

Lab 7: Muscle Histology

- ▶ Terms in Fig. 14.1
- ▶ Terms in Fig. 14.2
- ▶ Terms in Fig. 14.3
- ▶ Terms in Fig. 14.4
- ▶ Terms in Fig. 14.5

Identify the following on prepared slides and models of skeletal muscle (if applicable):

- | | | |
|-------------|--------------|----------------|
| ▶ A band | ▶ perimysium | ▶ muscle fiber |
| ▶ I band | ▶ endomysium | ▶ nucleus |
| ▶ epimysium | ▶ fascicle | |

Identify the following on prepared slides of neuromuscular junctions (motor end plates):

- ▶ skeletal muscle fiber
- ▶ axon
- ▶ axon terminal
- ▶ synaptic vesicles

Lab 8: Gross Anatomy of the Muscular System

You are responsible for learning the following muscles and their major actions:

- | | | |
|-------------------------|----------------------------------|------------------------|
| ▶ frontalis | ▶ latissimus dorsi | ▶ iliopsoas |
| ▶ orbicularis oculi | ▶ trapezius | ▶ pectineus |
| ▶ zygomaticus | ▶ deltoid | |
| ▶ orbicularis oris | ▶ infraspinatus | ▶ gluteus medius |
| ▶ temporalis | ▶ supraspinatus | ▶ gluteus maximus |
| ▶ masseter | ▶ subscapularis | |
| | ▶ teres major | ▶ tensor fasciae latae |
| ▶ platysma | ▶ teres minor | ▶ adductor brevis |
| ▶ sternocleidomastoid | | ▶ adductor longus |
| ▶ occipitalis | ▶ triceps brachii | ▶ adductor magnus |
| ▶ trapezius | ▶ biceps brachii | ▶ gracilis |
| | ▶ brachialis | ▶ sartorius |
| ▶ pectoralis major | | |
| ▶ pectoralis minor | ▶ brachioradialis | ▶ biceps femoris |
| ▶ serratus anterior | ▶ pronator teres | ▶ semitendinosus |
| ▶ external intercostals | ▶ flexor carpi radialis | ▶ semimembranosus |
| ▶ internal intercostals | ▶ palmaris longus | |
| | ▶ flexor carpi ulnaris | ▶ rectus femoris |
| ▶ rectus abdominus | | ▶ vastus lateralis |
| ▶ external oblique | ▶ extensor carpi ulnaris | ▶ vastus medialis |
| ▶ internal oblique | ▶ extensor digitorum | |
| ▶ transverse abdominus | ▶ extensor carpi radialis longus | ▶ gastrocnemius |
| | ▶ extensor carpi radialis brevis | ▶ soleus |
| | | ▶ tibialis anterior |

Muscle identification will be tested on the appendage models and the older torso model. Head/neck muscles will be tested using figures from the Lab Manual.

Major actions of selected muscles will be tested via multiple choice. Use the tables in the Lab Manual and pick the most obvious action to learn.

Lab 9: PhysioEx Skeletal Muscle Simulation

Interpret myograms of muscle twitches, wave summation, unfused and fused tetani, and recruitment.

Lab 10: Histology of Nervous Tissue & CNS

- ▶ Terms from Fig. 17.2

Identify on prepared slides of ox spinal cord smear:

- ▶ multipolar neuron
- ▶ nucleus
- ▶ cell body
- ▶ neuronal processes
- ▶ astrocyte nuclei

Identify on prepared slides of nerves:

- ▶ myelin sheath
- ▶ endoneurium
- ▶ perineurium
- ▶ fascicle
- ▶ epineurium

Identify on neuron model:

- ▶ cell body
- ▶ dendrites
- ▶ axon
- ▶ Schwann cell
- ▶ node of Ranvier
- ▶ axon terminal

continued on the next page

<p>External anatomy (human) (from models and/or figures)</p>	<p><i>cerebral hemispheres:</i></p> <ul style="list-style-type: none"> ▶ gyri (in general) ▶ sulci (in general) ▶ longitudinal fissure ▶ central sulcus ▶ lateral sulcus ▶ precentral gyrus ▶ postcentral gyrus ▶ frontal lobe ▶ parietal lobe ▶ temporal lobe ▶ occipital lobe <p><i>brain stem:</i></p> <ul style="list-style-type: none"> ▶ midbrain ▶ cerebral peduncles ▶ corpora quadrigemina ▶ pons ▶ medulla oblongata <p>cerebellum</p>	<p><i>diencephalon:</i></p> <ul style="list-style-type: none"> ▶ olfactory bulbs ▶ olfactory tracts ▶ optic nerves ▶ optic chiasma ▶ optic tracts ▶ pituitary gland ▶ mammillary bodies
<p>Internal anatomy (human) (from models and/or figures)</p>	<ul style="list-style-type: none"> ▶ gray matter ▶ white matter ▶ corpus callosum ▶ fornix ▶ basal nuclei (as a group) ▶ thalamus (general area) 	<ul style="list-style-type: none"> ▶ intermediate mass ▶ hypothalamus ▶ pineal body (pineal gland) ▶ choroid plexus ▶ cerebral aqueduct ▶ arbor vitae
<p>Ext and int anatomy (sheep) (from sheep brain dissection)</p>	<ul style="list-style-type: none"> ▶ dura mater ▶ pia mater ▶ cerebral hemispheres ▶ cerebellum ▶ pons ▶ medulla oblongata ▶ midbrain ▶ olfactory bulb and tracts ▶ optic nerve ▶ optic chiasma and tracts ▶ cerebral peduncles 	<ul style="list-style-type: none"> ▶ pituitary gland ▶ corpora quadrigemina ▶ pineal body (pineal gland) ▶ corpus callosum ▶ fornix ▶ intermediate mass ▶ ventricles ▶ cerebral aqueduct ▶ arbor vitae ▶ gray matter ▶ white matter
<p>Brain coverings (from Fig. 19.7)</p>	<ul style="list-style-type: none"> ▶ dura mater ▶ arachnoid mater ▶ pia mater 	<ul style="list-style-type: none"> ▶ subdural space ▶ subarachnoid space ▶ arachnoid villi
<p>Ventricles</p>	<ul style="list-style-type: none"> ▶ location of ventricles and route of CSF circulation from Fig. 19.8c (also in Lecture Slides) 	
<p>Cranial nerves</p>	<ul style="list-style-type: none"> ▶ names and numbers of all twelve pairs ▶ locations on brain models and/or figures ▶ whether each is sensory or mixed ▶ fiber origin and destination (in general) <p>Fill in the table provided with Lab 10 Objectives as a study guide.</p>	

▶ Terms in Fig. 21.1a

Identify on Fig. 21.2 and spinal cord model:

- ▶ gray matter
- ▶ white matter
- ▶ dorsal root
- ▶ dorsal root ganglion
- ▶ ventral root
- ▶ spinal nerve
- ▶ central canal
- ▶ anterior horn
- ▶ posterior horn
- ▶ lateral horn

Lab 11: Special Senses & PNS

Human eye (from models and/or figures)	▶ extrinsic eye muscles	▶ retina
	▶ sclera	▶ optic disc
	▶ cornea	▶ lens
	▶ choroid	▶ suspensory ligaments
	▶ ciliary body	▶ aqueous humor
	▶ iris	▶ vitreous body
	▶ pupil	▶ anterior & posterior chambers
Cow eye (from dissection)	▶ sclera	▶ optic nerve
	▶ cornea	▶ iris
	▶ lens	▶ pupil
	▶ vitreous body	▶ ciliary body
	▶ retina	▶ tapetum lucidum
	▶ optic disc	

Identify on figures and/or models:

- ▶ outer ear
- ▶ pinna (auricle)
- ▶ external acoustic meatus
- ▶ tympanic membrane
- ▶ middle ear
- ▶ malleus
- ▶ incus
- ▶ stapes
- ▶ oval window
- ▶ inner ear
- ▶ vestibule
- ▶ semicircular canals
- ▶ cochlea
- ▶ pharyngotympanic tube

Identify on Martini Fig. 13-11 (attached to Lab 11 Objectives, also available in labeled and unlabeled versions on course website):

- ▶ ulnar nerve
- ▶ median nerve
- ▶ radial nerve
- ▶ phrenic nerve
- ▶ femoral nerve
- ▶ sciatic nerve