

ASSIGNMENT SHEET

CHAPTER 11: ANATOMY AND PHYSIOLOGY OF THE HUMAN BODY

Unit 6: The Muscular System

WORDS TO KNOW CHALLENGE

A. Word Search: Find the following words hidden in the puzzle.

ABDUCT	DYSTROPHY	SMOOTH
ADDUCT	EXTENSOR	SPASM
ANCHOR	FASCIA	STRAIN
ATROPHY	FLEXOR	TEAM
BEND	INSERTION	TENDON
BICEP	MUSCLE	STONE
BURSA	ORIGIN	TRICEP
CARDIAC	RELAX	
CRAMP	SHEATH	

C J I A T R O P H Y F H
 B A B D U C T R M C A E
 I P F L E X O R I M S X
 C N C A R D I A C G C T
 E T S H E A T H O Q I E
 P E M E C V T O N E A N
 S A O C R A M P I U W S
 T M O B O T A B I D Q O
 R U T K E O I N U L W R
 A S H Q X N O O C R W X
 I C P T E N D O N H S P
 N L U A D D U C T W O A
 P E D Y S T R O P H Y R
 R E L A X M T R I C E P

B. Word Puzzle: Use the clues listed below to spell out these terms.

1. _ _ M _ _ _ _ _ _ _ _
2. _ _ _ _ _ U _ _ _ _ _
3. _ _ S _ _ _ _
4. _ _ _ C _ _ _ _ _ _ _ _ _ _ _
5. _ _ _ _ _ U _
6. _ _ _ _ _ L _ _ _ _ _
7. _ _ _ _ _ A _ _ _ _ _
8. _ _ _ _ _ R _ _ _ _ _

- | | |
|-------------------------------|--------------------------|
| 1. Muscle group | 5. Back muscle |
| 2. Muscle attachment | 6. Smooth muscle action |
| 3. Group of organs | 7. A permanent condition |
| 4. Combination of two systems | 8. Named for occupation |

C. Spelling: Underline the correct spelling of each word.

- | | | | |
|-------------------|---------------|----------------|-----------------|
| 1. dystrophy | dystrophy | distrapthy | dystraphy |
| 2. pecktoralis | pecktorales | pectoralles | pectoralis |
| 3. extensor | extenser | egtenser | egtensor |
| 4. gastructnemius | gastrocnemius | gastrocnemious | gastructnemious |
| 5. hiccoff | hiccupp | hiccough | hicough |
| 6. intercostal | intracostal | intracoastal | intercoastal |
| 7. spincter | spincter | sphincter | sphincter |
| 8. tortacollis | tortacolis | torticollis | torticolis |
| 9. fibramyositis | fibromyositis | fibromyasitis | fibermysitis |

UNIT REVIEW

A. Short Answer

1. What is a motor unit? _____

2. Why does muscular activity produce heat in the body? _____

3. List six functions of skeletal muscles.
 - a. _____
 - b. _____
 - c. _____
 - d. _____
 - e. _____
 - f. _____
4. What is the purpose of a muscle team? Give one example. _____

