

## THE IMPORTANCE OF BREATHING SYSTEM ORGANS

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**Abstract:** Human and every other living organism takes in oxygen from the environment and releases carbon dioxide gas called respiration. Breathing is the most necessary physiological process for the life of every living organism.

**Keywords:** breathing, organs, oxygen, lungs

The breathing process consists of the following parts: 1. Exchange of oxygen and carbon dioxide between the alveoli of the lungs and the external environment (external respiration). 2. Exchange of oxygen and carbon dioxide between pulmonary alveoli and pulmonary capillary blood vessels. 3. Exchange of oxygen and carbon dioxide between blood and tissues (internal respiration). Proteins, fats and carbohydrates in cells and tissues are oxidized and generate energy with the help of oxygen received from the external environment through breathing. All vital processes in cells and tissues (stimulation, movement, reproduction) are carried out at the expense of this energy. The carbon dioxide gas formed as a result of these vital processes passes from the cells and tissues into the blood and is released into the external environment through the lungs.

The structure of the respiratory organs

Respiratory organs include: nasal cavity, larynx, larynx (trachea), bronchi, lungs and pleural membranes.

Nasal cavity. Nasal cavity consists of upper, lower and two sidewalls. The nasal cavity is divided in two in the middle. Its inner surface is covered with a mucous membrane. There are many small glands in this membrane, from which a mucous fluid is released. The mucous membrane is rich in small blood vessels and nerve fibers.

Breathing movements

Breathing consists of inhalation and exhalation. The movement of breathing is provided by the rise of the ribs and the descent of the diaphragm. Elevation of the ribs occurs as a result of contraction of the neck and external intercostal muscles. The downward movement of the diaphragm occurs as a result of the contraction of its muscles. As a result of these movements, the size of the chest increases, the lungs expand, and air is sucked into the lungs from the outside environment. Breathing with the active participation of intercostal muscles is called chest breathing. Breathing through greater movement of the diaphragm is called abdominal breathing. In men, abdominal breathing is developed, and in women, chest breathing is developed. Breathing through the chest or abdomen depends on the position of the person and

the work he is doing. For example, when a person lifts a heavy load, the movement of the chest becomes difficult because the chest and spine act as a support for the load. Therefore, the diaphragm is mainly involved in breathing. In pregnant women, the downward movement of the diaphragm becomes difficult. Therefore, the respiratory movement is provided by the contraction of the intercostal muscles.

#### Diseases of respiratory organs

Diseases of respiratory organs are divided into two types: 1. Inflammatory diseases of respiratory organs. 2. Infectious diseases of respiratory organs.

**Inflammatory diseases of respiratory organs.** Mucous membranes covering the inner surface of each part of the respiratory organs can be inflamed due to changes in the external weather temperature, dust particles in the air, and chemical substances. Some parts of the respiratory organs, namely the nose, throat, larynx, trachea, bronchi and lungs can be inflamed separately or all of them can be inflamed at the same time. Accordingly, the symptoms of the disease will be different.

**Infectious diseases of respiratory organs.** Among the infectious diseases of the respiratory organs, the most common among the population are influenza and pulmonary tuberculosis.

**Flu.** Special influenza viruses cause this disease. They are of three types: (A, B, C). In addition to these, viruses called adenoviruses also cause flu-like illness.

Influenza is most common in autumn and winter.

**Pulmonary tuberculosis.** Tuberculosis is an infectious disease. The German scientist Robert Koch discovered the disease-causing microbe in 1882, so it is called Koch's bacillus after him. The disease-causing microbe is transmitted through air, dishes, unboiled water. Because the germs in the sputum and saliva drops of a patient with tuberculosis can spread into the air, damage dishes, towels and other items, and through them can be transmitted to healthy people. Germs can also be transmitted through unboiled milk from an infected cow.

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