

Positive Impact of Wellness Running on the Cardiovascular System and the Physiological Condition of the Human Body

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Abstract:

In today's world, running is considered one of the most accessible and effective ways to improve health, including the cardiovascular system. Its influence on human health has thus become a pertinent issue. Running also aids in combating excess weight, a contributing factor to cardiovascular diseases. Moreover, regular training strengthens the immune system and reduces the risk of many diseases. Running has a positive effect on emotional well-being, reduces stress, improves mood, and promotes the production of endorphins – the happiness hormones.

Keywords: running, health, cardiovascular system, movement, physical activity, training, stress, oxygen exchange.

Relevance of the Issue: In modern society, running is a vital component of a healthy lifestyle. However, many people currently lead a sedentary lifestyle, which leads to various diseases. Running is the easiest exercise to address this problem. Running equates to movement, and movement is life. Running is a very popular sport enjoyed by adults, children, and often older people. Many engage in running not only to stay in good shape but to improve their health. Running is beneficial at any age, emphasizing the relevance of this topic. Many people who become interested in sports choose running. Scientists claim running significantly influences human longevity. Running is traditionally seen as one of the most accessible and effective ways to improve health, particularly the cardiovascular system. This sport enhances heart function, strengthens blood vessels, and normalizes blood pressure. Regular running improves blood circulation and oxygenates the blood, which is essential for overall health. People who run regularly have a lower risk of premature death and live almost three years longer than those who do not. However, running can

also be harmful if not done correctly. It is important to understand how and how much to run to maximize benefits.

Running is a foundation of a healthy lifestyle. It helps develop endurance, positively impacts essential components of the human body – the heart and blood vessels, enhances metabolism, aids in weight control, boosts the immune system, and tones the skin. Running also harmonizes the functioning of all body systems – cardiovascular, nervous, and others, as it enhances blood flow in vessels and activates previously unused capillaries.

This sport is the most accessible of all and plays a significant role in strengthening the cardiovascular, respiratory, and musculoskeletal systems. Running helps achieve fitness more effectively and faster than any other sport. It is used from an early age for physical development and is also beneficial for older generations, military training, and therapeutic physical education. It is beneficial for everyone, making it clear that running positively affects overall health.

Various perspectives exist on the importance of running for improving health. Scientists have long proven the positive impact of physical exercise on the cardiovascular system (CVS). However, it is crucial to perform any exercise correctly, as a poorly planned training regimen can worsen the overall condition of the body, particularly the heart. To better understand the correlation between running exercises and CVS, one must comprehend the difference between the functioning of a loaded and a resting heart.

The heart is the king of the CVS. Blood is ejected into the circulatory system when the heart contracts. There are two circulatory systems: the major and the minor. The former distributes blood throughout the body, including the extremities, while the latter interacts with the lungs, oxygenating them.

During increased physical activity, such as running, pressure on the heart muscle inevitably rises, resulting in the CVS adapting. The heart chambers expand, increasing heart size and the minute volume of the heart (MVH), enhancing blood supply to muscles and organs. All muscles, including the heart, hypertrophy under a training regimen, expanding the capillary network and improving blood supply to the heart.

Physical activity involving the whole body during running means that, with gradual introduction, the body adapts more easily. It is important not to stop after the first training session. With each session, handling the load improves as muscles adapt.

Running is one of the most accessible and effective ways to increase endurance and overall health. How exactly does running affect our bodies and help improve endurance? Firstly, running improves cardiovascular function. The heart works faster during running to supply muscles with oxygen and nutrients. Gradually, the heart becomes more efficient, increasing its volume and contracting more forcefully, thus strengthening and making it more resilient.

Secondly, running enhances lung function. Muscles consume more oxygen during running, causing the lungs to work harder, increasing lung capacity and efficiency in oxygenating the blood. Thirdly, running improves metabolism. The body uses more energy while running, accelerating metabolism, better utilizing energy reserves, and burning fat faster, aiding weight loss and enhancing metabolism.

Fourthly, running strengthens muscles. Muscles work harder during running, leading to their strengthening and increased endurance, enabling them to work longer without fatigue. Finally, running improves mental health. Endorphins, the happiness hormones, are released during running, improving mood and reducing stress. Running enhances concentration and reduces depression risk.

Running boosts cognitive abilities, self-control, and willpower. For productive brain function, oxygen and energy are necessary, which running supplies in greater quantities. Running enhances

cognitive processes, memory, concentration, and creativity, making it a physical and intellectual sport.

Running affects all organs, including the skeleton. It increases bone mineralization by activating osteoblasts, fibroblasts, and somatotropin production, strengthening bones and reducing fracture risk and osteochondrosis. Joints also benefit from stronger muscles, ligaments, and increased synovial fluid production. Running significantly benefits the ligamentous apparatus, heating them during training. Post-run stretches help prepare ligaments, preventing strains, inflammations, and dislocations in running and daily life.

Running offers many types and variations, each chosen based on individual capability, health, age, and mood. Running can have both positive and negative health effects, so choosing the right load based on the type of running – wellness, jogging, or sports – is crucial. Running is essential for a healthy lifestyle, but its benefits depend on correctly distributing the load. Running positively impacts health by improving functional health indicators and physical fitness levels.

Running suits all ages; anyone, regardless of age, physical abilities, or experience, can start with short runs from childhood. Begin with brief training sessions and minimal loads, adhering to rules for each running type to avoid injury and health deterioration. Regular running in the first and second halves of the day improves sleep due to its effect on the parasympathetic and sympathetic nervous systems. Evening runs should be done at least two hours before sleep.

In conclusion, running is an excellent form of physical activity, beneficial for health if practiced correctly. Here are some tips for proper running technique for health:

Running Technique Tips

- ✓ Keep the torso upright without leaning forward.
- ✓ Look straight ahead.
- ✓ Bend arms at 90 degrees, moving them near the torso.
- ✓ Land under the center of gravity (pelvis).
- ✓ Aim to land on the midfoot or toes.
- ✓ Take frequent steps (cadence above 160/min).
- ✓ Relax the shoulders.

Proper Breathing

- ✓ Breathe using the diaphragm (abdominal breathing).
- ✓ Breathing through both nose and mouth enhances running benefits.
- ✓ Do not synchronize breathing with steps; breathe intuitively.
- ✓ Slow down if short of breath.
- ✓ In winter, press the tongue tip to the upper palate to warm cold air.

Pulse

- ✓ Check pulse to ensure the correct pace.
- ✓ Run in pulse zones 1-2 (up to 75% of MHR = up to 135 bpm).
- ✓ Calculate target heart rate: $(220 - \text{age}) * 0.75$.
- ✓ Reduce speed if the pulse rises.

Equipment

- Choose shoes according to the surface. The harder the surface (asphalt, pavement), the more cushioning is needed. For trail running, choose trail shoes. In winter, consider spikes. In rainy seasons, select shoes with a membrane.
- Dress for 10-15 degrees cooler than walking temperature.
- Follow the three-layer principle in winter: thermal underwear, fleece clothing, and a membrane jacket.
- In cold weather, wear gloves, a buff, a hat, and glasses.

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