



THE EFFICIENT MACHINES OF HUMAN BODIES: THE CIRCULATORY AND RESPIRATORY SYSTEMS

Turdaliyeva Nazokat Maxammadismoil qizi

Student of Andijan State Medical Institute
+998 (94) 908 8554

nazokatturdaliyeva310598@gmail.com

Turdaliyeva Mokhlaroyim Maxammadismoil qizi

Student of Uzbekistan State World Languages University
+998 (94) 179 6313

moonlita021504@gmail.com

Article history:	Abstract:
Received: June 1 st 2022 Accepted: July 1 st 2022 Published: August 6 th 2022	The main focus of this article is to provide information related to the heart and lungs, with a special emphasis on clarification the significance of the "efficient machines" in the bodies of human beings. Moreover, it finds out the disorders that, with a higher probability, make the heart and lungs to function inappropriately, and shows the ways to develop healthy circulatory and respiratory systems.
Keywords: high blood pressure, stroke, coronary heart disease, pneumonia, bronchitis, asthma, emphysema, balanced diet, regular exercise.	

The circulatory and respiratory systems do tremendously important job in our body. It is fact that these systems do supply our body with oxygen and beneficial nutrients, and get rid of carbon dioxide and other unwanted waste materials produced by our cells. This may seem simple and regular activity for heart and lungs, however these activities are an indispensable part of our living. Without oxygen and essential nutrients, our body can not function properly and die. This article doesn't concern what the circulatory and respiratory systems are or what kind of structure they have – that is, it deals with the disorders that may cause dysfunctions of these systems. So, let's straightly move onto that part...

Most of the time, from the words of doctors and even ordinary people, we hear that they address to the circulatory and respiratory systems as efficient machines. So, why is it so? Apparently, heart and lung do behave and work as an efficient machine like *an engine* or *a motor* in a car. Anyway, occasionally, however, something of course goes wrong and causes some bigger problems.

Among other cardiovascular (another term for 'circulatory') problems, *high blood pressure* is the most common throughout the world, and many people visit hospitals or other medical centres by complaining about it. Mostly, they experience headaches, dizziness, nervousness etc. However, according to the recent research on this field, the analyses of doctors about the people who came by complaining of high blood pressure show no symptoms. When it comes to the solution, most of the time, the causes are improper or poor diet, weight, stress, heredity and exercise.

Another most common disorder in the cardiovascular system is a stroke. If in the brain the pressure on a vessel wall becomes so great, and as a result the vessel wall breaks and simultaneously blood leaks in to the surrounding tissues, this dysfunction is called a *stroke*. Eventually, the process of regularly bleeding into the brain tissue may result in paralysis and even death.

Even a recently-born child can also suffer from a heart disease. Actually a heart disease is a generally broad term for cardiovascular disorders. For a child, a *malformed heart* is a heart disease. This heart malfunction usually occurs before the birth. Heart malformations may involve distinct forms of disorders. The most common among them is faulty valves or openings between chambers.

Coronary heart disease occurs when the heart arteries become blocked or, with more medical term, clogged



with cholesterol. As you can see in the picture, too much cholesterol can cause heart disease. [LDL – low density lipoproteins; HDL – high density lipoproteins – these are miniscule protein-containing packets that cholesterol travels through the body. According to the scientists, LDL, rather than HDL, is the main factor in causing heart



disease.] If the arteries are blocked, the heart muscles can not get sufficiently enough blood, and consequently a heart attack may occur. And the heart attack makes some of the muscles of the heart die. Unfortunately, these scenarios happen too much throughout the world. According to the American research on heart diseases, in a year time, over one million people suffer from coronary heart disease in America. And now you can imagine the number of people experiencing this disorder worldwide.