5. What does the term "muscle tone" mean? _____

6. Describe the structure and function of a tendon, locating the body's strongest example. _____

7. Explain the meaning of the terms "origin" and "insertion." _____

8. Describe a muscle sheath and bursa; explain their functions. _____

9. Identify the muscles of respiration and explain their actions. _____

10. Explain peristaltic action. _____

11. Describe the structure and function of a sphincter. _____

B. Matching: Match the term in column I with its description in column II. (Note: Not all descriptions will be used.)

COLUMN I

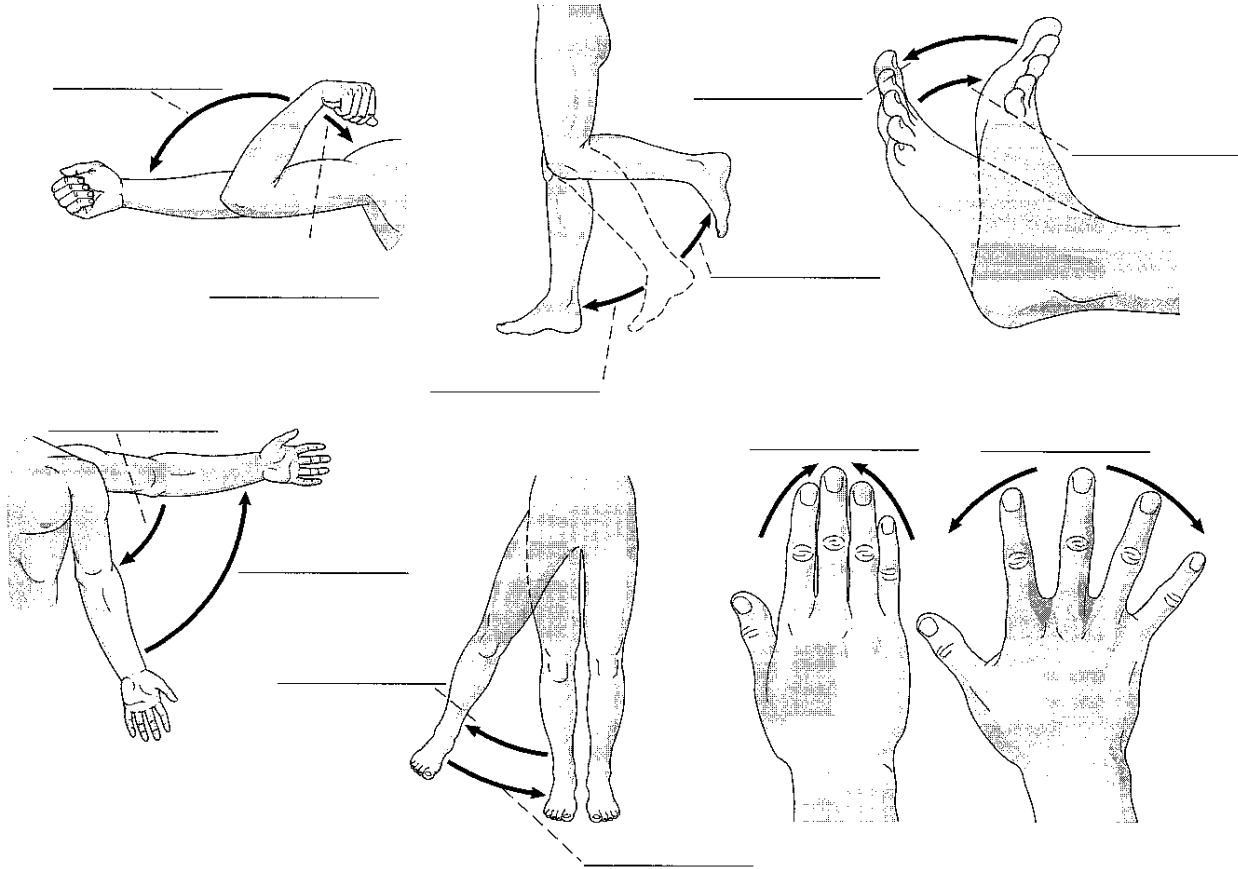
- _____ 1. Abduction
- _____ 2. Adduction
- _____ 3. Anchor
- _____ 4. Atrophy
- _____ 5. Contracture
- _____ 6. Dystrophy
- _____ 7. Fascia
- _____ 8. Hiccough
- _____ 9. Spasm
- _____ 10. Strain

COLUMN II

- a. Spasmodic contractions of the diaphragm
- b. Excessive stress on a skeletal muscle
- c. A doughnut-shaped muscle
- d. A progressive wasting of muscle tissue from lack of use
- e. A tough membrane sheath attachment
- f. To move an extremity away from the body's center
- g. The origin of a muscle
- h. Permanent shortening of flexor muscles with bent joints
- i. Congenital progressive skeletal muscle wasting
- j. A state of partial muscle contraction
- k. To move an extremity toward the body's center
- l. A painful contracted muscle that will not relax

C. Label the Illustration

1. Label the six illustrations below to indicate direction of movement in the muscle teams. Refer to Figure 11-96 and Figure 11-97 in the textbook.



