

Muscular Unit – Review

Name _____

Date _____

1. The body has approximately _____ muscles.	Over 600
2. Name three functions of your muscles. A. B. C.	Movements Maintenance of posture and shape of the body Production of body heat
3. Involuntary Muscles –	Muscles that you do not control, smooth muscle tissue and cardiac muscle tissue
4. Voluntary Muscles –	Muscles that you can control, Skeletal muscle tissue
List where each of the following muscle tissue is found, described its appearance, and lists its functions; 5. Skeletal muscle tissue –	The muscle tissue is striated, attached to bones by tendons, provides the force to move the bones, voluntary contractions
List where each of the following muscle tissue is found, described its appearance, and lists its functions; 6. Smooth Muscles –	Inside linings of internal organs, involuntary contractions control body functions
List where each of the following muscle tissue is found, described its appearance, and lists its functions; 7. Cardiac Muscles –	Found in the heart, involuntary contractions, Slightly striated muscle fibers
8. Define and give two examples of antagonistic muscles	Muscles that work opposite of each other, Bicep/triceps, hamstrings/quads
Define the following parts of the muscles. 9. Tendon –	Attaches muscle to bone
Define the following parts of the muscles. 10. Fasciculus –	Muscles are made up of special cells called fibers. A muscle is a collection of fibers made up of cells and grouped in bundles. Each bundle is called a fasciculus, (singular).
Define the following parts of the muscles. 11. Fasciculi –	Plural for fasciculus
Define the following parts of the muscles. 12. Muscle Fiber –	smaller unit than a fasciculus, where the A band is located with the actin and myosin
Define the following parts of the muscles. 17. Actin –	The thin filaments in our muscle fibers are a protein
Define the following parts of the muscles. 18. Myosin –	the thick filaments consist of a protein, Myosin and Actin filaments band together during a muscle contraction. Myosin cross bridges reach out and pull the actin filaments together.

Define the Following: 19. Intensity of a movement depends on –	number of fibers involved during the contraction
Define the Following: 20. Reflex -	type of skeletal muscle contraction occurs without a signal from the brain
Define the Following: 22. Fast Twitch –	Fast twitch muscle fibers provide short powerful contractions
Define the Following: 23. Slow Twitch –	muscle fibers require a steady supply of oxygen
Define the Following: 24. Cardio-respiratory Endurance –	The ability of the circulatory system (heart, blood, blood vessels) and respiratory system to deliver fuel and oxygen to the muscles during work
Define the Following: 25. Muscular Strength –	the ability of a muscle, or muscle group to exert force against resistance
Define the Following: 26. Muscular Endurance –	the ability of a muscle, or group of muscles, to apply a great force repeatedly or to sustain a muscular contraction for a period of time
Define the Following: 27. Muscular Power –	The combination of strength and speed
Define the Following: 28. Flexibility –	the ability to move a joint through its full range of motion
Define the Following: 29. Body Composition –	the relative amount of lean body mass (bones, muscles, connective tissue) vs. fat in your body
30. Isotonic –	A contraction in which the tension should be the same throughout the entire range of motion.
Define the Following: 31. Concentric Contraction –	concentric = positive contraction
Define the Following: 32. Eccentric Contraction –	eccentric = negative contraction
Define the Following: 33. Isometric –	The type of contraction in which the muscle develops tension without changing its length
Define the Following: 34. Adenosine Triphosphate - Adenosine Diphosphate + P –	MUSCLE ENERGY The molecular chemical breakdown that results in energy released causing the muscles to contract.

Define the Following: 35. Anaerobic Alactic System –	This system uses creatine phosphate or phosphocreatine, which is broken down into creatine and phosphate, to resynthesize the ADP + P back into ATP. This creatine is stored in the muscles, but is in very limited supply. This system can only supply energy for 8 to 10 seconds of activity. It is the chief source of energy for maximal contractions.
Define the Following: 36. Anaerobic Lactic –	This system is used is during events of very intensive work of longer duration, approximately one minute. This system breaks down glycogen, (sugar), which releases energy to resynthesize ADP + P into ATP. Due to the lack of oxygen during this process, a product called lactic acid is also formed. If hard work continues for a extended period of time, a lot of lactic acid is produced causing muscle fatigue.
Define the Following: 37. Aerobic System –	This system begins to produce energy for the resynthesis of ATP from ADP + P after approximately one to one and a half minutes. It also uses glycogen for energy, but it is broken down in the muscles in the presence of oxygen. Since glycogen is now broken down in the presence of oxygen, very little or no lactic acid is produced. This system is the primary source of energy for events between two minutes and two to three hours
Define the Following: 38. Origin –	The origin of a muscle is the beginning of the muscle that is anchored to a bone to form a stationary attachment
Define the Following: 39. Insertion –	The insertion of a muscle is at the end of the muscle and is the moveable attachment
Describe the following movements 40. Flexion –	Bending, bringing bones together
Describe the following movements Extension –	Straightening, moving bones apart
Describe the following movements 41. Everson	Turning sole of foot outward
Describe the following movements Inversion –	Turning sole of foot inward
Describe the following movements 42. Pronation	Rotation on axis of bone, turning hand down by rotating radius
Describe the following movements Supination –	Rotations on axis of bone, turning hand up by rotating radius
Describe the following movements 43. Abduction –	Movement away from axis or trunk

