

# Muscular system essay sample

[Science](#), [Anatomy](#)



## Muscle System

### Human Biology

The human body is covered by muscles, made up of more than 650 of them. The purpose of the muscular system is for the body to move, maintain posture, and produce heat. There are three different types of muscles tissues; cardiac, smooth, and skeletal. There are also two types of muscles are in the body; voluntary and involuntary. The ones which we can move are the voluntary muscles; the ones which move on their own, like the heart, are involuntary muscles. When muscles move, they virtually have other muscles helping out. When one muscle flexes, its opposite relaxes, for instance; the tongue. The tongue works with other muscles in the mouth so that we can chew, swallow, and talk. Another good example of a unison muscle would be the heart. The heart is the most important muscle in our body. It's what pumps blood in and out of our veins and arteries, and is what gives our body oxygen. The heart is not only composed of cardiac muscle tissues. It is also joined with skeletal muscle. Without skeletal muscles, veins would not be able to get blood moving.

They would have to rely on gravity and momentum o get through the body parts it needs to. As previously mentioned, the heart is an involuntary muscle. People do not have to think about making their heart beat; it happens naturally, like breathing. Muscles make up 40% of the body's weight. The nervous system sends signals to the muscular system which cause the muscles to contract. Muscle contractions are what create movement. Skeletal muscles are a voluntary muscle. An example of a skeletal muscle would be an arm muscle. A teacher tells you to raise your

hand, and that signal goes from your ears, to your brain, to your arm resulting in you raising your arm consciously. Cardiac muscle tissues, unlike skeletal muscle tissues, are linked together and not attached to bones. Smooth muscle tissue makes up the walls around most of the human body's organ systems. This tissue is controlled by both the body's hormones and nervous system. The three main jobs of the muscular system are to keep body heat regulated, maintain the body's balance, and create movement. Homeostasis is the balance and stability of the human body; the body's way of keeping consistency. The muscular system plays a large part in the human body's homeostasis. Even when the body is at rest, muscles are constantly moving to keep their tone consistent and to maintain the body's regular temperature.

Muscles are made of fibers which contain oxygen, which is rapidly used up by movement. During exercise the muscles need more energy than usual, and that energy comes from glucose. The glucose, or sugar, is turned into ATP. During this process the muscles use up all of the oxygen. That's when the muscles convert the glucose into lactic acid, which is what hurts after a day of excessive exercise. As the body's way of homeostasis, when you're cold, you shiver. This is because the body is telling the muscle to shake rapidly. The quick movements of the muscles are the body's way of keeping the body temperature regular. This diagram shows all of the main muscles of the body. Muscles are located all over the body, from the top of the head to the bottom of the feet. Neck muscles are used to move the head in any particular direction. The shoulder muscles (or trapezius) stabilize the head and shoulders, the arms muscles move the arms and shoulders, the

abdominal muscles are for moving your torso, and your leg muscles are for walking and balance. The most important muscles in the body are the ones which run along the spine (the latissimus dorsi). These muscles help support the body and help with standing upright. The largest muscle in the human body is the gluteus maximus, or the buttock. As unflattering as that sounds, this muscle is as important as any other muscle in the body. The buttocks are what keep the legs moving, protect the pelvic bones when we sit down (or fall down). This muscle is also responsible for keeping the body standing straight. The face is covered in muscles. These muscles control a large variety of movements, especially around the mouth and eyes. There are over 30 muscles in the face which show looks such as a smile, frown, grimace, or surprise.

Eye muscles do the most moving in the entire body. Studies have shown that the eye muscles move over 100, 000 times a day. But eye muscles don't stop moving when you go to sleep. During REM (rapid eye movement) the eyes move at a rapid pace, which create your dreams. As important as the muscular system is, it is just as prone to diseases, disorders and cancers as any other system of the body. Diseases which can affect the muscular system are fibromyalgia, muscular dystrophy, and tendonitis. A majority of muscle disease cause muscle weakness, fatigue, and deterioration of muscle fibers. Disorders which can affect the muscular system are usually due to an immune deficiency, poison, or genetic cause. Disorders of the muscles that are connected to the immune system can often lead to tumors. Cancer in the muscular system is rarely heard of, but they do exist. Muscles are made up of cells, just like the rest of the body.

This means there is no exception for the muscles becoming cancerous. Some examples of muscular cancers would be myosarcoma or abdominal cancer. Myosarcoma is cancer of the muscle tissues, resulting in tumors. Abdominal cancer is a cancer which can arise in any organ of the abdominal cavity of the body (ovaries, intestines, the abdominal muscles themselves est....). Symptoms of muscle cancer are; weight loss, jaundice, loss of appetite, vomiting, and/or large mass in the abdominal area. Treatment for muscular cancers would be to surgically remove the cancer, chemotherapy, or radiation. Other mishaps with muscles may be bruising or puncture wounds, but the great part about muscles is that they are able to regenerate. This means that they are able to grow back tissues that they have lost. All skeletal muscles are capable of regenerating.

In cases of large injuries to muscles, fibrosis occurs. When fibrosis takes place, the muscle fills in the space of missing tissue with scar tissue. After fibrosis, the muscle then undergoes a remodeling stage. This makes the muscle tissue more flexible and moveable. This may take time, and so message therapy would be a good ideal during the remodeling stage. The muscular system truly is a very amazing system of the human body!

Summary: The muscular system plays a major role in the human body.

Homeostasis takes place every moment of our lives in the muscular system. Muscles are constantly moving and are the main role in peoples' everyday transportation and communication. Just like any other system of the human body, the muscular system is susceptible to disease, disorders and cancers however the muscular system is able to repair itself and continue doing its job