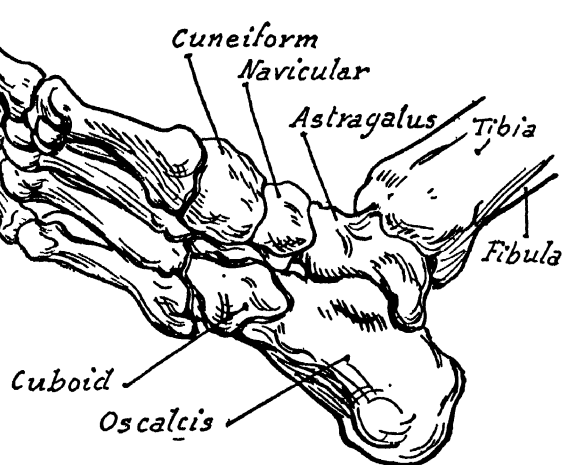
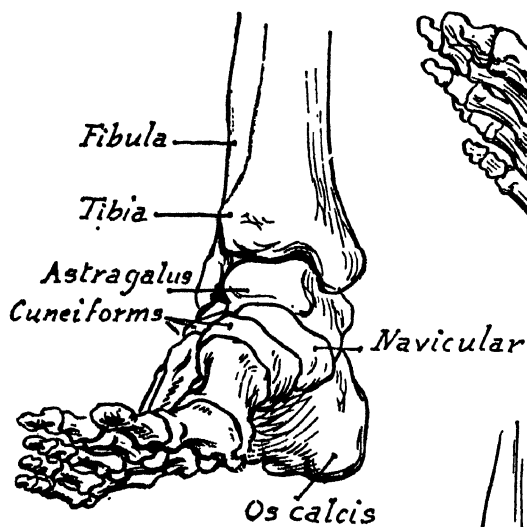
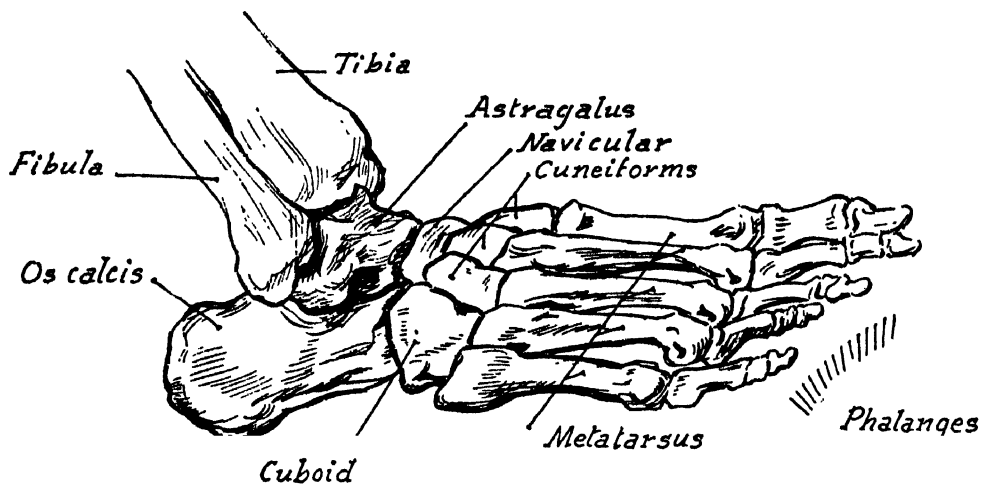


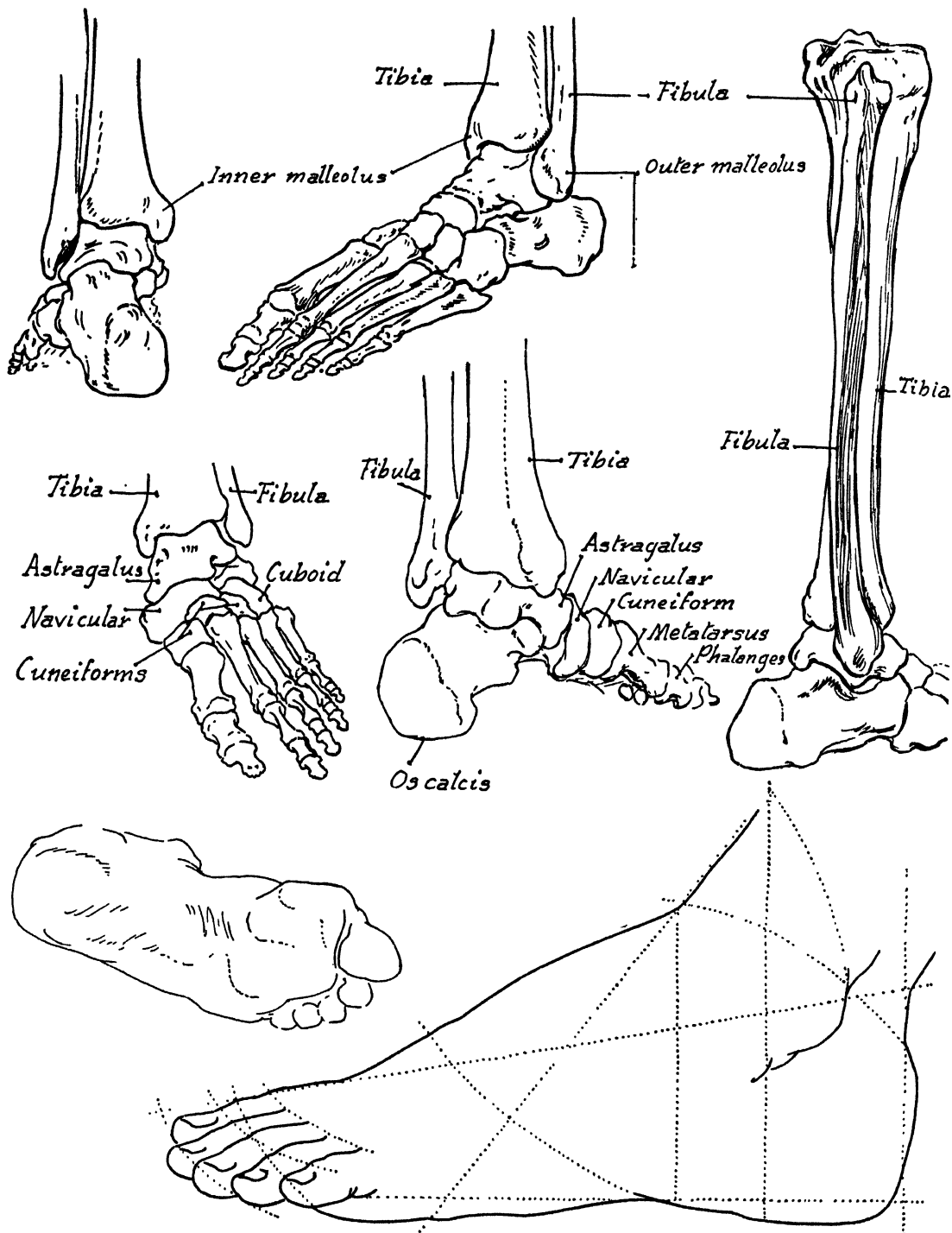


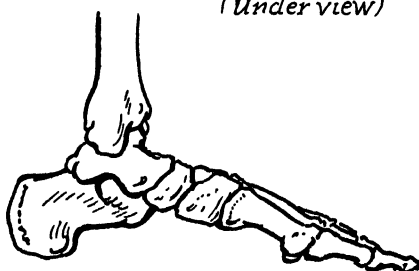
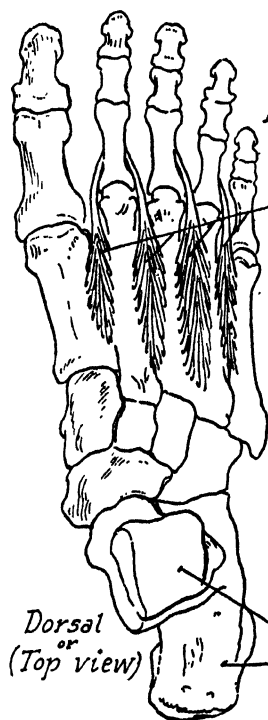
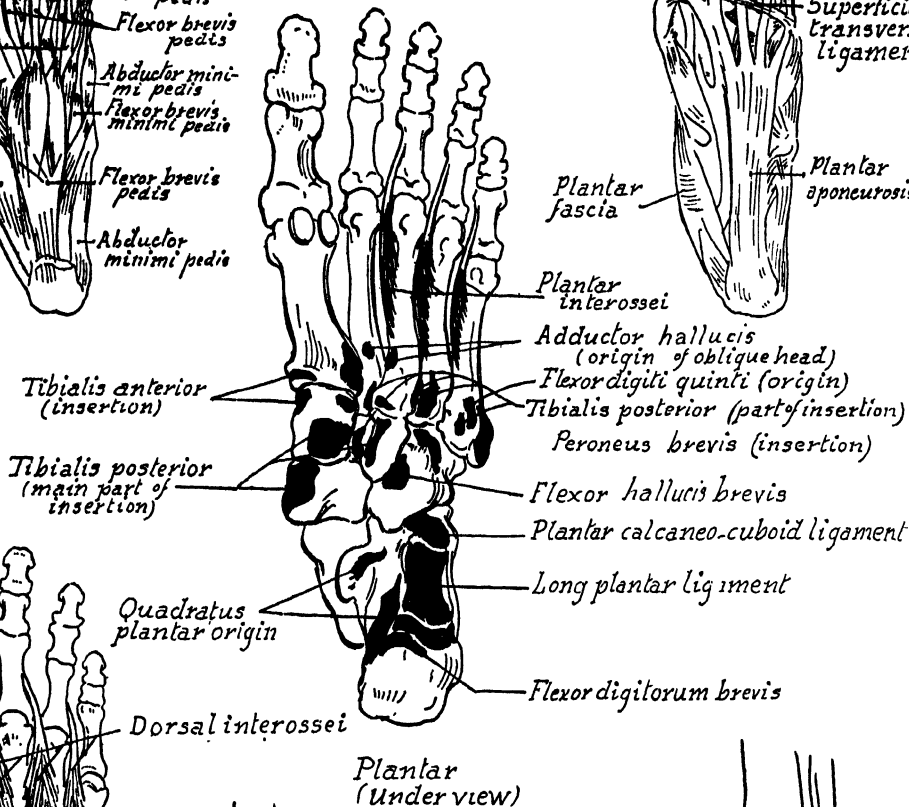
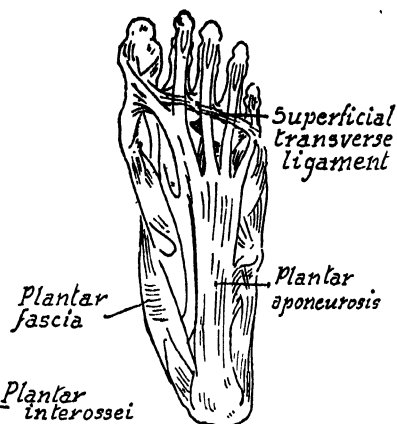
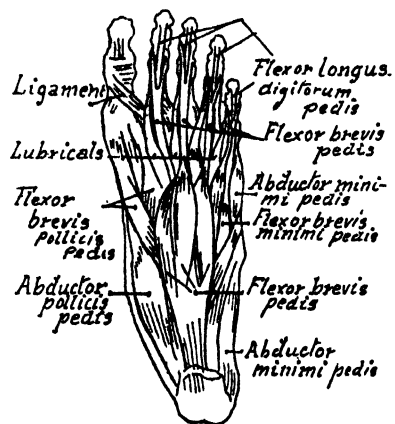
Inner view