As for the respiratory diseases, there are a number of disorders that affect the lungs of people. For instance, the most common among them is pneumonia, based on the of-late research on lung diseases. In fact, pneumonia is a type of disease in which a bacterium or a virus causes an inflammation of the air-filled alveoli by resulting in the difficulty of breathing in and out. This disorder leads to the buildup of fluid in the air sacs of the lungs. Eventually, this diminishes the ability of the lung to take in oxygen and remove carbon dioxide. The symptoms of pneumonia is distinguishably different, but they might as well be cough, fever, chills, shortness of breath and sweating.

Another lung problem is bronchitis. This mostly occurs while having a cold. A cold invades the mucous membranes lining the bronchi. Consequently, the membranes become inflamed as a response to them, and produce a thick sticky liquid – known as mucus. The symptoms are coughing and hoarseness. It is fact that people who frequently smoke are more and highly susceptible to the pneumonia than people who don't smoke.

Last but not least, respiratory disorders are asthma and emphysema. These two diseases differ from others, although they are considered as serious lung diseases. These latter disorders are not brought about or caused by illness. For instance, emphysema is a lung disorder in which the lungs' small air sacs lose their elasticity. When it comes to asthma, it can be an allergic reaction or response to a substance. The symptoms are coughing, wheezing and difficulty in breathing in and out. When they attack the lung, the muscles in bronchioles experience spasms by squeezing the air passages. These are the aforementioned disorders concerning the circulatory and respiratory systems. So, what are the certain ways to improve and develop healthy cardiovascular and respiratory systems?

Diet, exercise, stress, weight, and life style – all definitely affect our hear and lings. For example, a diet with lower amount of cholesterol and other animal fats factually helps to avoid clogged arteries by making the heart work harder. Furthermore, shedding unwanted pounds from your body and maintaining a body weight

that is suitable and appropriate for you are the most important factors in keeping your `efficient machines strong and healthy. On top of that, avoiding any alcoholic drinks and tobacco or cigarettes is, you need to take into accout, the first step to develop and ensure the health of your circulatory and respiratory systems. Doing any kind exercises is the most effective way to stengthen these systems and releieve stress which makes the blood vessels constrict by resulting in high blood pressure. Doing exercise regularly in a daily basis causes the heart to pump blood more efficiently. Moreover, making muscles work and move can help to take oxygen from the blood more easily. In the light of thorough consederation, exercise helps to maintain healty respiratory and circulatory systems. Swimming, diving, walking, commuting, biking, cross-counrty skiing and even running are the forms of exercises that are simultaneously easy to make them a part of daily life and to cheer the mood up and enjoyable.

Based on the research on physical exercises, it has been detected that some people find relaxation exercises beneficial. According to the analyses of theirs, they benefit from them, because they are considered as a combination of deep breathing and stretching the muscles so as to relieve stress lika yoga or meditation. The aim of these exercises is to loosen tight muscles. Other people people consider that as a process of sharing the feelings of fear, trepidation, anxiety, anger, hopelessness and frustaration with their family, soulmate or a trusted friend. And this procedure helps them to relax and relieve or ease stress.

BIBLIOGRAPHY

1. A.G. Gadayev, M.SH. Karimov, X.S. Axmedov. (2014). *Ichki kasalliklar propedevtikasi*.
2. J.A. Blom. (2003). *Monitoring of Respiration and Circulation*. (1 st Edition).
3. <https://cambridgebrc.nihr.ac.uk/research/cardiovascular-and-respiratory-disease/#:~:text=Cardiovascular%20and%20respiratory%20diseases%20are,disease%20are%20sudden%20and%20unexpected>.
4. <https://www.amazon.com/Body-Systems-Respiratory-Circulatory/dp/1410850846>
5. <https://opentextbc.ca/biology/chapter/11-3-circulatory-and-respiratory-systems/#:~:text=Gas%20exchange%20betw een%20tissues%20and,carbon%20dioxide%2 C%20work%20in%20tandem>.
6. <https://www.healthline.com/health/circulatory-system-diseases#cad>
7. <https://www.livescience.com/22616-respiratory-system.html>