Muscular System

Muscular System Video

1. Does a muscular person have more muscles than a smaller person? _____

2. What are the three types of muscles?
   1. _______________________
   2. _______________________
   3. _______________________

3. Smooth muscles make up what? __________________________

4. What do you think throwing up is called? _________________

5. What does cardiac muscle make up? ______________________

6. What is the heart also known as? _______________________  

7. What is an example of a skeletal muscle? ________________

8. What is the difference between voluntary and involuntary muscles?
   _____________________________________________________
   _____________________________________________________

9. What controls the voluntary muscles? ____________________
   _____________________________________________________

10. Give a brief explanation of how muscle action works: ______
    ______________________________________________________
    ______________________________________________________

11. When you flex your bicep which muscle is the flexor? ______

12. When you flex your bicep which muscle is the extensor? ____

13. What are the shoulder muscles called? ____________________

14. What are the chest muscles? _____________________________

15. Where are the quadriceps? ______________________________

16. Where are the Gluteus Maximus located? _________________

17. What are two things you should do to keep a healthy body?
   1. ___________________________________________________
   2. ___________________________________________________
Muscular System Diagram
Using the diagram on page 273 and your notes from the video to make a diagram of the muscular system. Be sure to label all of the muscles covered on page 273 and the muscles mentioned in the video. A frontal view will go on this page and a posterior view will be drawn on the following page.

Anterior

Posterior
Your Muscular System (pp. 272–275)

The Muscles in Your Body

1. Complete the table with details about muscle types.

<table>
<thead>
<tr>
<th>Muscle Type</th>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smooth muscle</td>
<td>a. involuntary muscle that causes movements within the body</td>
<td>b. smooth muscle in blood vessels</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cardiac muscle</td>
<td>c.</td>
<td>d.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Skeletal muscle</td>
<td>e.</td>
<td>f.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. Complete the graphic organizer about how a pair of muscles in your arm works.

<table>
<thead>
<tr>
<th>Cause</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>arm bends</td>
</tr>
<tr>
<td>b.</td>
<td>arm straightens</td>
</tr>
</tbody>
</table>

3. Describe muscle tone.

__________________________________________________________________
__________________________________________________________________
Section 11-2: Note Taking Guide (continued)

Keeping Healthy

4. In your own words, describe the difference between muscle endurance and muscle strength. What is one activity that could help build muscle endurance? What is one activity that could help build muscle strength?

__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________

5. Complete the table with details about kinds of muscle injuries and how to prevent them.

<table>
<thead>
<tr>
<th>Injury</th>
<th>Description</th>
<th>Prevention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strain</td>
<td>a.</td>
<td>b.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tendonitis</td>
<td>c.</td>
<td>d.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Muscle cramps</td>
<td>e.</td>
<td>f.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Chapter 11 Section 2 Review Questions

Answer the questions in Section 1 Review on pg. 271 below using your notes and what you have read in section 1 pgs. 272-275.

1. Identify the 3 types of muscles and describe the location and function of each.

<table>
<thead>
<tr>
<th>Types of Muscle</th>
<th>Location</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. What is a tendon?
__________________________________________________________________
__________________________________________________________________

3. Explain what causes muscle tone. What causes the condition known as atrophy?
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________

4. What can you do to prevent muscle injuries?
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________

5. What is the cause of a muscle strain?
__________________________________________________________________
__________________________________________________________________

Critical Thinking

6. Why is it an advantage that you do not have control over all of your muscles?
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
Decide whether each statement is true or false. Write true or false in the space provided.

____ 1. You consciously control involuntary muscles.

____ 2. All muscles work by contracting.

____ 3. To keep up your muscle strength you should always practice the same exercise routine.

____ 4. Treatment for muscle injuries includes strenuous exercise.

____ 5. Some muscle soreness after exercise is normal.

Write the letter of the correct answer in the space provided.

____ 6. Involuntary muscle found only in the heart is called
   a. smooth muscle.
   b. cardiac muscle.
   c. skeletal muscle.
   d. voluntary muscle.

____ 7. Smooth muscles are involved in which one of the following activities?
   a. pumping blood
   b. walking
   c. digesting food
   d. playing a piano

____ 8. A tendon is a thick strand of tissue that attaches
   a. muscles to nerves.
   b. muscles to muscles.
   c. bones to bones.
   d. muscles to bones.

____ 9. Which is a condition that occurs when muscles weaken or shrink due to little use?
   a. atrophy
   b. muscle tone
   c. strain
   d. tendonitis

____ 10. A muscle strain is a(an)
    a. overused tendon.
    b. strong, uncontrolled muscle contraction.
    c. pulled muscle.
    d. strengthening exercise.
Concept Check: Muscles in the Body

Look at the pictures below. Then answer the question next to each picture.

1. a. When a runner uses her leg muscles to run, which of the three types of muscle is she using?
   
   b. Are these muscle movements voluntary or involuntary? Explain.

2. a. When food moves through the esophagus, stomach, and intestines, which type of muscle is at work?
   
   b. Are these muscle movements voluntary or involuntary? Explain.

3. a. When the heart pumps blood, which type of muscle is being used?
   
   b. Are these muscles voluntary or involuntary? Explain.

4. While eating, you lift food to your mouth, chew it, swallow it, and digest it. Explain how all three types of muscle tissue are used during this process.
It is important to prepare your body before you work out and after you finish. You can prepare by doing warming-up, stretching, and cooling-down exercises. Following this routine will help minimize the effects of the stress of physical activity.

Keep to the routine for one week. Use the chart on the next page to record your progress. Check off the appropriate box as you complete each part of your workout, and note which activity you perform each exercise day. Be sure to note how you feel every day, even if it is not an exercise day.

1. **Warming up**  Before you exercise, warm up for the activity by starting at a reduced pace. For example, before running you could walk or jog slowly. The slow movement prepares your muscles for more intense activity.

2. **Stretching**  Once you have warmed up your muscles, stretch them. You could use the stretches described on page 277 or other stretches recommended by your coach, physical education teacher, or a trainer.
   - **Lower back curl**  Use the lower back curl shown on page 277 to stretch your lower back muscles in a stress-free manner.
   - **Side stretch**  Perform the side stretch shown on page 277 in your text.
   - **Hamstring stretch**  The hamstrings work hard in almost any exercise. They should be well stretched before you begin any activity.
   - **Calf stretch**  The stride position stretches your calf muscles. The stride position is also good for stretching muscles in your shin area.
   - **Triceps stretch**  Stretch your triceps as shown on page 277.

3. **Cooling down**  As your workout is ending, start slowing down your rate of activity before you stop exercising. Then stretch your muscles as you did before the workout.

4. After a week, review your chart. On the lines below, write down any benefits of warming up, stretching, and cooling down that you noticed.

__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
## Warming Up, Stretching, and Cooling Down (continued)

| Sun. | | | |
| Sat. | | | |
| Fri. | | | |
| Thurs. | | | |
| Wed. | | | |
| Tues. | | | |
| Mon. | | | |

<table>
<thead>
<tr>
<th>Exercise</th>
<th>Warm-up</th>
<th>Stretching exercises</th>
<th>Activity</th>
<th>Cool-down</th>
<th>Stretching exercises</th>
<th>Notes</th>
</tr>
</thead>
</table>

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