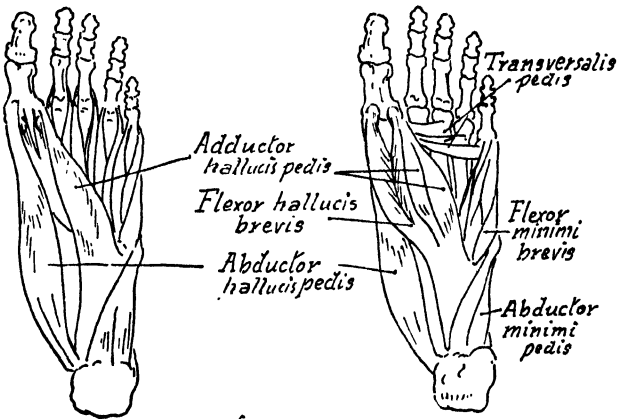
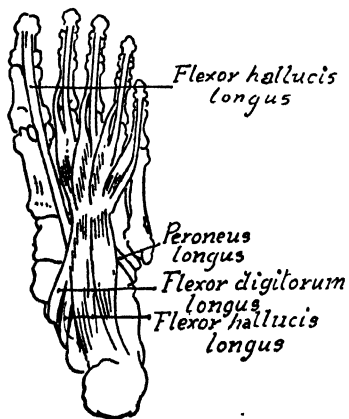
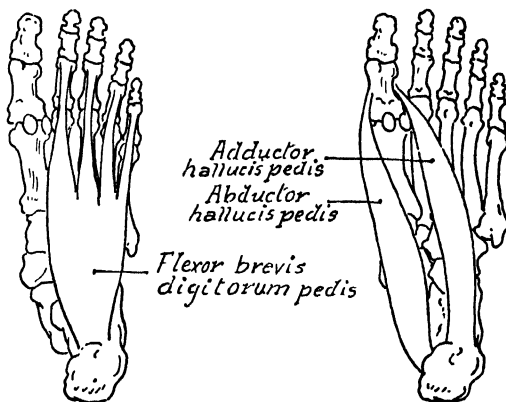
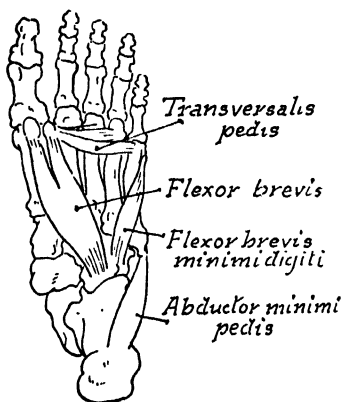
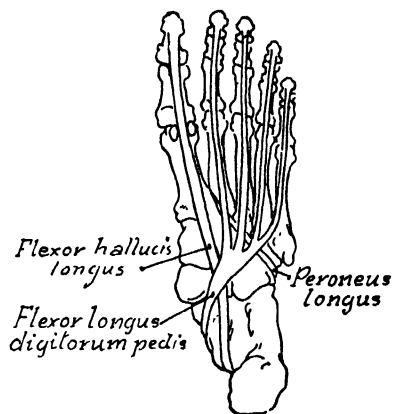
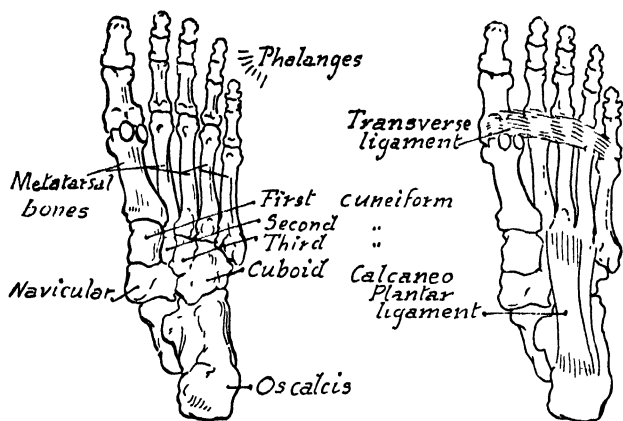


