

Human Anatomy and Physiology I Lab Omission Sheets

Textbook: Marieb EN, Mitchell SJ. 2008. Human Anatomy and Physiology Laboratory Manual, 9th ed.

These sheets are general guidelines concerning what will be and what will not be covered in the lab. They are not a substitute for lab attendance nor for active participation in the lab.

Exercise 1: Language of Anatomy

Read the entire exercise.

Omit the following:

Activity 3: Observing Sectioned Specimens (page 6)

“Serous Membranes of the Ventral Body Cavity” (pages 6-7)

Activity 4: Identifying Organs in the Abdominopelvic Cavity (page 7)

Exercise 2: Organ Systems Overview

Read pages 15-16

Omit all activities

omit pages 17-24

Exercise 4: The Cell: Anatomy and Division

Read pages 39-44 only

Omit Cell Division: Mitosis and Cytokinesis (pages 45-48)

Exercise 6A: Classification of Tissues

Read the entire exercise

Omit Mesenchyme

Histology Atlas: pages 693 – 695

Know the tissue pictures and structures identified for Plates 1-14.

Exercise 7: The Integumentary System

Read pages 91-98

Omit the following:

Figure 7.5: Structure of a hair and hair follicle

Figure 7.8: Main types of fingerprint patterns

Figure 7.9: Method of inking the thumb and index finger

Activity 3: Comparison of Hairy and Relatively Hair-free Skin
Microscopically

Activity 4: Differentiating sebaceous and sweat glands microscopically

Activity 5: Plotting the distribution of sweat glands

Dermography: Fingerprinting section on p. 99

Activity 6: Taking and identifying inked fingerprints

Exercise 8: Classification of Covering and Lining Membranes

Read entire exercise
omit all activities

Exercise 9: Overview of the Skeleton: Classification and Structures of Bones and Cartilages

Read entire exercise (including the text corresponding to omitted activities and figures)
Omit activities 2 and 4
Omit Figure 9.4: Endochondral ossification in a developing long bone

Exercise 10: The Axial Skeleton

Read the entire exercise and DO activity 2 on page 132
Omit the following from identification only:

Figures 10.3, 10.4, 10.5, 10.6(c), 10.7 and 10.9
Locations of specific sutures on the skull
Regions of temporal bone (squamous, tympanic, mastoid, petrous)
Meningitis
Stylomastoid foramen
Internal acoustic meatus
Foramen lacerum
Hypoglossal canal
External occipital crest and protuberance
Ethmoid bone
Mandibular body
Mandibular ramus
Mandibular angle
Mandibular foramen
Incisive fossa
Inferior nasal conchae (turninates)
Vertebral arch
Superior and inferior articular processes
Intervertebral foramina
Sacral hiatus
Sacral promontory
Sternal angle
Xiphisternal joint

Exercise 11: The Appendicular Skeleton

Read the entire exercise
Know the right and left of the following bones:

Scapula
Humerus
Femur
Tibia
Pelvic Girdle

On the clavicle: know only the sternal end and the acromial end

Omit the following from the humerus:

- Greater and lesser tubercle
- Deltoid tuberosity
- Radial groove
- Radial fossa

Omit the following from the coxal bone:

- Auricular surface
- Sacroiliac joint
- Anterior/posterior superior spine
- Arcuate line
- Lesser and greater sciatic notches
- Rami of the pubis

Omit the following from the Femur:

- Intertrochanteric crest and line
- Gluteal tuberosity
- Linea aspera
- Intercondylar fossa
- Adductor tubercle

Omit the following from the Tibia:

- Intercondylar eminence
- Anterior border

Know only the following on the hand and foot:

- Carpals, metacarpals, phalanges
- Tarsals, metatarsals, phalanges, calcaneus, talus

Exercise 13: Articulations and Body Movements

Read pages 169-177

Omit activities 3 and 4

Know Table 13.1

Exercise 46 (p. 675): Surface Anatomy Roundup

Read the entire exercise: pages 675-689.

On Figure 46.3, know the hyoid bone, laryngeal prominence, Sternocleido-mastoid (sternal head and clavicular head), and the jugular notch

Omit Figure 46.4

On Figure 46.10, know the triceps brachii, dimple with the head of the radius, head of ulna

omit a and b of Figure 46.10

On Figure 46.12, know the styloid process of radius and the head of the ulna

On Figure 46.13, know the Flexor carpi ulnaris, Palmaris longus, and the Flexor carpi radialis

Omit Figure 46.14, 46.15, and 46.16

On Figure 46.18, know Quadriceps femoris (a); Sartorius (b),\; Medial and Lateral condyles of the femur, Patella, Medial and Lateral condyles

of the tibia (c); Anterior border of the Tibia, Medial and Lateral Malleolus (d)

On Figure 46.19, know Biceps Femoris, Semitendinosus, Semimembranosus, Gastrocnemius, Soleus, Calcaneal (Achilles) tendon