2. Label the illustration with the following major anterior body muscles. Refer to Figure 11-99 in the textbook.

Biceps brachii

Deltoid

External oblique

Intercostals

Masseter

Orbicularis oculi

Orbicularis oris

Pectoralis major

Quadriceps femoris

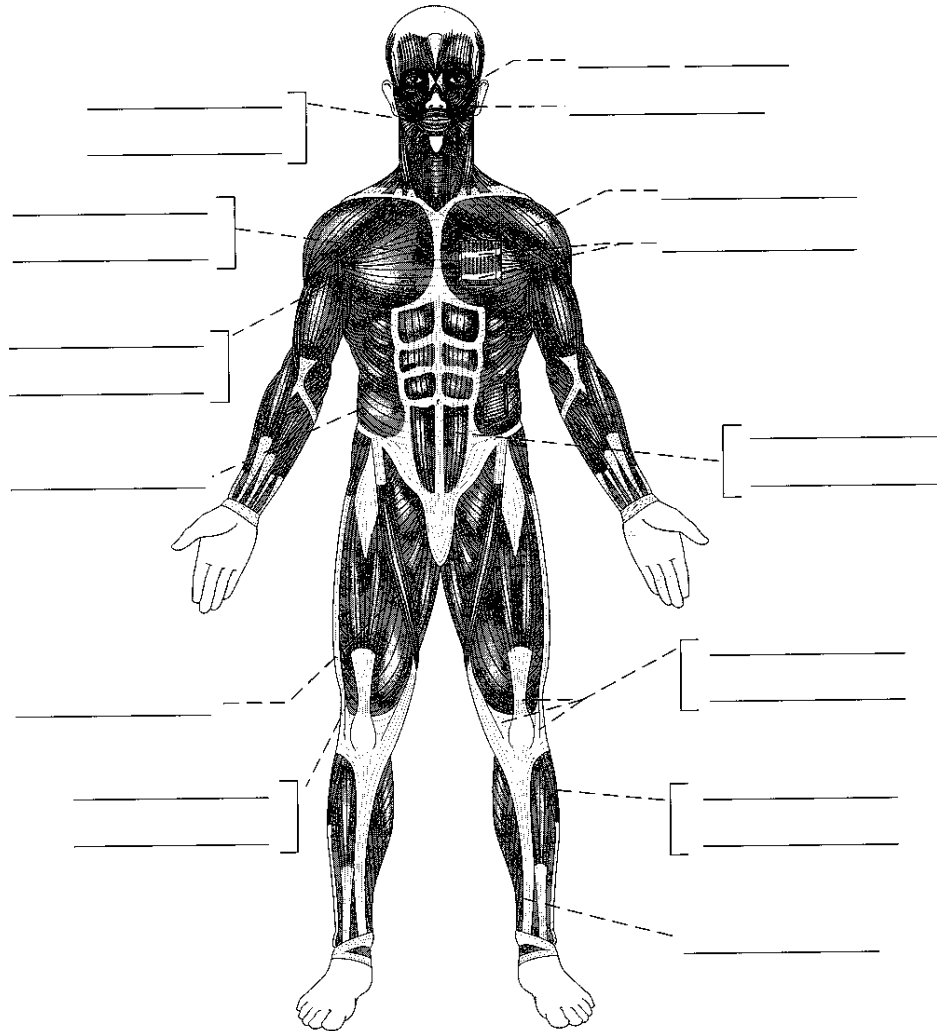
Rectus abdominis

Sartorius

Soleus

Tibialis anterior

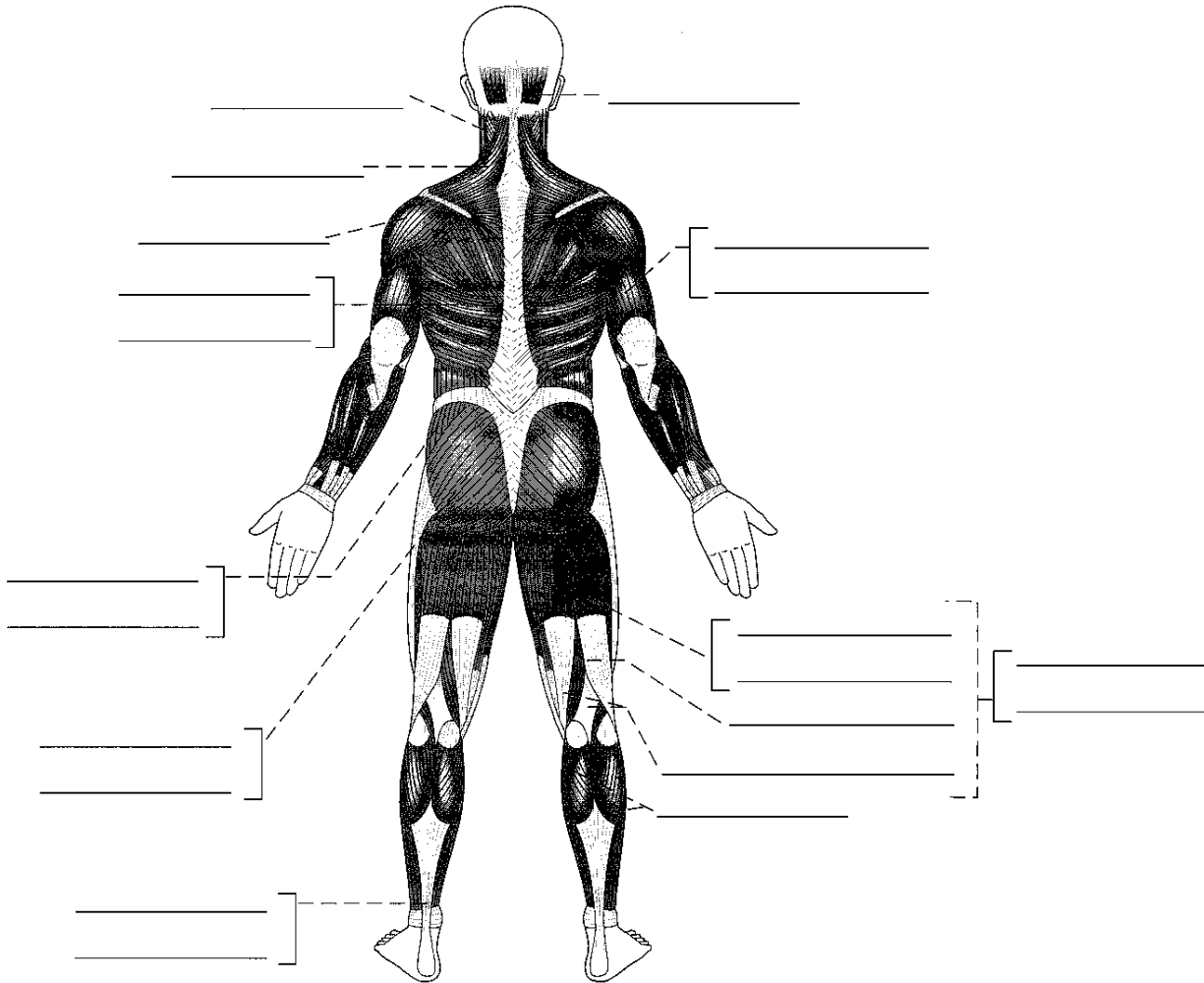
Vastus lateralis



3. Label the illustration with the following major posterior body muscles. Refer to Figure 11-100 in the textbook.

- Achilles tendon
- Biceps femoris
- Deltoid
- Gastrocnemius
- Gluteus maximus
- Gluteus medius
- Hamstring group

- Latissimus dorsi
- Occipitalis
- Semi-membranosus
- Semi-tendinosus
- Sternocleidomastoid
- Trapezius
- Triceps brachii



D. Design a table: List the three types of muscular tissue, describe the characteristics of each type, the location in the body, and the function performed.