Outer view



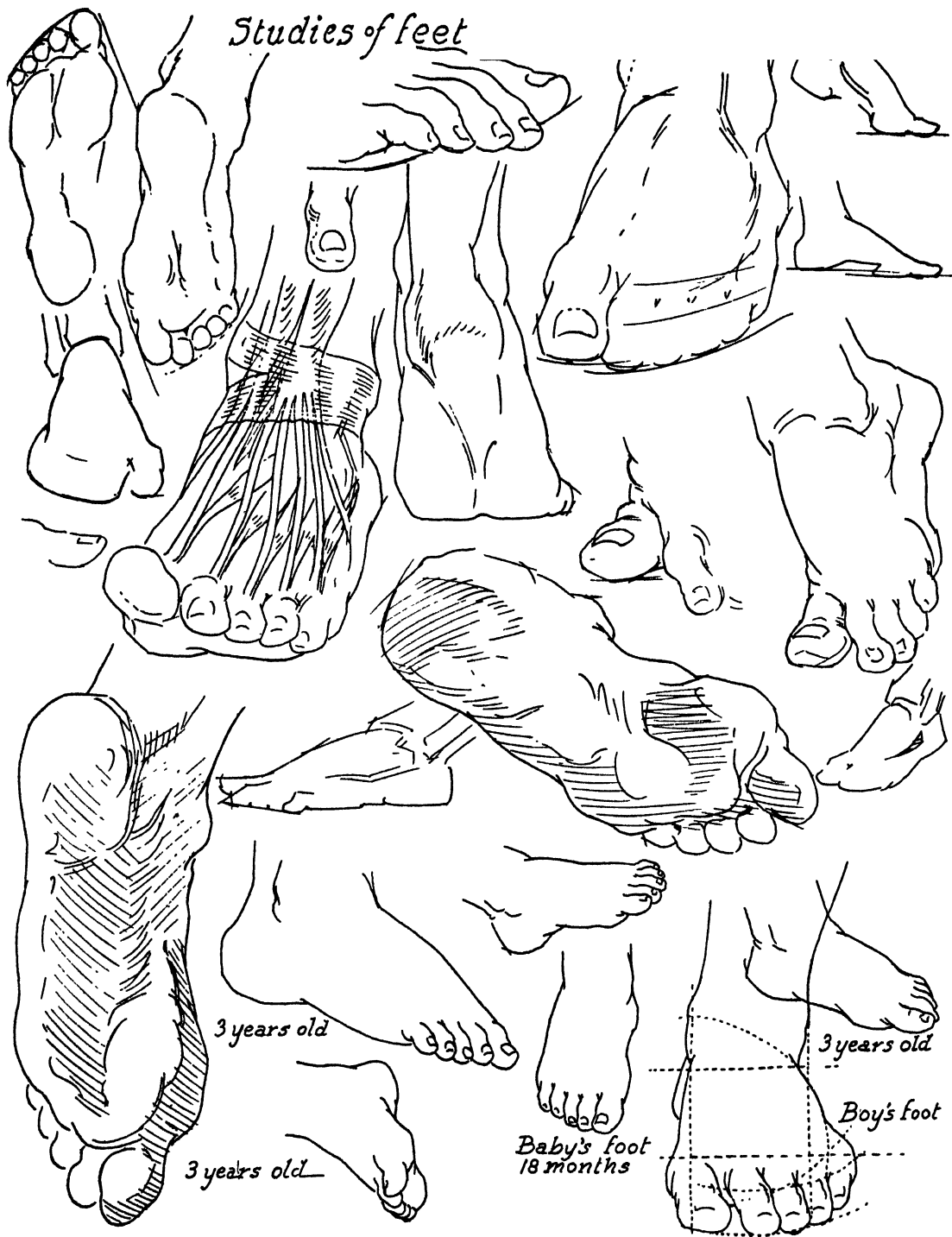


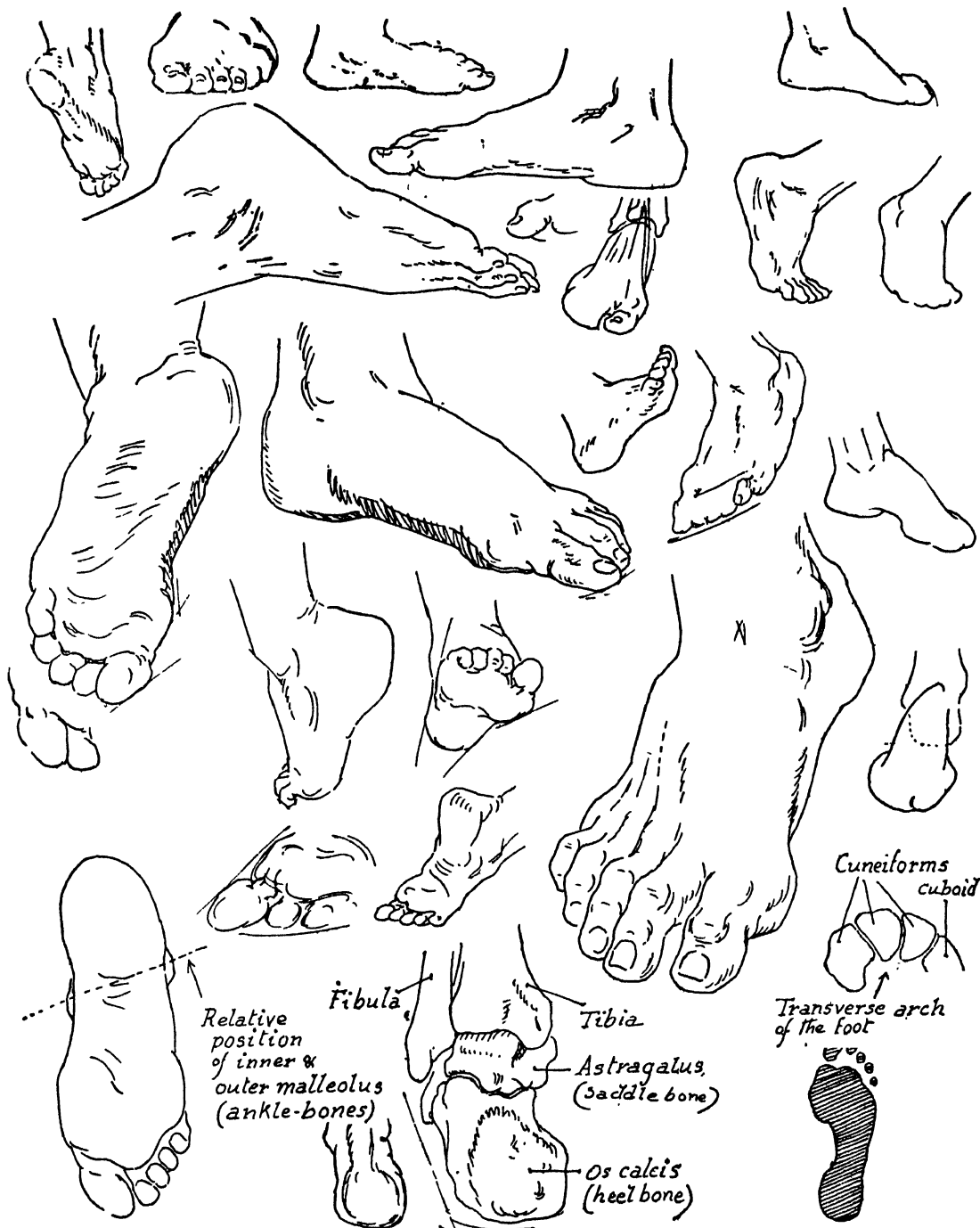




Plantar View of Foot

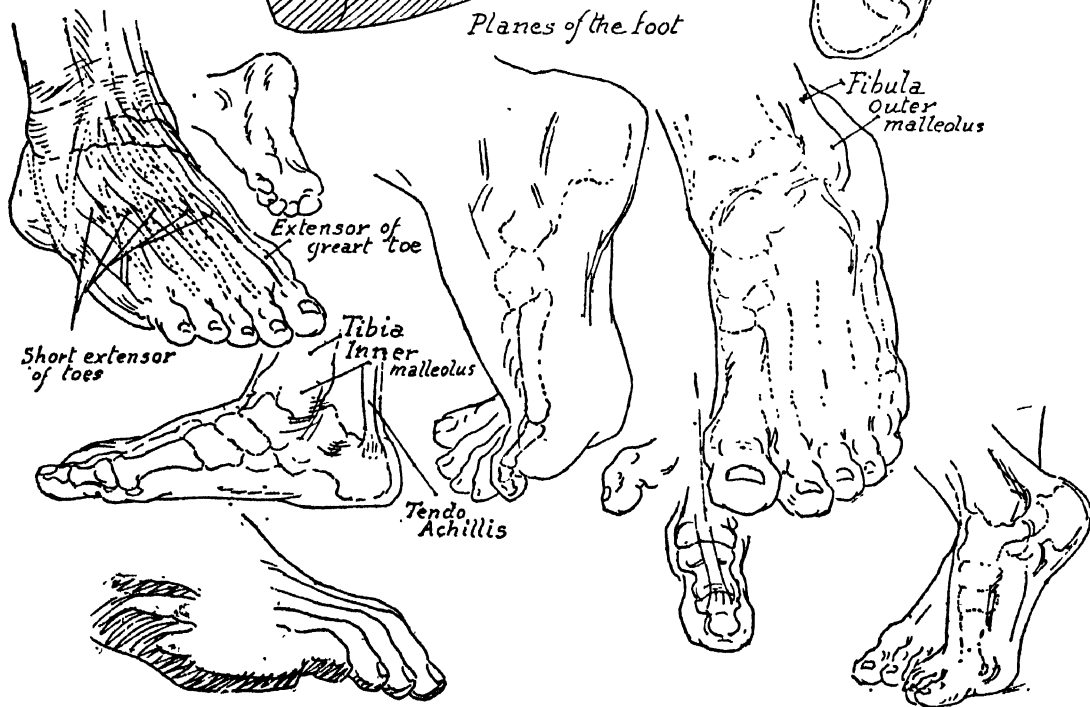
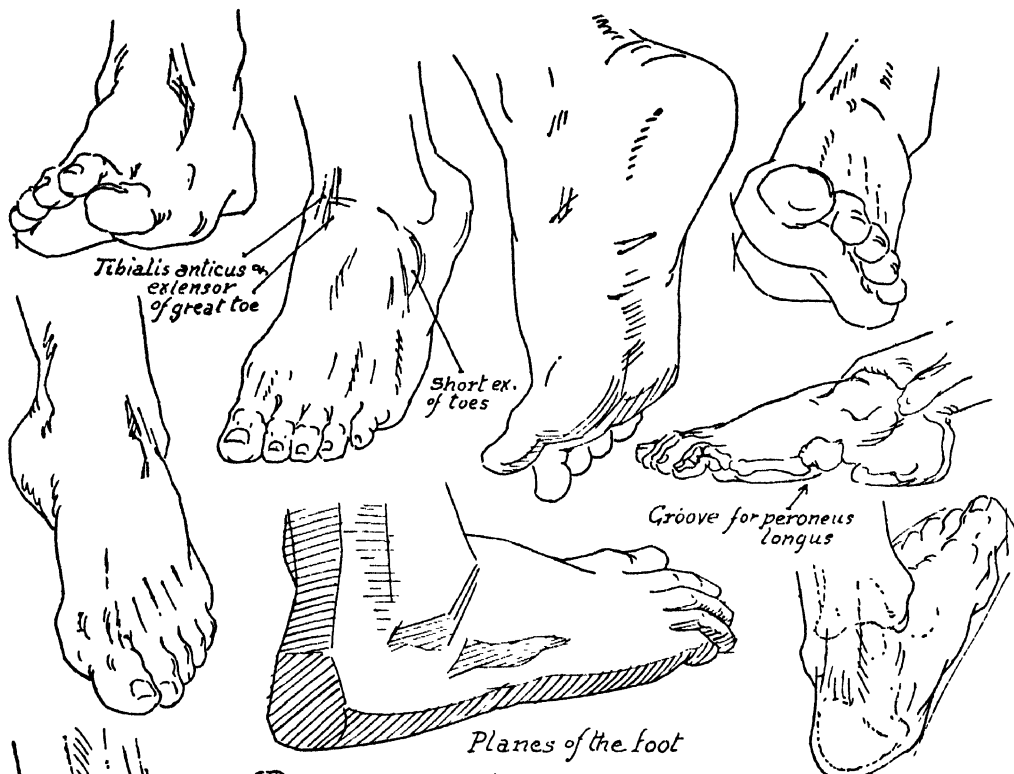
Studies of feet

