

Questions / Review

Lab 7.0

Anatomy: Muscle Actions Worksheet / Problems

Work through the following worksheet without attempting to identify specific muscles but to get a feel for how muscles are organized. Later, after you are comfortable with the organization of the muscles and the identity of specific muscles, repeat this worksheet adding the names of specific muscles.

I. Muscle Movements

For each of the body parts listed below, name the joint which the muscle must cross to move that body part, the bone that is moved (muscle insertion) and the fixed bone (muscle origin).

Moving Body Part	Joint	Moving Bone (insertion)	Fixed Bone (origin)
Example: arm (brachium)	shoulder	humerus	scapula

forearm (antebrachium)

hand

fingers

thigh

leg

skull

II. Flexion vs. Extension

For each of the actions listed, give the insertion (moving bone), the origin (fixed bone) and the side of the joint on which the muscle must be located for a muscle capable of this action.

Action	Side of the Joint	Insertion	Origin
Example: flex hand (wrist)	anterior	carpals / metacarpals	radius / ulna

flex arm (brachium)

flex finger on hand

extend hand (wrist)

extend forearm
(antebrachium)

flex thigh

flex leg

extend thigh

planter flex foot

flex arm and forearm

flex thigh and extend leg

III. Abduction vs. Adduction

For each of the actions listed, give the origin and insertion of a muscle capable of performing this action.

Action	Insertion	Origin
Example: abduct hand	lateral carpals	lateral radius

abduct arm

adduct arm

adduct thigh

abduct thigh

IV. Rotation

For each of the listed actions, give the origin and insertion of a muscle capable of performing this action and the side of the joint on which the muscle must be located.

Action	Side of the Joint	Insertion	Origin
Example: medially rotate arm	anterior	lateral humerus	sternum

laterally rotate arm

medially rotate thigh

laterally rotate thigh

pronate hand

rotate vertebral column

V. Give the action(s) of muscles having the following origins and insertions.

Origin	Insertion	Action
Example: anterior sacrum	body of thoracic vertebrae	flexion of trunk / vertebral column

spinous processes
of cervical vertebrae

occipital bone

anterior humerus

radius

anterior radius

anterior metacarpals

posterior humerus

posterior metacarpals

anterior ilium

anterior femur

posterior ilium

posterior tibia

acromion process

lateral humerus

medial ulna

medial 5th metacarpal

pubis

medial femur

inferior rib

superior rib

Drawings / Notes