

9.8 MAJOR SKELETAL MUSCLES

NAMING OF SKELETAL MUSCLES

CHARACTERISTIC	EXAMPLES	EXAMPLES IN HUMANS
Direction of fascicles relative to midline	rectus = parallel transverse = perpendicular oblique = at 45° angle	Rectus abdominis Transversus abdominis External Oblique
Location (i.e. the bone or body part that a muscle covers)	frontal bone tibia	Frontalis Tibialis Anterior
Relative Size	maximus = largest longus = longest brevis = shortest	Gluteus maximus Palmaris longus Peroneus longus
Number of Origins (Heads)	biceps = 2 origins triceps = 3 origins	Biceps brachii Triceps brachii
Shape	deltoid = triangle trapezius = trapezoid serratus = saw-toothed orbicularis = circular	Deltoid Trapezius Serratus anterior Orbicularis oris
Location of Origin and/or Insertion	origin = sternum insertion = mastoid process	Sternocleidomastoid
Action of Muscle	flexion extension adduction	Flexor carpi radialis Extensor digitorum Adductor longus

UNIT 2 - CHAPTER 9: MUSCULAR SYSTEM

SKELETAL MUSCLE SUMMARY TABLES

A. Muscles of Facial Expression

NAME OF MUSCLE	LOCATION/ DESCRIPTION	ACTION
Epicranius Frontalis Occipitalis	Covers cranium over forehead over occipital	elevates eyebrow
Orbicularis oris	circular muscle around the mouth	closes lips ("kissing muscle")
Zygomaticus Major and Minor (*) Origin: zygomatic bone Insertion: corners of orbicularis oris	muscle that connects zygomatic arch to corner of mouth	elevates corners of mouth ("smiling muscle")
Buccinator	hollow of cheek	compresses cheeks "trumpeter's muscle"
Platysma	lower border of mandible	"pouting muscle"
Orbicularis oculi	circular muscle around eye	closes eye

B. Muscles of Mastication

NAME OF MUSCLE	LOCATION/ DESCRIPTION	ACTION
Masseter(*) Origin: Zygomatic Arch Insertion: Lateral Mandible	over lateral mandible	elevates mandible
Temporalis	convergent muscle over temporal bone	elevates mandible

UNIT 2 - CHAPTER 9: MUSCULAR SYSTEM

SKELETAL MUSCLE SUMMARY TABLES

C. Muscles that Move the Head and Vertebral Column:

NAME OF MUSCLE	LOCATION/ DESCRIPTION	ACTION
Sternocleidomastoid(*) Origin: sternoclavicular region Insertion: mastoid process of temporal	Major neck muscle	flexion of head toward chest (as synergists) rotation/abduction of head (as antagonists)
Erector Spinae	Group of midline dorsum muscles	Maintain posture

D. Muscles that Move the Pectoral Girdle

NAME OF MUSCLE	LOCATION/ DESCRIPTION	ACTION
Trapezius (*) Origin: occipital bone & spines of C7-T12 Insertion: clavicle, spine and acromion process of scapulae	Trapezoid shaped muscle in posterior neck and upper back	elevates pectoral girdle ("shoulder shrug")
Pectoralis minor	Muscle deep to Pectoralis major	scapula fixator
Serratus anterior	Saw-toothed lateral thoracic muscle	scapula fixator

E. Muscles that Move the Arm (Humerus)

NAME OF MUSCLE	LOCATION/ DESCRIPTION	ACTION
Pectoralis major (*) Origin: clavicle, sternum, & costal cartilages of ribs 1-6 Insertion: between tubercles of humerus	Large, convergent chest muscle	flexes arm medially (pull arms forward and together)
Latissimus dorsi	Large, back muscle	adduction of humerus
Deltoid	Triangular shaped shoulder muscle	abduction of humerus

UNIT 2 - CHAPTER 9: MUSCULAR SYSTEM

SKELETAL MUSCLE SUMMARY TABLES

F. Muscles that Move the Forearm (radius & ulna)

NAME OF MUSCLE	LOCATION/ DESCRIPTION	ACTION
Biceps Brachii (*) Origin: Coracoid process Insertion: Radial tuberosity	fusiform, parallel, anterior upper arm muscle (two origins)	flexion of arm at elbow (prime mover)
Brachialis	muscle beneath biceps brachii	flexion of arm at elbow (synergist)
Brachioradialis	lateral muscle between upper and forearm	flexion of arm at elbow (synergist)
Triceps brachii	posterior upper arm muscle (three heads)	extension of arm at elbow