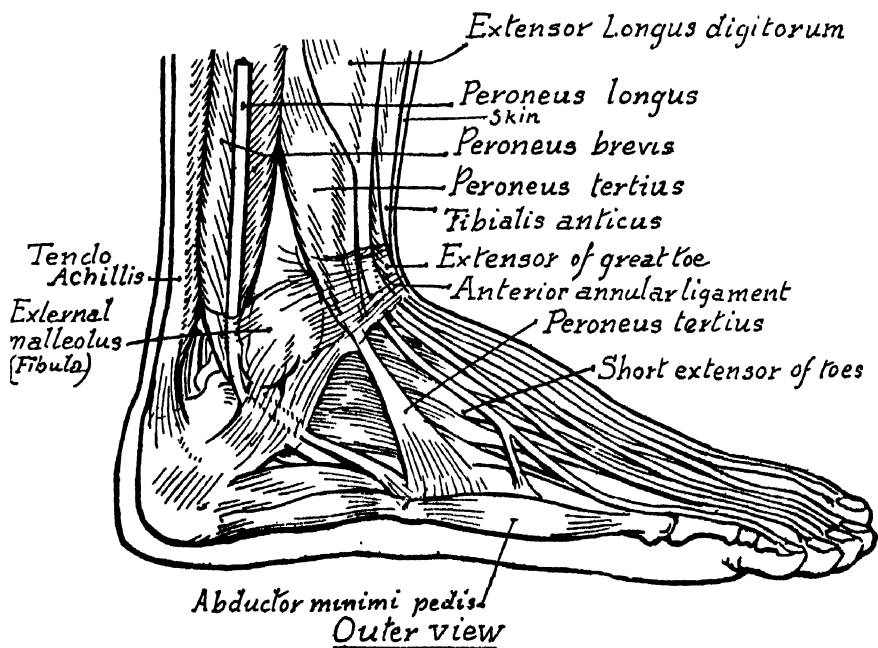
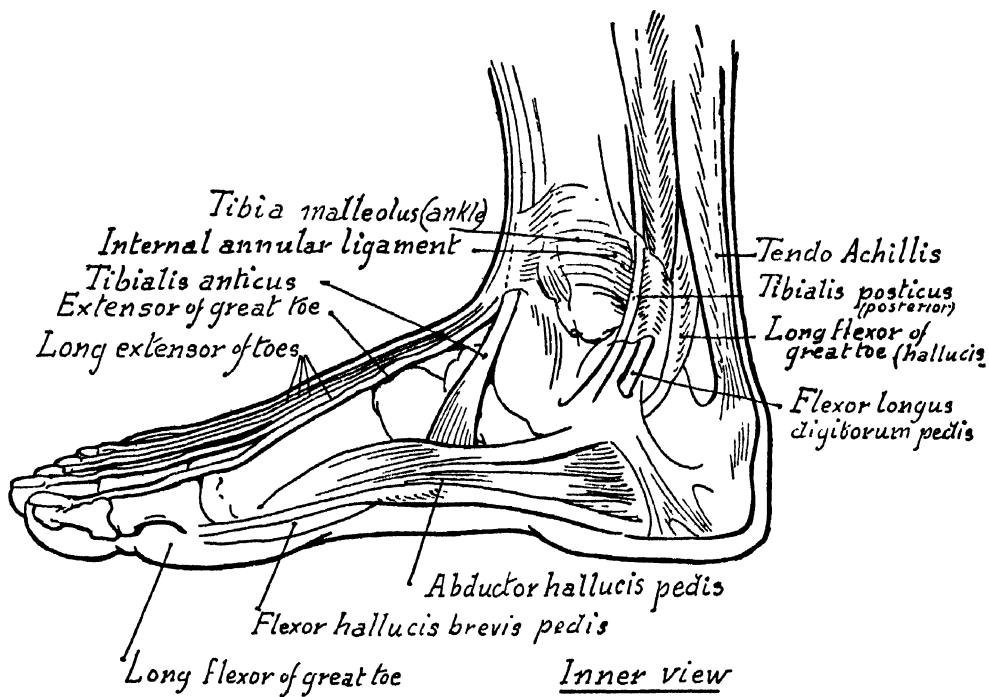


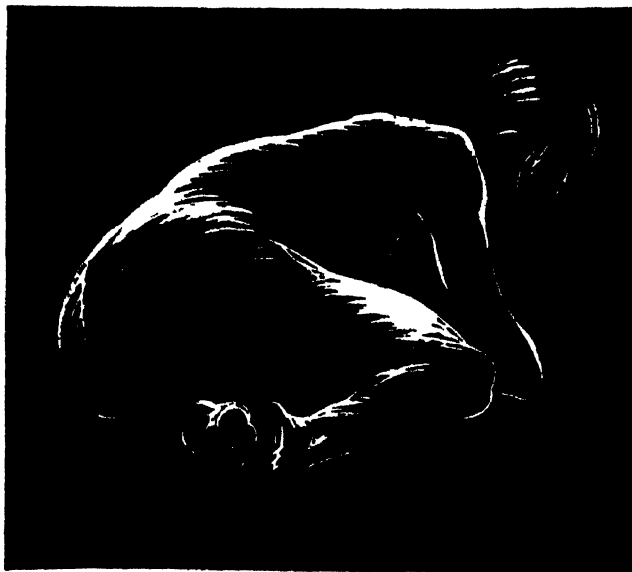


Bones of back of left foot

Imprint of the sole of the foot

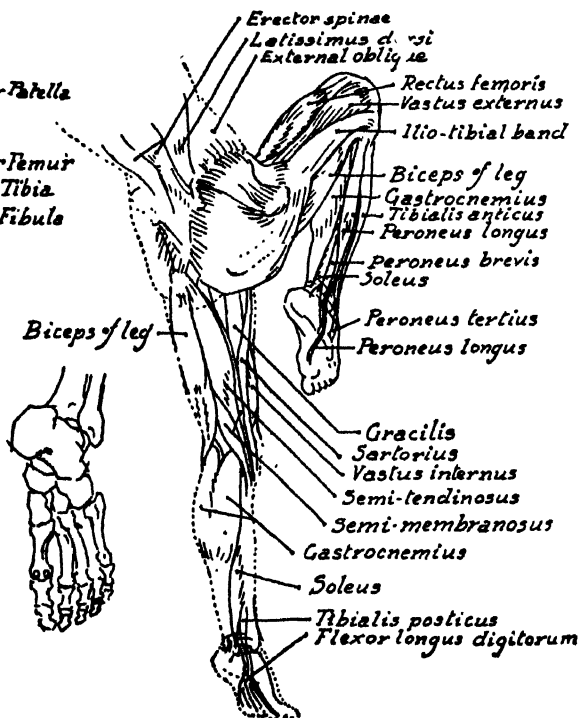
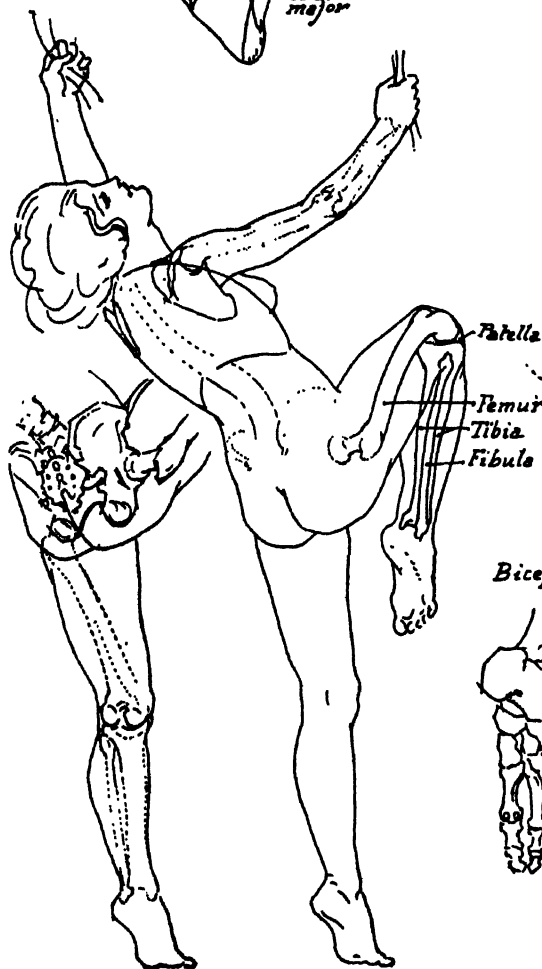
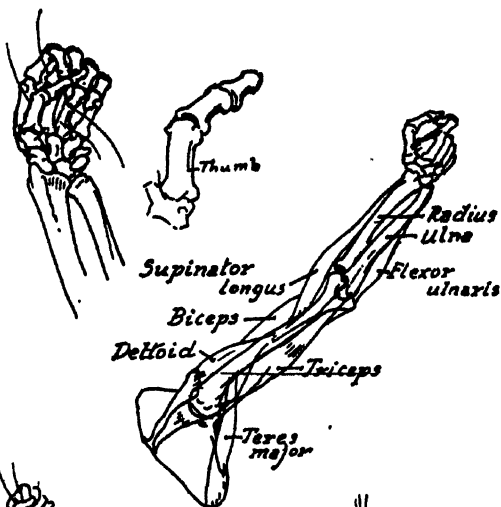