<u>TYPE</u>	<u>CHARACTERISTICS</u>	<u>LOCATION</u>	<u>FUNCTION</u>
a. _____ _____	_____ _____	_____	_____
b. _____ _____ _____ _____	_____ _____ _____ _____	_____ _____ _____ _____	_____ _____ _____ _____
c. _____ _____	_____ _____	_____	_____

CASE STUDIES

Scenario 1

A male patient has been treated for tendonitis of the elbow. He calls the office to complain that for the past two days he has experienced an increase of pain and feels he is worse than when he was first diagnosed. He has been applying heat like he was advised. He wants to know what to do.

CRITICAL THINKING QUESTIONS

1. What additional information should you get? _____

2. What advice can you give him? _____

3. Do you think the physician needs to see him again? _____

Scenario 2

One of your best friends calls you and is very upset. She tells you the doctor thinks she may have fibromyalgia. She has never heard of the condition and is asking you for information. You realize she needs help and support.

Critical Thinking Questions

1. Why should you question her about her symptoms? _____

2. Why should you determine what the physician has already told her? _____

3. Where else can she go for help? _____

UNIT APPLICATION

Research Activity

Fibromyalgia is a chronic, long-term condition that cannot be cured. Those affected must learn to alter their lifestyle to better cope with the disorder. Some help can be obtained from the National Fibromyalgia Association. Go online to www.fmaware.org.

From the column on the left, select About Fibromyalgia. Under the General category, scroll down to find the answers to the first seven questions listed. Write each question and a brief answer.

Now look at the Support Group Directory link. See if you can find a group that meets in your area. Select your state and scroll down to see if your city has a group that is in the NFA's Fame directory. If not, check your local phone directory yellow pages under Support Groups. The business section of the white pages will list the Arthritis Foundation, which might be able to help you and may even hold meetings. The local newspaper often lists support group meetings within the community. Many groups meet in churches or community centers. Another resource would be a physician's office that specialized in rheumatology. Work this out with your instructor so that only *one* student calls the office to obtain the information. Office personnel may know of a local support group.

CERTIFICATION AND REGISTRATION PREPARATION

- _____ 1. Tendonitis is:
- a. an inflammation of the coverings of the muscles and tendons at a joint
 - b. a tear in the tendon attachment
 - c. a chronic condition of the joint structures
 - d. an inflammation of the tendon-muscle attachment
- _____ 2. Bursitis is:
- a. an inflammation of the tendon-muscle attachment
 - b. an inflammation of the coverings of the muscles and tendons at a joint
 - c. an inflammation of the smooth muscle
 - d. the result of misaligned posture
- _____ 3. Epicondylitis is:
- a. inflammation of the condyles at the knee
 - b. widespread pain in muscles
 - c. inflammation of the forearm tendon at the elbow
 - d. a congenital muscle disease
- _____ 4. Muscular dystrophy is:
- a. a temporary muscle disorder
 - b. a group of muscles that are inflamed
 - c. a muscle-wasting disorder
 - d. characterized by trigger points

- _____ 5. The Achilles tendon:
- a. attaches the quadriceps femoris to the knee
 - b. permits a person to sit cross-legged
 - c. permits flexion of the biceps
 - d. attaches the gastrocnemius to the heel
- _____ 6. A sphincter is:
- a. the permanent flexor muscle shortening
 - b. a painful muscle contracture
 - c. a smooth muscle found in the opening of the heart
 - d. a circular-shaped muscle
- _____ 7. Food is moved throughout the body by
- a. contracture
 - b. peristalsis
 - c. the conversion of glycogen to ATP
 - d. intercostal muscle contractions
- _____ 8. The term "flexor" refers to:
- a. straightening a joint
 - b. bringing the legs together
 - c. raising the arm at the side of the body
 - d. bending the joint
- _____ 9. Abduction means to:
- a. move an extremity away from the body's center
 - b. move an extremity toward the body's center
 - c. flex the muscle to bend a joint
 - d. flex muscles to straighten a joint
- _____ 10. Hiccoughs are caused by:
- a. a lack of oxygen
 - b. the contraction of the intercostal muscles
 - c. spasmodic contractions of the diaphragm and vocal cord space
 - d. the rhythmic contraction of the muscles of the throat

