

Muscular System Study Questions II

Dr. J. Lim

1. A neural stimulation causes the release of _____ from the sarcoplasmic reticulum and _____ from the mitochondria within the muscle fiber to make the contraction of the sarcomere possible.
2. _____-twitch skeletal muscle fiber is best suited for walking at a slow pace to the grocery store.
3. In the triceps muscle, the ulna serves as the attachment point called the _____.
4. The corners of the mouth are lifted while smiling by using the _____ muscle.
5. The _____ muscle is most active when you raise your arms out laterally.
6. The thicker myofilament is called _____.
7. Due to the generation of heat, our muscles only work at a _____% efficiency.
8. Aerobic respiration in the mitochondria results in the production of _____ ATPs.
9. Muscle soreness following vigorous exercise is due to an accumulation of a chemical substance called _____.
10. The forehead can be wrinkled using the _____ muscle.
11. Lifting the knee is made possible due to the work of the _____ muscle.
12. The connective tissue wrap surrounding a fascicle is called the _____.
13. Of the three types of muscle tissue, only _____ muscle does not have striations.
14. The muscle that allows you to close and pucker your lips is called the _____ muscle.
15. This muscle has been called the toe dancer's muscle. _____
16. These two facial muscles become noticeably fatigued following prolonged periods of gum chewing. _____ and _____

Muscular System HW II KEY

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1. A neural stimulation causes the release of **calcium** from the sarcoplasmic reticulum and **ATP** from the mitochondria within the muscle fiber to make the contraction of the sarcomere possible.
2. **Slow**-twitch skeletal muscle fiber is best suited for walking at a slow pace to the grocery store.
3. In the triceps muscle, the ulna serves as the attachment point called the **insertion**.
4. The corners of the mouth are lifted while smiling by using the **zygomaticus** muscle.
5. The **deltoid or latissimus dorsi** muscle is most active when you raise your arms out laterally.
6. The **thicker** myofilament is called **myosin**.
7. Due to the generation of heat, our muscles only work at **25%** efficiency.
8. Aerobic respiration in the mitochondria results in the production of **36** ATPs.
9. Muscle soreness following vigorous exercise is due to an accumulation of a chemical substance called **lactic acid (lactate)**.
10. The forehead can be wrinkled using the **frontalis** muscle.
11. Lifting the knee is made possible due to the work of the **quadriceps** muscle.
12. The connective tissue wrap surrounding a fascicle is called the **perimysium**.
13. Of the three types of muscle tissue, only **smooth** muscle does not have striations.
14. The muscle that allows you to close and pucker your lips is called the **orbicularis oris** muscle.
15. This muscle has been called the toe dancer's muscle. **gastrocnemius**
16. These two facial muscles become noticeably fatigued following prolonged periods of gum chewing. **temporalis** and **masseter**