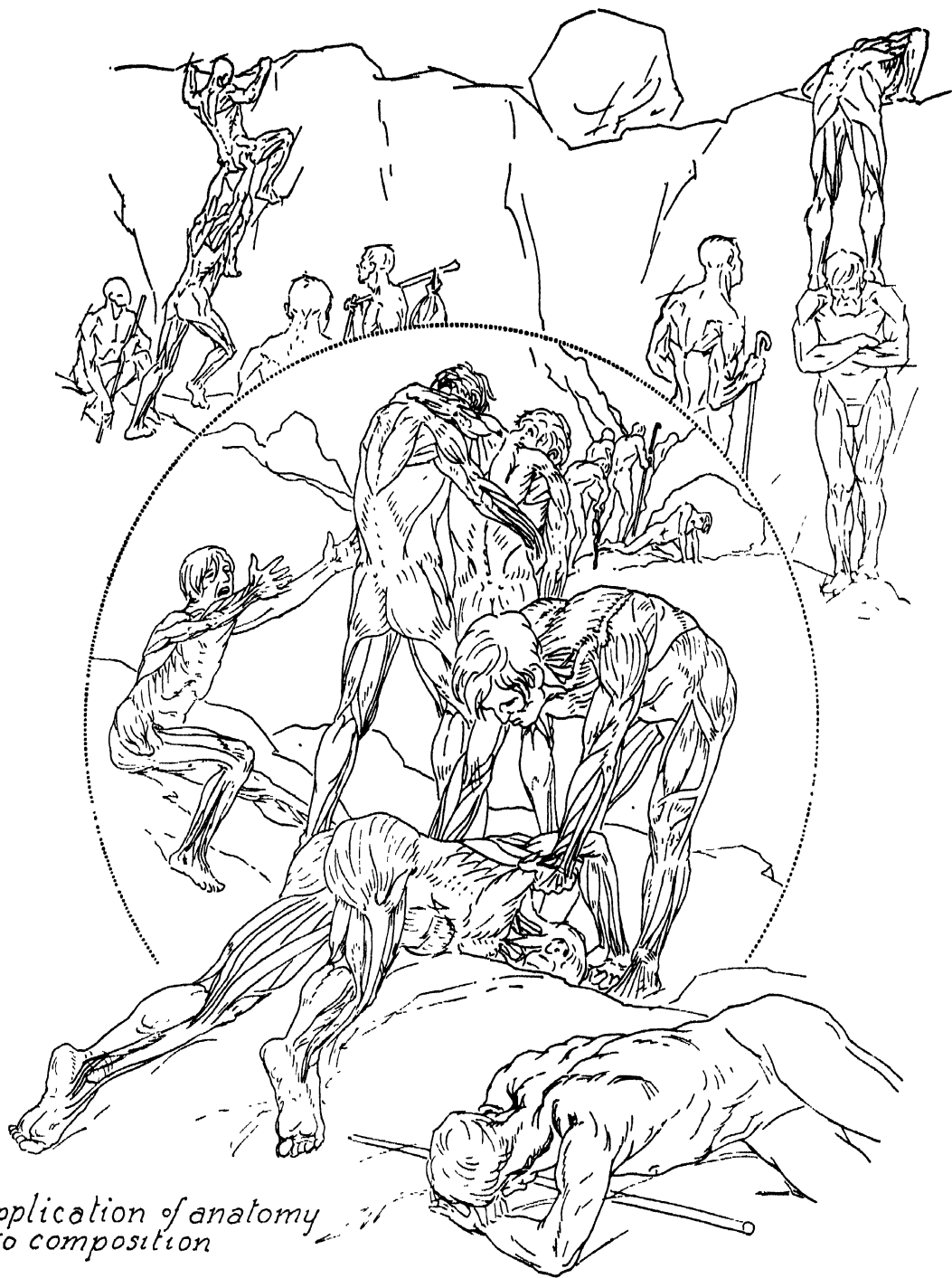




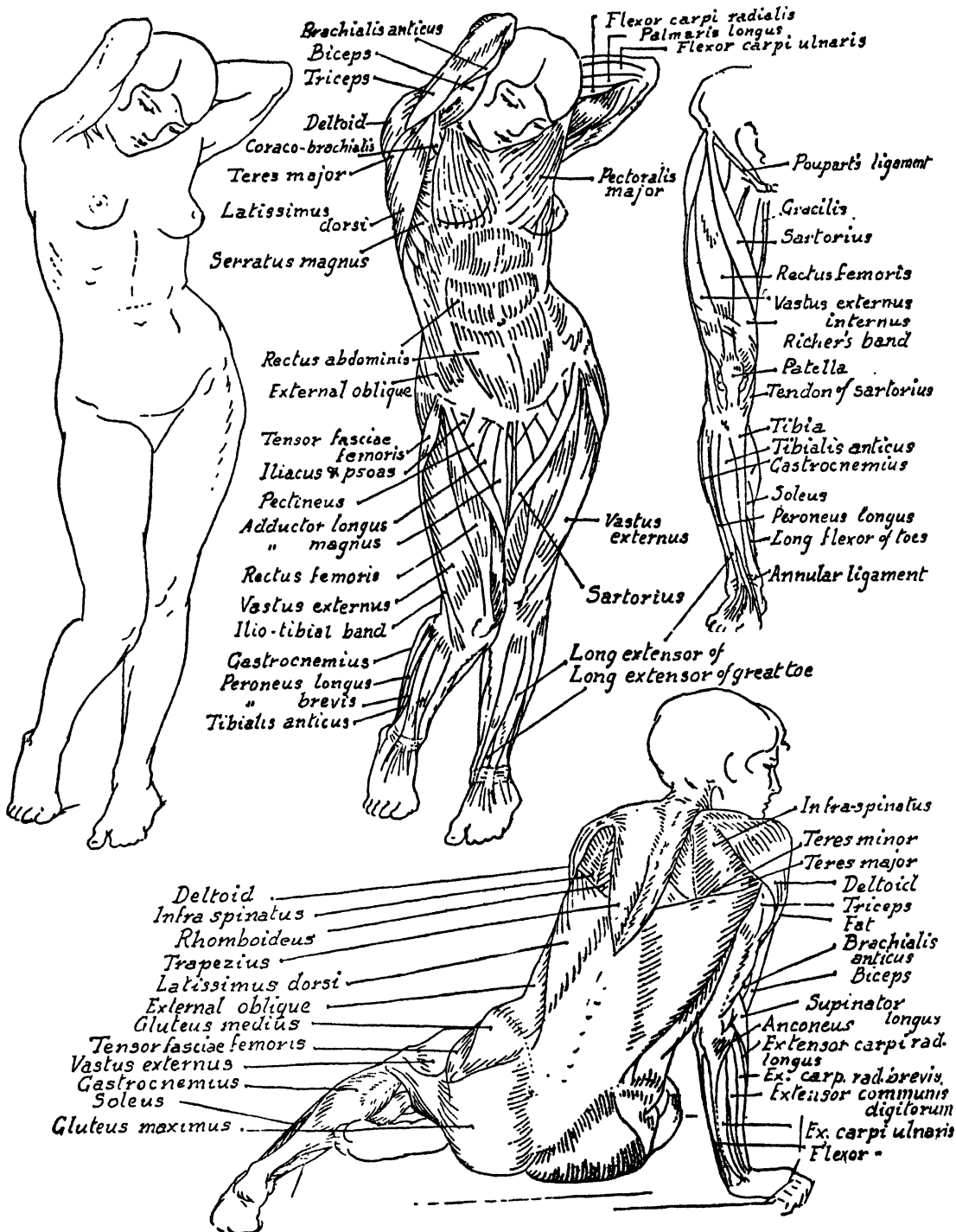
PART IX
THE ECORCHÉ

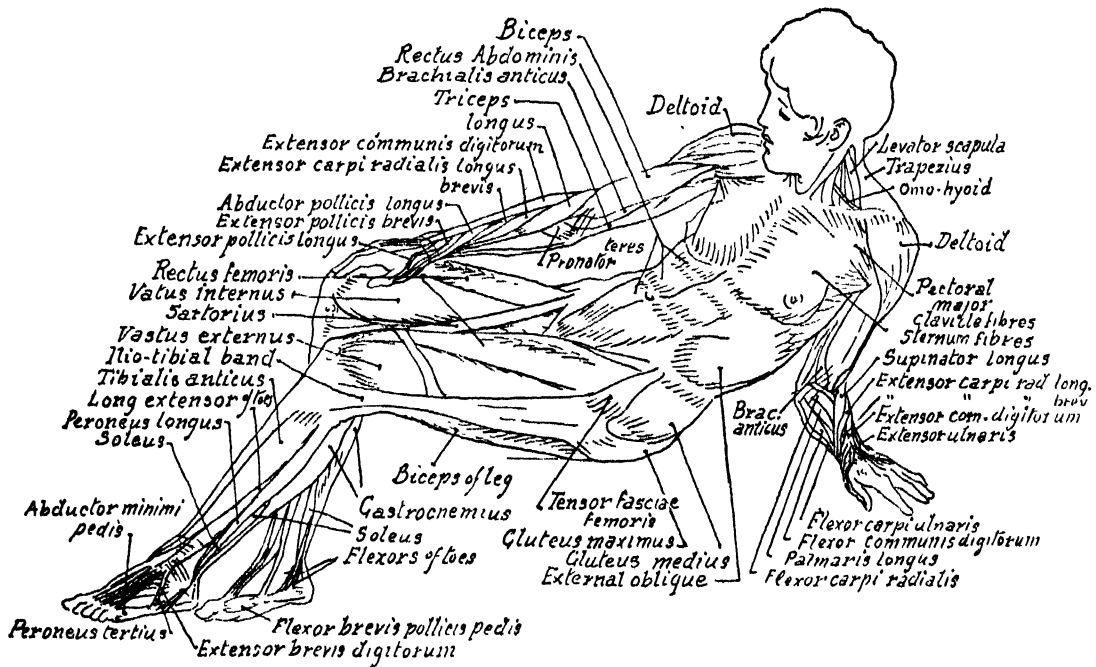
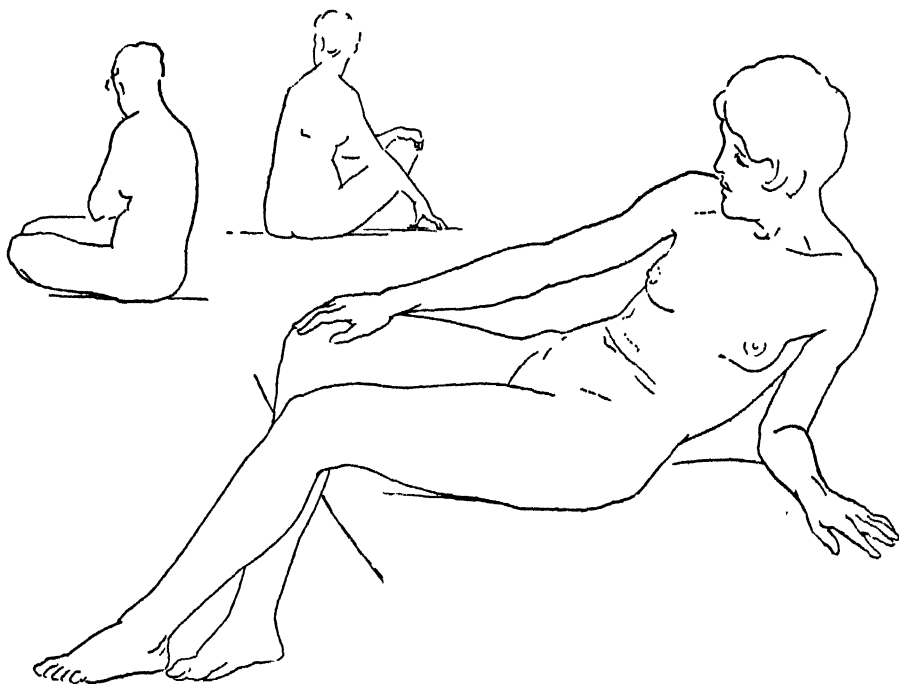