Exercise 14: Microscopic Anatomy and Organization of Skeletal Muscle

Read entire exercise

Omit all activities

Exercise 15: Gross Anatomy of the Muscular System

KNOW the identification of the following muscles:

Head/Neck

- | | |
|----------------------|-----------------------------|
| 1. orbicularis oris | 8. mylohyoid |
| 2. orbicularis oculi | 9. omohyoid superior belly |
| 3. mentalis | 10. omohyoid inferior belly |
| 4. platysma | 11. sternohyoid |
| 5. temporalis | 12. sternocleidomastoid |
| 6. masseter | 13. digastric |
| 7. trapezius | 14. sternothyroid |

Thorax:

- | | |
|--------------------------|----------------------|
| 1. deltoid | 8. rhomboid minor |
| 2. pectoralis minor | 9. rhomboid major |
| 3. pectoralis minor | 10. teres major |
| 4. transversus abdominis | 11. latissimus dorsi |
| 5. internal oblique | 12. levator scapulae |
| 6. external oblique | 13. supraspinatus |
| 7. rectus abdominis | 14. infraspinatus |

Arm:

- | | |
|--------------------------|------------------------------------|
| 1. triceps brachii | 8. flexor carpi ulnaris |
| 2. biceps brachii | 9. flexor digitorum profundus |
| 3. brachialis | 10. extensor carpi ulnaris |
| 4. brachioradialis | 11. extensor carpi radialis longus |
| 5. pronator teres | 12. extensor carpi radialis brevis |
| 6. flexor carpi radialis | 13. extensor digitorum |
| 7. Palmaris longus | |

Leg:

1. sartoris

quadriceps femoris

2. rectus femoris

9. semimembranosus

- | | |
|-----------------------|-------------------------------|
| 3. vastus lateralis | 10. gastrocnemius |
| 4. vastus intermedius | 11. fibularis longus |
| 5. vastus medialis | 12. extensor digitorum longus |
| 6. gracilis | 13. fibularis brevis |
| 7. gluteus maximus | 14. biceps femoris |
| 8. semitendinosus | |

Exercise 16A: Skeletal Muscle Physiology

Read pages 235-236, 241-242

Omit all activities

Histology Atlas: pages 693 – 695

Know the tissue pictures and structures identified for Plates 2, 4, and 14.

Exercise 17: Nervous Tissue

Read the entire exercise

Exercise 19: Nervous Tissue

Read the entire exercise

Omit the following figures:

Figure 19.1: Embryonic development of the human brain

Figure 19.5: Basal Ganglia

Figure 19.6: Cerebellum

Figure 19.7: Meninges

Figure 19. 8: Location and circulatory pattern of cerebrospinal fluid

Omit the following terms:

Cerebral peduncles

Decussation of pyramids

Superior colliculi

Inferior colliculi

Caudate nucleus

Lentiform nucleus

Putamen

Globus pallidus nuclei

Corona radiata

Internal capsule

Corpus striatum

Interthalamic adhesion

Intermediate mass

Interventricular foramen

Infundiubulum

Epithalamus

Pineal body

Choroid plexus

Vermis

All terms related to the meninges

Hydrocephalus

Know all 12 cranial nerves by name, location, and function (Table 19.1)

Exercise 21: Spinal Cord, Spinal Nerves, and the Autonomic Nervous System

Read pages 315-326

Omit activity 2: identifying spinal cord tracts

Omit all tables

Exercise 22: Human Reflex Physiology

Read pages 341-347

Omit activities 4-10

Exercise 23: General Sensation

Read the entire exercise

Omit activities 1, 4, 6, and 7

Exercise 24: Special Senses: Vision

Read the entire exercise

Omit the following terms on Figure 24.1:

External anatomy of the eye and accessory structures:

Levator palpebrae superioris muscle

Tarsal plate

Palpebral conjunctive

Palpebral fissure

Conjunctival sac

Medial canthus

Excretory ducts of lacrimal gland

Lacrimal punctum

Lacrimal sac

Inferior meatus of nasal cavity

Omit column 3, cranial nerves, of (c) of Figure 24.2: Extrinsic muscles of the eye

Omit the following terms from Figure 24.3: Sagittal section of the internal anatomy of the eye:

Ora serrata retinae

Sclera venous sinus

Omit 24.8: Refraction of light in the eye. resulting in the production of a real image on the retina

Omit Figure 24.13: Posterior portion of right retina

Omit activities 1, 3, 4, 6, 7, and 9 - 12

Do activity 2, dissection of sheep eye, 5, and 8 in lab.

Exercise 25: Special Senses: Hearing and Equilibrium

Read the entire exercise

Omit the following Figures:

Figure 25.4: Microscopic view of the organ of Corti

Figure 25.5: Resonance of the basilar membrane

Figure 25.8: The effect of gravitational pull on a macula receptor in the utricle

Omit activities 2-7

Exercise 26: Special Senses: Olfaction and Taste

Read pages 397-399

Omit all activities

Histology Atlas: pages 693 – 695

Know the tissue pictures and structures identified for Plates 5 -13, 14-18.