Describe the following movements 44. Adduction	Movement toward axis or trunk
List the muscles functions; 45. Bicep -	Flexion of the elbow
List the muscles functions; 46. Triceps-	Extension of the elbow
List the muscles functions; 47. Pectoralis major-	Horizontal flexion-from side horizontal position to the front horizontal position,
List the muscles functions; 48. Deltoid-	True abduction
List the muscles functions; 49. Trapezius-	Rotates the scapula upward
List the muscles functions; 50. Latissimus Dorsi-	Extension, Rotation inward, Horizontal extension, Adduction
List the muscles functions; 51. Gluteus Maximus-	Extension of thigh at the hip, Outward rotation
List the muscles functions; 52. Rectus Abdominis-	Flexion & lateral flexion of the trunk, Flattens out Lumbar curve, Pulls down ribs
List the muscles functions; 53. External Oblique-	Flexes trunk, Controls twisting motion of trunk by working opposite side
List the muscles functions; 54. Quadriceps	Knee extensors
List the muscles functions; 55. Hamstrings-	Flexion of leg at knee, Secondary Hip Extensors
List the muscles functions; 56. Sartorius-	Flexion of thigh at the hip, Flexion of the leg at the knee
List the muscles functions; 57. Gastrocnemius-	Plantar flexion of the foot, Flexion of the leg at the knee
List the muscles functions; 58. Extensor Digitorum Longus-	Dorsal Flexion, Eversion of the foot, Toe Extension
List the Tendons functions; 59. Achilles Tendon-	Tendon for the gastrocnemius, origin knee insertion ankle
Define the Following: 60. Lactic Acid –	By product produced in the anaerobic lactic phase of energy, the breakdown of glucose for ATP with out oxygen.

<p>61. Define the Following:</p> <p>Muscle Cramp –</p>	<p>A prolonged muscle contraction causing extreme pain. The muscle is said to be in a state of tetanus (a constant summation/fusion of the muscle’s fibers). A cramp can lead to tension 3 –4 times greater than normal single twitch. A muscle cramp often occurs when a muscle is over worked or tired. They can also occur due to a lack of nutrients needed by the muscles, including hydration. Immediate treatment is to massage the area and stretch the muscle out. Long term treatment involves looking at the amount of work the muscle does during the activity and the supply of nutrients to that muscle.</p>
<p>62. Define the Following:</p> <p>Muscle Strain –</p>	<p>Muscle soreness/pain), Results from severely over working the muscle. Often caused by a severe build up of lactic acid in the muscle, often caused by a lack of proper cool down and stretch. RICE</p>
<p>63. Define the Following:</p> <p>Torn Muscle –</p>	<p>A tear in the muscle fibers. Often is caused by various circumstances; heavy lifting, sudden force or pull, excessive activity where the muscle is not properly rested or has proper nutrients, Lack of proper warm-up. RICE & See a doctor</p>
<p>64. Define the Following:</p> <p>Torn Tendon –</p>	<p>A tearing of the tendon that attaches the muscle to the bone. Often occurs from severe trauma. RICE & see a Doctor</p>
<p>65. Define the Following:</p> <p>Tendonitis –</p>	<p>Swelling that occurs in a tendon. This irritates the tendon, causing pain. If continues over a period of time, it can have long lasting detriments. RICE</p>
<p>66. Define the Following:</p> <p>Shin Splints –</p>	<p>The partial separation of the muscle from its bone, Tibia, attachment caused by the repeated pounding of the feet and legs on hard surfaces. Ice and possible arch support.</p>
<p>67. Define the Following:</p> <p>Hernia –</p>	<p>Occurs when a hole in the muscle allows another part of the body through that hole. Often occurs when a portion of the intestine pushed itself through the layers of muscle in the abdomen or groin area. See a Doctor</p>
<p>68. Muscular Dystrophy –</p>	<p>A hereditary disease that slowly destroys muscle fibers. Patients gradually lose control of their muscles until they are unable to move. Death occurs from paralysis of the muscles that control breathing or from failure of the cardiac muscle. Progress is being made in the treatment of this disease.</p>