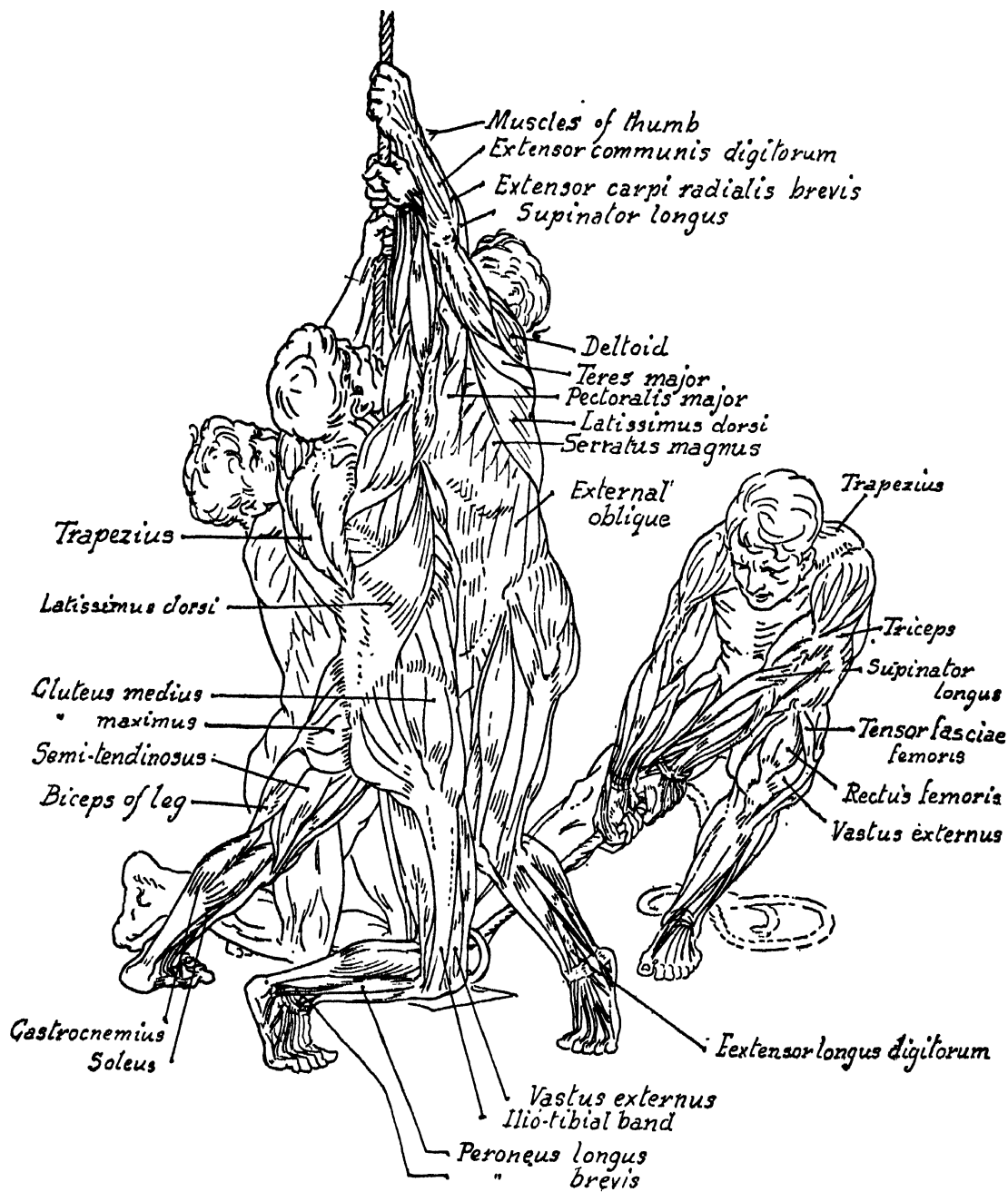


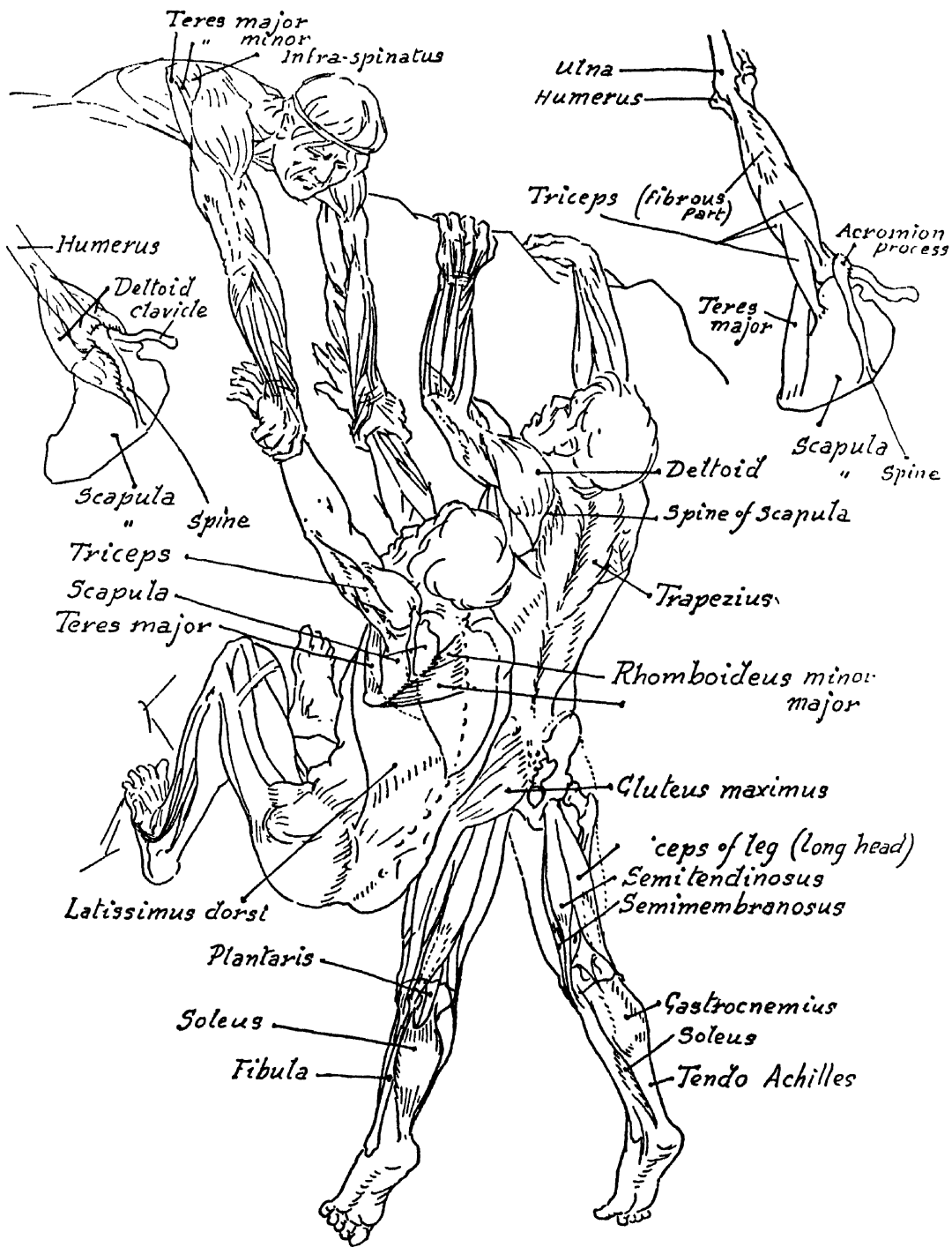


*Application of anatomy
to composition*

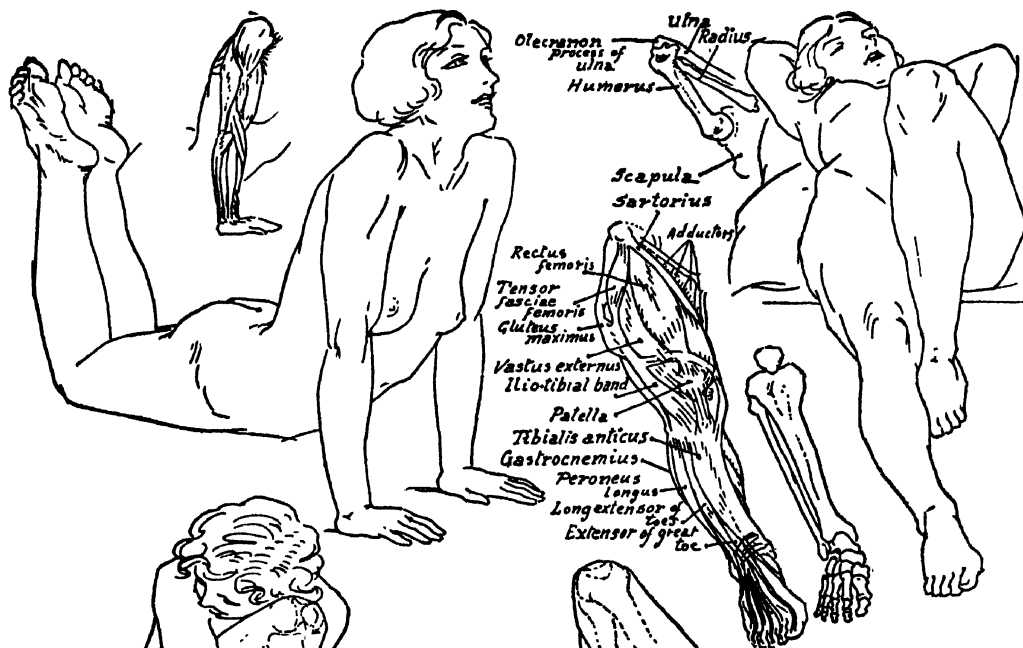




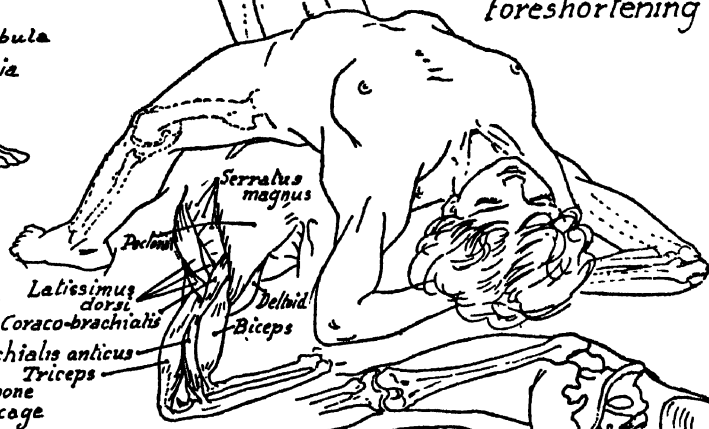
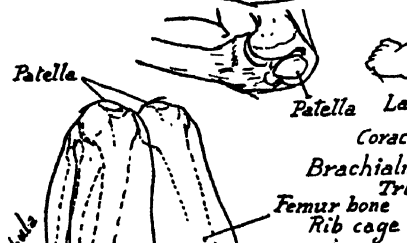
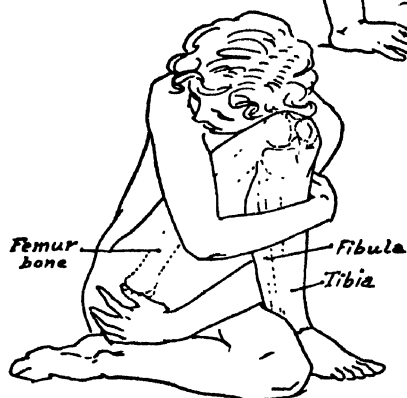