G. Muscles that Move the Hand

NAME OF MUSCLE	LOCATION/ DESCRIPTION	ACTION
Flexor carpi Radialis	anterior, lateral forearm muscle	flexion of wrist
Flexor carpi Ulnaris	anterior, medial forearm muscle	flexion of wrist
Palmaris longus	anterior forearm muscle located between two above	flexion of wrist
Extensor digitorum	posterior forearm muscle	extension of wrist/fingers

UNIT 2 - CHAPTER 9: MUSCULAR SYSTEM

SKELETAL MUSCLE SUMMARY TABLES

H. Muscles of the Abdominal Wall

NAME OF MUSCLE	LOCATION/ DESCRIPTION	ACTION
Rectus abdominis (*) Origin: pubic crest & symphysis Insertion: xiphoid process & costal cartilages of 5-7 th ribs	strap like muscle from costal cartilages to ilium	tenses abdominal wall
External Oblique	superficial/lateral oblique abdominal muscle	tenses abdominal wall
Internal Oblique	deep oblique abdominal muscle	tenses abdominal wall
Transversus abdominis	deep abdominal muscle that runs perpendicular to rectus abdominis	tenses abdominal wall

I. Muscles of the Pelvic Outlet

NAME OF MUSCLE	LOCATION/ DESCRIPTION	ACTION
Levator ani	Thin sheet surrounding anus, urethra and vagina	Supports viscera and aids sphincters
Coccygeus	Fan shaped, posterior to levator ani	Same as above
Superficial transversus perineae	Band of muscle anterior to levator ani	Supports viscera
Bulbospongiosus	Surrounds base of penis or vagina	Male – assists ejaculation Female – constricts vaginal orifice
Ischiocavernosus	Band of muscle lateral to bulbospongiosus	Same as above
Sphincter urethrae	Surround urethra	Opens and closes urethral orifice

UNIT 2 - CHAPTER 9: MUSCULAR SYSTEM

SKELETAL MUSCLE SUMMARY TABLES

J. Muscles that Move the Thigh (Femur)

NAME OF MUSCLE	LOCATION/ DESCRIPTION	ACTION
Gluteus Maximus (*) Origin: dorsal ilium, sacrum, coccyx Insertion: posterior femur	buttocks, largest muscle in body	extension of hip at thigh (as in walking or climbing stairs)
Gluteus Medius	lateral hip muscle	abduction of femur
Adductor Longus	medial thigh muscle	adduction of femur
Gracilis	medial thigh muscle	adduction of femur

K. Muscles that Move the Tibia & Fibula

NAME OF MUSCLE	LOCATION/ DESCRIPTION	ACTION
Rectus femoris	anterior thigh quadriceps	extension of leg at knee
Vastus lateralis	lateral anterior thigh quadriceps	extension of leg at knee
Vastus Medialis	medial anterior thigh quadriceps	extension of leg at knee
Vastus intermedius	deep anterior thigh quadriceps	extension of leg at knee
Sartorius (*) Origin: iliac spine Insertion: medial tibia	parallel strap-like muscle that crosses thigh	flexion of knee forward
Biceps femoris	posterior thigh hamstring	flexion of leg at knee
Semitendinosus	posterior thigh hamstring	flexion of leg at knee
Semimembranosus	posterior thigh hamstring	flexion of leg at knee

UNIT 2 - CHAPTER 9: MUSCULAR SYSTEM

SKELETAL MUSCLE SUMMARY TABLES

L. Muscles that Move the Foot

NAME OF MUSCLE	LOCATION/ DESCRIPTION	ACTION
Tibialis anterior	anterior to tibia	dorsiflexion
Peroneus longus	lateral to fibula	eversion
Gastrocnemius (*) Origin: condyles of femur Insertion: calcaneus	posterior lower leg (i.e. calf muscle) two origins	plantar flexion (prime mover)
Soleus	deep to gastrocnemius	plantar flexion (synergist)