

MUSCULAR SYSTEM AND ITS FUNCTIONS

The muscular system is a set of tissues in the body with the ability to change shape.

The most obvious function of the muscular system is *movement*. The nervous system coordinates the contraction of the muscular system to synchronize the movement of the limbs.

The second and less obvious function of the muscular system is *to assist with circulation*. Visceral and cardiac muscle tissues surround the blood vessels and lymph vessels that carry nutrients and oxygen to the cells of the body. Cardiac muscle makes up the heart and supplies the main force for blood travelling through the body. Large arteries and veins have associated muscles which can contract or relax to control blood pressure. The actions of large skeletal muscles also help pump the blood throughout the body.

The muscular system also aids *in moving food through the digestive system*. Most digestive organs are surrounded by smooth muscle tissue. When food needs to be moved through the gut, the muscles contract in a synchronized fashion in a wave through the digestive system. These wave-like muscular contractions are called *peristalsis*.

Muscular System Parts

Unlike other organ systems, the muscular system is divided into different types of tissues, which are incorporated into various organs in the body.

Striated muscle, or *skeletal muscle*, is the tissue most commonly associated with the muscular system. This type of muscle attaches to the skeleton and moves the limbs and body of an organism.

Cardiac muscle, which surrounds the chambers of the heart, is striated like skeletal muscle, but the cells are connected to adjacent cells, which creates more of a contractile motion to pump the blood.

Visceral muscle makes up the walls of the internal organs or viscera. Visceral muscle is also known as *smooth muscle*.

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Smooth muscle is found throughout the body where it serves a variety of functions. It is in the stomach and intestines where it helps with digestion and nutrient collection. It is found throughout the urinary system where it functions to help rid the body of toxins and works in electrolyte balance. It is found throughout arteries and veins where it plays a vital role in the regulation of blood pressure and tissue oxygenation. Without these vital functions, the body would not be able to maintain even its most basic functions.