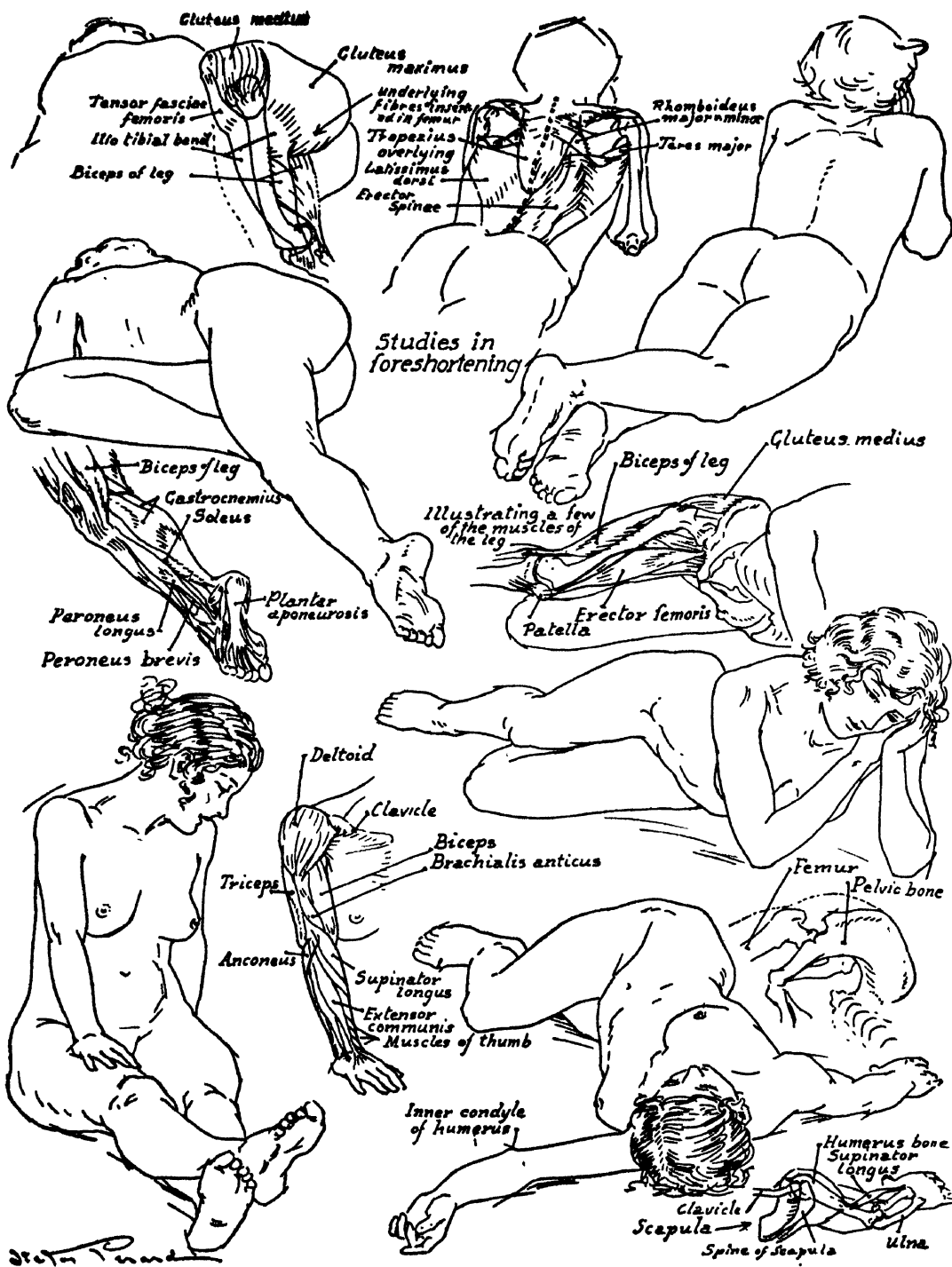


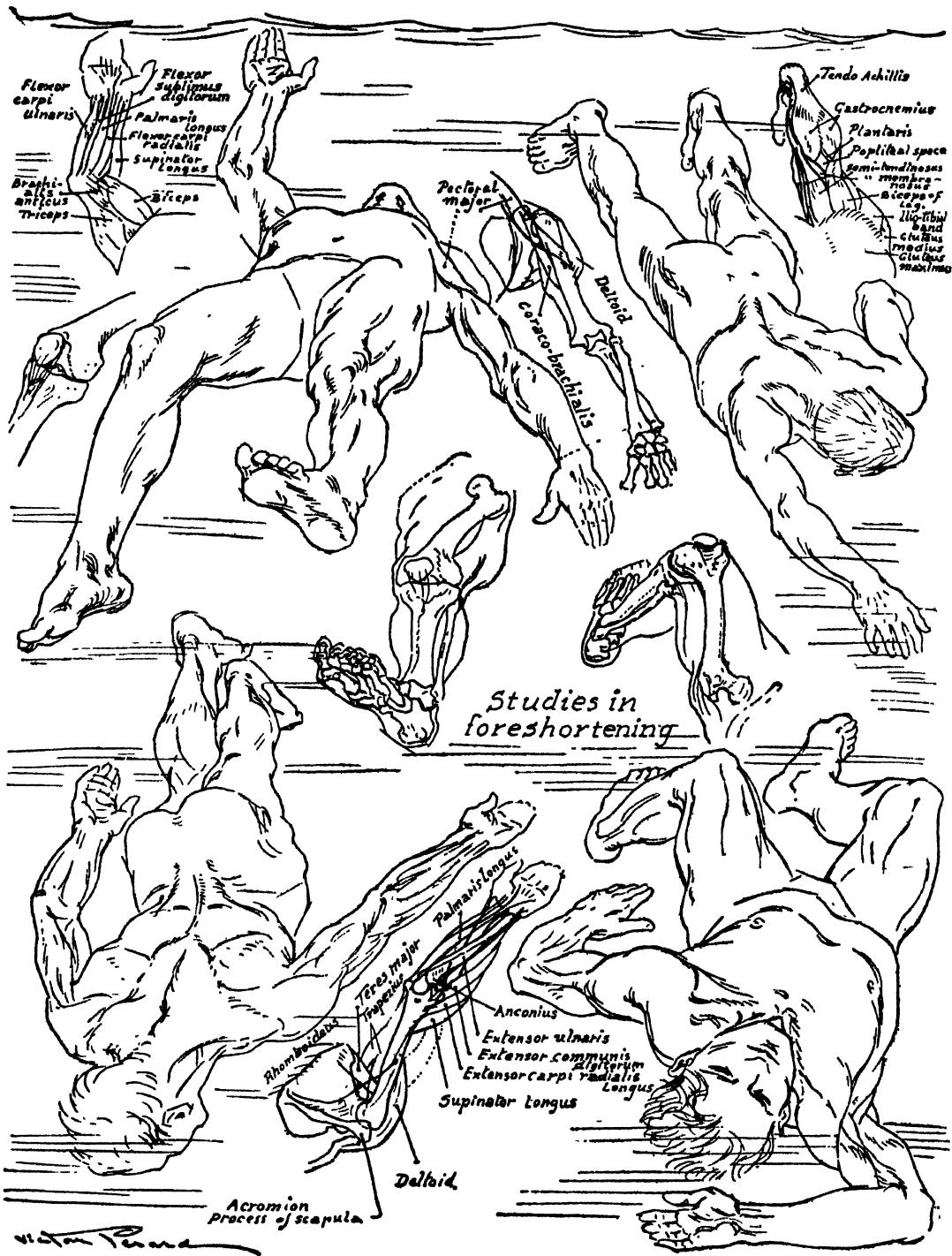


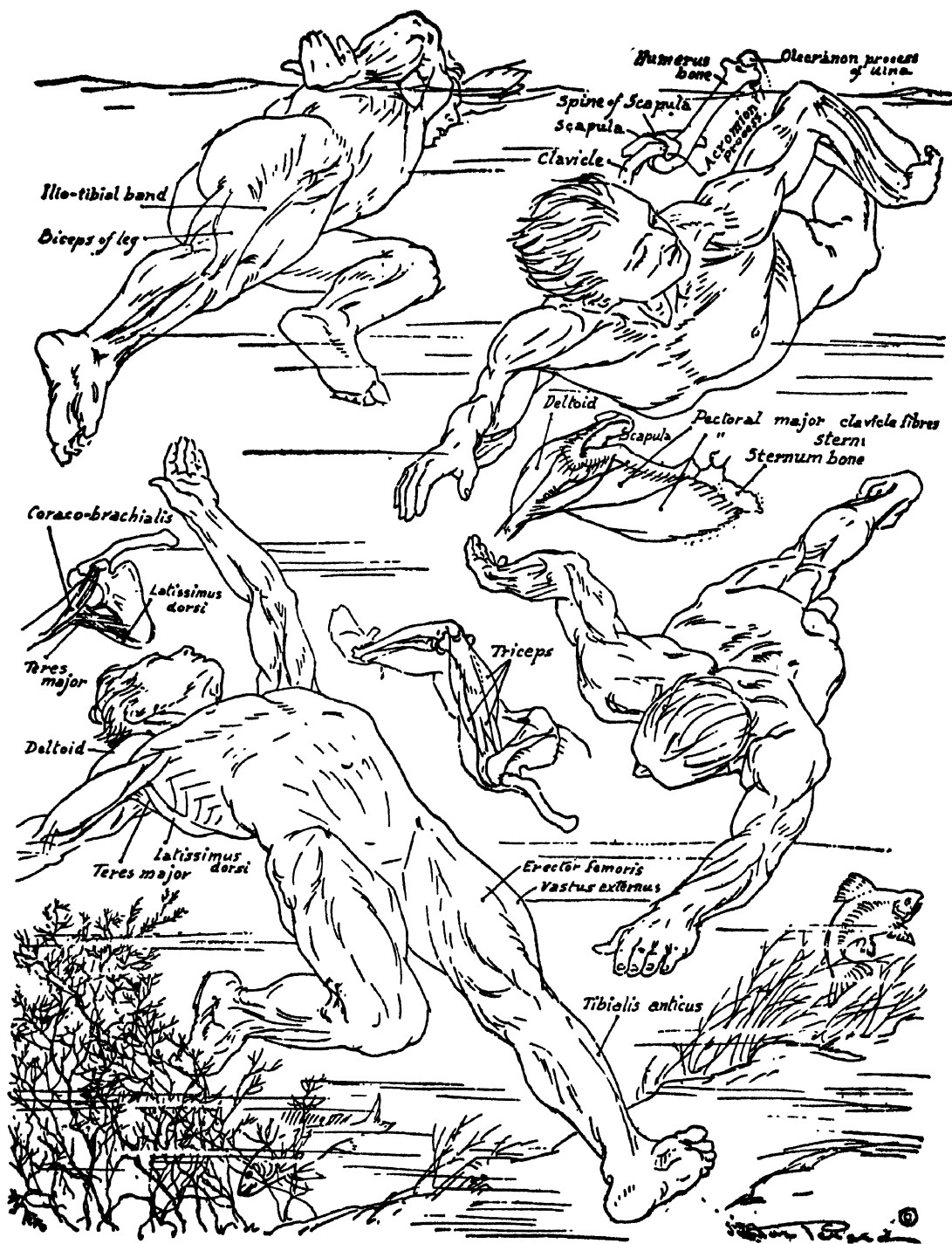


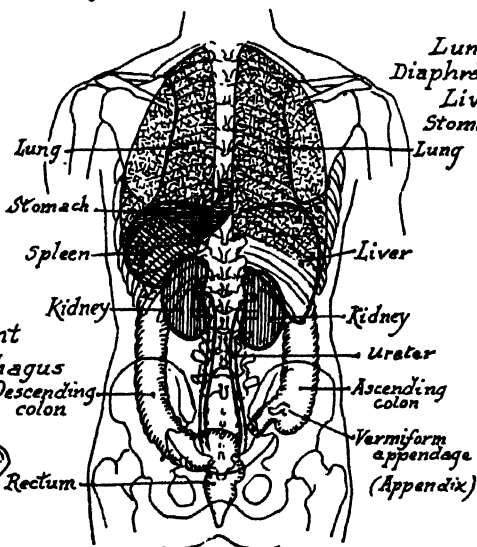
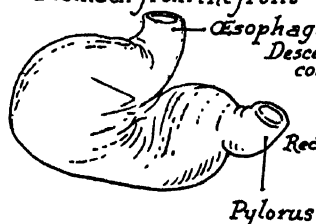
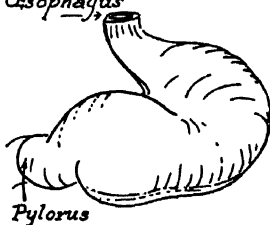
