AGE FEATURES OF INDICATION OF EXTERNAL RESPIRATION IN TRAINED AND UNTRAINED PEOPLE

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Abstract: *the diaphragm separates the heart and lungs from other members of the abdominal cavity. When the diaphragm during breathing takes place the whole movement of the abdominal organs. When a person breathes through the diaphragm, the surface of the alveolaris increases, blood is oxygenated well, and the circulation is accelerated. This also has a positive effect on the activity of the internal organs in the abdomen and helps to remove toxins and waste from the body, reduces mental stress.*
Keywords: *diaphragm, epithelium, lung capacity, proportionality, alveolar degeneration, toxins, mental stress, hypoxia.*

ВОЗРАСТНЫЕ ОСОБЕННОСТИ ПОКАЗАНИЯ ВНЕШНЕГО ДЫХАНИЯ У ТРЕНИРОВАННЫХ И НЕТРЕНИРОВАННЫХ ЛЮДЕЙ

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Аннотация: *диафрагма отделяет сердце и легкие от других органов брюшной полости. При работе диафрагмы во время дыхания происходит целостное движение органов брюшной полости. Когда человек дышит через диафрагму, поверхность альвеол увеличивается, кровь хорошо насыщается*

кислородом, и кровообращение ускоряется. Это также положительно влияет на деятельность внутренних органов брюшной полости и помогает выводить токсины и шлаки из организма, уменьшает психическое напряжение.

Ключевые слова: *диафрагма, эпителий, жизненный объем легкий, пропорциональный, альвеоловая дегенерация, токсины, психическое напряжение, гипоксия.*

Relevance. Our country has created great opportunities for youth to develop both mentally and physically mature, spiritually developed and healthy. A healthy lifestyle is a subjective factor. But it is influenced by quite objective reasons: the standard of living of the population (financial situation, provision of housing, etc.), the presence of good nutrition, a clean environment, etc. According to experts, the health status of the population in a particular country is 15-20 % depends on genetic factors, 50-55% - on social conditions and lifestyle, 20-25% - on the degree of environmental pollution, i.e. environment, and 10-15% - of the state and level of health care in the country.

Characteristics of the mechanisms of respiratory regulation in hypoxia are studied mainly under highaltitude conditions [1–4]. However, these conditions include some additional external factors, such as a low atmospheric pressure, low temperature, and an increased background radiation, which also influence the body. At the same time, the physiological mechanism of action of normobaric hypoxia on the external respiration control and metabolism are of special interest, because it allows researchers to study the action of a single hypoxic factor directly influencing the functioning of all parts of the oxygen transportation system.

As you can see, among these so-called levels of health condition, social conditions and a healthy lifestyle occupy a large place. It is well known that many adult diseases are laid in the womb. A woman is a continuer of the human race. A healthy woman - healthy children, that is, the future health of any nation depends on the state of health of women, and therefore, current girls and girls.

For the normal continuation of the life of a person and all living creatures, periodic penetration of oxygen from the external environment into the tissues of the body is necessary. Breathing is a sign of life. About this, the ancient Romans said this: "quot - I breathe, then I live." A person eats 1.24 kg of food per day and drinks about 2 liters of water, but absorbs more than 9 kg of air (10,000 liters). The secret to longevity is proper breathing. For humans, the most effective way is natural deep breathing through the diaphragm. The diaphragm separates the heart and lungs from other organs of the abdominal cavity. During the work of the diaphragm during breathing, there is a holistic movement of the abdominal organs. As a result, pressure changes in the abdominal cavity. With age, we move away from proper breathing, that is, breathing through the diaphragm decreases, and the chest type of breathing begins to prevail. This is due to the fact that with age we go into a sedentary lifestyle and, as a result, respiratory activity decreases and thereby we block the movement of the diaphragm. The key to health and longevity is

diaphragmatic breathing. The advantage of diaphragmatic breathing, in contrast to chest breathing, is as follows:

1 - during diaphragmatic breathing, air penetrates to the lower part of the lungs, increases the surface of the alveoli and provides good oxygen saturation of the blood.

2 - due to the movement of the diaphragm as a result of changes in pressure in the abdominal cavity, blood circulation is accelerated. This has a positive effect on the activity of internal organs located in the abdominal cavity. As a result, digestion improves. It also helps to eliminate toxins and toxins from the body.

3 - deep breathing through the diaphragm has a calming effect on the nervous system and reduces the mental stress of the body. This means that proper breathing through the diaphragm restores health and rejuvenates our body. Helps the body fight diseases.

Objective: to study the physiological basis of external respiration indicators occurring in the human body and to properly organize a healthy lifestyle.

Research Methods.

Research was carried out in several stages. We divided the studied people into 3 groups by age. Each group consisted of 10 people: The first group consisted of students of the third grade of the 33rd school at the age of 8-9 years. Inspections were carried out in the October-December month. Studies were conducted mainly between 13-14 hours. The second group consisted of students of the pedagogical institute at the age of 22-23 years. The studies were conducted from November to January, mainly between 11-12 hours. The third group consisted of elderly people aged 60-75 years living in the city of Bukhara.

