Mindluster Platform

About the course Muscular System

The muscular system is an organ system consisting of skeletal, smooth and cardiac muscles. It permits movement of the body, maintains posture and circulates blood throughout the body.The muscular systems in vertebrates are controlled through the nervous system although some muscles (such as the cardiac muscle) can be completely autonomous. Together with the skeletal system in the human, it forms the musculoskeletal system, which is responsible for movement of the body. There are three distinct types of muscles: skeletal muscles, cardiac or heart muscles, and smooth (non-striated) muscles. Muscles provide strength, balance, posture, movement and heat for the body to keep warm. There are about 690 muscles in the human body. A kind of elastic tissue makes up each muscle, which consists of thousands, or tens of thousands, of small muscle fibers. Each fiber comprises many tiny strands called fibrils. Impulses from nerve cells control the contraction of each muscle fiber. This process consumes large amounts of adenosine triphosphate (ATP), the energy source of the cell. ATP binds to the cross-bridges between myosin heads and actin filaments. The release of energy powers the swiveling of the myosin head. When ATP is used, it becomes adenosine diphosphate (ADP), and since muscles store little ATP, they must continuously replace the discharged ADP with ATP. Muscle tissue also contains a stored supply of a fast-acting recharge chemical, creatine phosphate, which when necessary can assist with the rapid regeneration of ADP into ATP. Calcium ions are required for each cycle of the sarcomere. Calcium is released from the sarcoplasmic reticulum into the sarcomere when a muscle is stimulated to contract. This calcium uncovers the actin-binding sites. When the muscle no longer needs to contract, the calcium ions are pumped from the sarcomere and back into storage in the sarcoplasmic reticulum.

Medical Category's Courses

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Lesson 2 : **Muscular system 2**

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Lesson 4 : **Skeletal muscles 1**

Lesson 5 : **Skeletal muscles 2**

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Lesson 7 : **Origin Insertion**

Lesson 8 : **Origin Insertion 2**

Lesson 9 : **Raphe Aponeurosis**

Lesson 10 : **Cardiac Muscle**

Lesson 11 : **Skeletal muscles forms**

Lesson 12 : **Skeletal muscles forms 2**

Lesson 13 : **Skeletal muscles forms 3**

Lesson 14 : **Skeletal muscles forms 4**

Lesson 15 : **Skeletal muscles forms 5**

Lesson 16 : **Agonist Antagonist**

Lesson 17 : **Agonist Antagonist 2**

Lesson 18 : **Agonist Antagonist 3**

Lesson 19 : **Fixators**

Lesson 20 : **Fixators 2**

Lesson 21 : **Synergists**

Lesson 22 : **Paradox muscles**

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