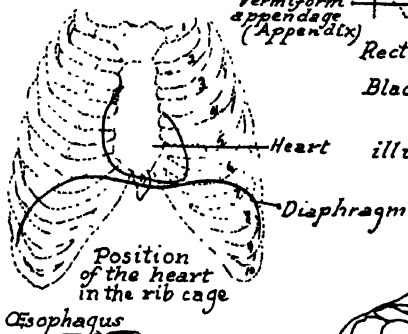
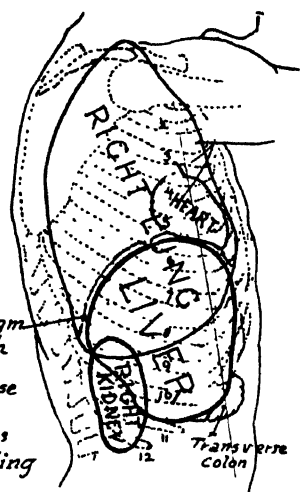
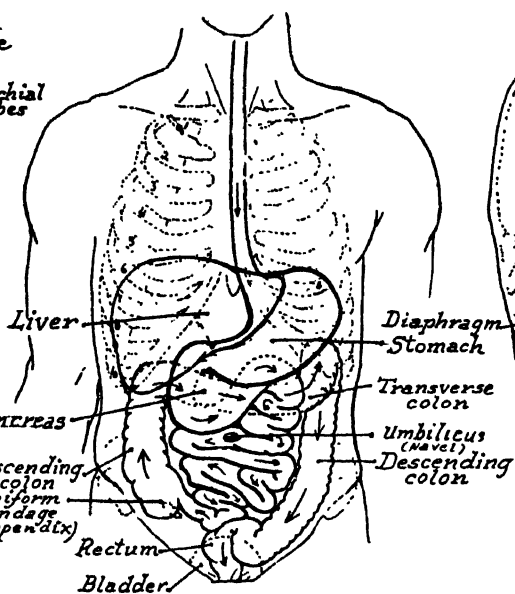
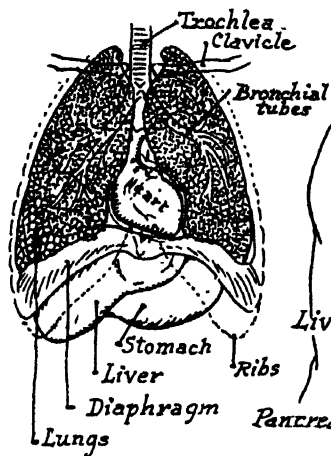
Studies in foreshortening











Back view
Illustrating relative positions
of internal organs