The studies were conducted from November to January, mainly between 16-17 hours. Using a spirometer, the vital lung capacity (VC) was measured in all subjects. The number of people in each group is 33.3%. Our goal is to study changes in lung capacity in people of different ages.

Research results and discussion:

The oxygen demand of young children is very high. For example, for the normal supply of 1 kg of the body weight of a child’s body, 1400-1500 cm3 of air per minute must pass through its lungs, and for an adult - 300-400 cm3 of air. This indicates that in adults, energy metabolism and metabolism are very passive. With age, morphological and physiological changes are observed in all parts of the respiratory system, especially in the pulmonary circulation. Due to atrophy of the epithelial and smooth muscles of the upper respiratory tract, sputum accumulates in the bronchi.

This, in turn, makes breathing difficult by narrowing the bronchial cavity. As a result, fibrosis is formed in the arteries of the pulmonary circulation and fats accumulate in the capillary endothelium. This reduces the vascular function and diffusion capacity of the lungs. There are also a number of changes in lung volumes. For example, lung capacity and breathing volume are reduced to 10 ml annually. The residual volume increases, anatomically the air of the dead space and breathing quickens. The most interesting thing is that in a calm state there are no

changes in the gas exchange of the lungs. However, a hypoxic state occurs in arterial blood.

The vital capacity of the lungs changes during physical work. In an adult, during muscular work, pulmonary ventilation increases due to increased and deeper breathing. Activities such as running, swimming, and cycling dramatically increase pulmonary ventilation. In trained people, increased pulmonary gas exchange occurs mainly due to an increase in the depth of breathing. Because of the peculiarities of their breathing apparatus, children cannot significantly change the depth of breathing during physical exertion, but increase their breathing rate.

And without that, frequent and shallow breathing in children with physical activity becomes even lower the efficiency of ventilation, especially in young children. Physical work in healthy people leads to a decrease in lung capacity by 15% compared with a calm state. A further decrease in the vital capacity of the lungs indicates a deficiency in the circulatory system of the lungs. When we analyzed the vital capacity of the lungs in groups, we obtained the following results. The indicator of vital lung capacity in girls of the 1st group was 1.4-1.7 liters. And in boys of this group, the vital capacity of the lungs was 1.75-1.9 liters. The data obtained indicate that all students are healthy. The oxygen demand of young children is very high. This suggests that children are very actively involved in energy metabolism and metabolism. The indicator of vital lung capacity in one of the girls-schoolgirls was quite high (1.75 - 1.9 liters), as an indicator characteristic of boys. It turns out this schoolgirl is swimming.

This means that when playing sports, the indicator of vital capacity of the lungs increases and this is well reflected in human health.

The vital lung capacity indicator for girls of students of group 2 was 1.7-2.3 liters, and for boys - 3.4-3.8 liters. This can be seen from the data obtained that in girls and boys 22-23 years old, the lung capacity should be as high as possible. The vital capacity indicator for girls students should be 3-4. 5 liters, and for boys - 4-5.5 liters. The above data indicate that girls and boys are mainly engaged in mental work, that is, they are limited to physical labor.

This indicates that students have high chest breathing and a low immune system. Based on the data we have received, our advice to these students is sports and proper breathing exercises.

The indicator of lung capacity in women of the 3rd group is 1.3-1.9 liters, the indicator of lung capacity in elderly men is 2.0-2.8 liters. These findings suggest that the lung capacity of older people is slightly below normal. This indicates that the energy metabolism and metabolism in adults is very low. In one of the women, the vital capacity of the lungs was below normal. She explained this by the fact that she is allergic to the upper respiratory tract.

In one of the men, the vital capacity of the lungs was significantly higher than normal. It turns out that he walks every morning and evening in the stadium, which is located near his house. Therefore, he looks quite young, despite the fact that he is 65 years old. No wonder they say that sport rejuvenates a person.

The vital capacity of the lungs depends on the growth of a person. In people of the same sex and the same age, if the growth of the body is 1 cm higher, then the

volume of the lungs increases by 1-2%. The vital lung capacity in men is greater than in women. In people of the same age and the same body length, lung volume is 10-15% less in women than in men. This is expressed in various proportions of the size of the chest and body. This means that the longer the leg and the shorter the body, the lower the lung capacity.

Conclusions:

Thus, the movement that occurs due to contraction of the respiratory muscles and changes in the amount of oxygen in the internal environment is controlled by the respiratory center. Morphological and physiological changes in the pulmonary circulation are observed with age. The vital capacity of the lungs increases from birth to twenty years. At the age of twenty to forty years does not change. After forty years, lung volume gradually decreases. There is a process of degeneration in the lung tissue. As a result, lung volume decreases.

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