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Abstract: *This article extensively covers the structure, types, physiological properties of the muscular system, as well as its role in the human body. The role of the muscles in promoting movement, controlling the activity of internal organs, maintaining body shape and heat production is presented on a scientific basis. The article also analyzes the development, diseases of the muscular system and ways to prevent them.*

Key words: *Muscular system, skeletal muscles, smooth muscles, heart muscle, myofibril, actin, myosin, contraction, physiology, movement, tone, muscle diseases.*

The human body is made up of complex systems, one of which is the muscular system. The muscles play a key role in the implementation of movement. They work together with the bones and ensure the interaction of the body with the external environment. Muscles are important not only for locomotion, but also for managing the functioning of internal organs, blood circulation, respiration and digestion.

The muscular system makes up about 40–50% of the human body. This system performs many functions necessary for the vital activity of the body.

BASIC SECTION

1. Muscle structure

Muscles are made up of special cells – muscle fibers. Within each muscle fiber are located myofibrils, which consist of actin and myosin proteins. It is these proteins that cause muscle contractions.

The muscles consist of the following parts:

Sarcomere (smallest shrinking unit)

Blood vessels

Nerve fibers

2. Types of muscles

Muscles are divided into 3 types according to their structure and function:

a) Muscular skeleton

Adjoined to the fins

Optional Managed

Shrinks rapidly

Provides movement

b) Silliq muskullar

Located in the internal organs

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Discretionary managed

Slowly, but not long, shrinks

C) Heart muscle

Only located in the heart

Automatically & Works

Shrinks in a constant rhythm

3. Basic functions of muscles

1. Action function

Muscles, together with the bones, perform the movement. Movements such as walking, running, jumping are performed with the help of muscles.

2. Maintaining body shape

Muscles maintain the body posture (posture). For example, standing or sitting is associated with muscle activity.

3. Management of activities of internal bodies

Smooth muscles provide contractions of the internal organs:

Ichak harakati

Narrowing of blood vessels

Breathing

4. Heat production

It generates heat when the muscles contract. And this is important in maintaining body temperature.

5. Protection function

Muscles protect the internal organs.

4. The mechanism by which muscles work

Muscle contraction occurs in the following stages:

Nerve impulses travel to the muscle

Calcium ions decompose

Actin and myosin begin to interact

Muscle shrinks

This process is carried out at the expense of energy (ATP).

5. Muscle development

Muscles are developed through exercise. Playing sports:

Increases muscle mass

Fortify Strength

Improves endurance

6. Muscular diseases

There are various diseases of the muscular system:

Myositis (inflammation of the muscle)

Dystrophy

Muscle spasms

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Myasthenia

These diseases limit movement and cause pain.

7. Keeping muscles healthy

To keep the muscular system healthy:

Proper feeding

Exercise

Adequate rest

Taking vitamins and minerals is necessary

CONCLUSION

The muscular system is one of the most important systems of the human body. It plays an important role in ensuring movement, maintaining body condition, managing the activity of internal organs and heat generation. Keeping muscles healthy is essential for a person's overall health. Therefore, adherence to a healthy lifestyle is important in strengthening the muscular system.

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