

# AIR POLLUTION AND ITS HARMFUL EFFECTS ON THE HUMAN ORGANISM

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**Abstract:** *Air pollution is currently not only a problem of Uzbekistan, but a problem of the whole world. Air pollution is pollution caused by the presence of substances in the atmosphere that are harmful to the health of people and other living beings and the climate. Since the beginning of the industrial revolution 300 years ago, the problem of air pollution has been constantly increasing. Coal is responsible for 50% of air pollution. If we dwell on other statistics, according to the conclusion of WHO, 99 percent of the world's population breathes air with pollution levels higher than standard indicators. This is a serious threat to human health. This article talks about the composition of air, the factors that increase air pollution, its harm and the impact of damage on the human body. In addition, the development of new measures to detect air pollution and measures aimed at its prevention were discussed.*

**Key words:** *Artificial pollution, anthropogenic damage, bronchial asthma, myocardial infarction, brain stroke, ischemia, oxygen, glucose, biochemical analysis, heavy metal salts, urbanization.*

## INTRODUCTION

Currently, air pollution, which has reached the level of a global problem and is the cause of many diseases, the impact of the increase of harmful substances and waste in it on the human body is one of the main reasons for the further development of genetic diseases and oncological diseases. Here, we reported that on February 29, 2024, based on the indicators recorded by the "Uzhydromet" stations, the IQAir portal took the first place among the world's major cities in terms of air pollution. it is permissible to say. Measures taken by young people to prevent certain situations that cause such great losses will help to prevent several diseases listed below.

## METHODS AND LITERATURE ANALYSIS

To prepare this article, Google scholar, PubMed and several other scientific and public databases were searched for keywords such as "Atmospheric air pollution statistics", "влияние загрязнения воздуха на организм", articles published from 2000 to 2023 in Uzbek, Russian and English were analyzed and summarized.

## RESULTS

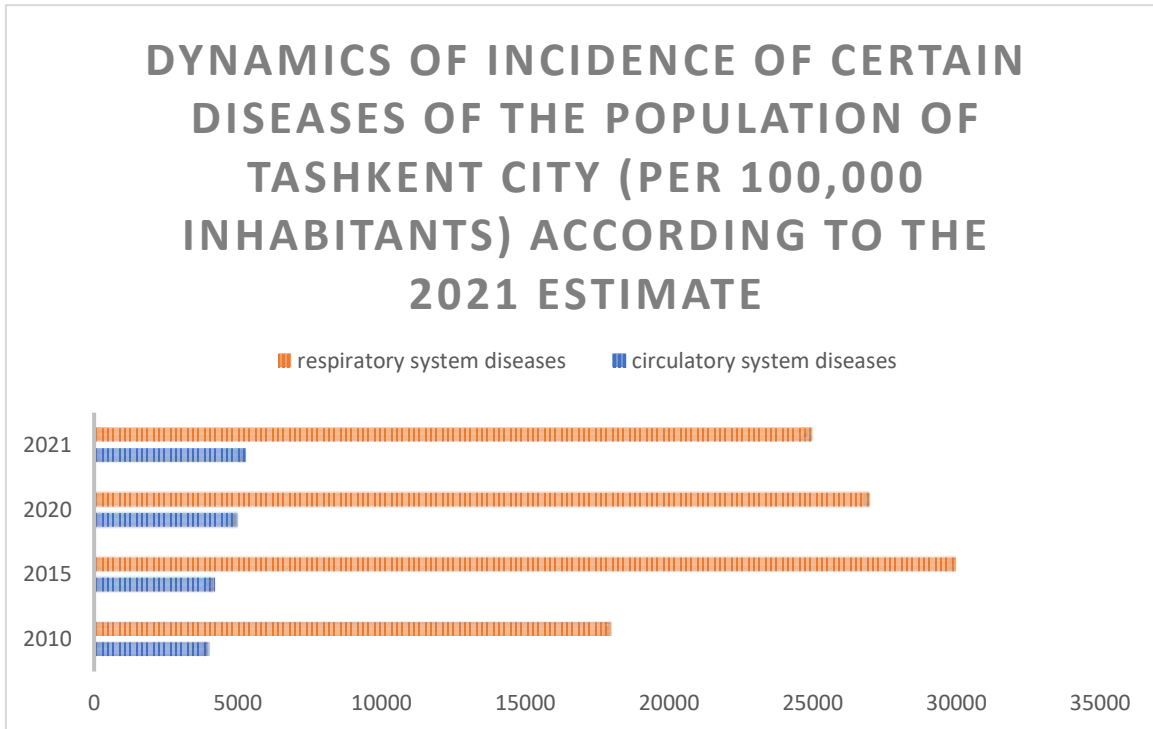
As we all know, recently air pollution in Tashkent city has many serious and negative consequences. In normal conditions, fresh air is 21 percent

oxygen, 78 percent nitrogen, 0.03 percent carbon dioxide, and 0.93 percent other gases.

#### *Factors causing air pollution*

It is known that the physical and chemical properties of atmospheric air are constantly changing, but the increase in the amount of harmful gaseous substances in its composition has a direct effect on the human body. Among the artificial air pollution, i.e. anthropogenic damage caused by people, smoke from cars takes the first place, energy industry, enterprise and organization production, factories and factories, agricultural production are among them. The World Health Organization estimates that air pollution causes 7 million premature deaths each year and millions of healthy years lost to disease. As our great grandfather Abu Ali ibn Sina said, "If there is no dust in the air, a person will live for 1000 years", in fact, the pollution that occurs around us causes many diseases, such as bronchial asthma, it is the whole world 4 to 10 percent of people suffer from the disease, and this figure is 10-15 percent in children. This disease is a chronic disease of the respiratory tract, the main causes of which are dust in the air, tobacco smoke, bacterial and viral infections, in the stages of the development of this disease, shortness of breath, feeling of lack of air, acute cough are one of the main complaints of the patient. As a result of this disease, a person can die due to acute respiratory failure. According to the statistics presented by the World Health Ministry, the number of people who died from this disease in 2019 was 455,000. This was just one example of respiratory disease, but there are many diseases caused by this type of air pollution. Air pollution shows its effects over the years and causes not only respiratory system diseases in the human body, but also various dangerous and chronic diseases in the whole body. Lack of oxygen in the body causes a number of biochemical changes. In a normal state, when our body is constantly supplied with oxygen, the breakdown of glucose takes place aerobically, that is, with the help of oxygen, and the energy necessary for our daily activities is formed ATP, due to various reasons, the amount of oxygen entering our body decreases, glucose anaerobic, ie without oxygen, it leads to decomposition. As a result of this reaction, 2 molecules of lactic acid are formed. An increase in lactic acid causes an increase in body acidity, ie a decrease in pH. This causes pain in the body. Chronic continuation of this condition causes strain on the cardiovascular system. In order to make it easier to understand how air pollution affects the human body, let's analyze another disease. After respiratory diseases, one of the diseases that has a great impact on human health is cardiovascular disease. How does air pollution affect the cardiovascular system? it is natural to ask that question. The researchers modeled the effects of different sources of air pollution on mortality. According to this, in 2015, the bad state of the environment caused the death of 790

thousand people throughout Europe. Currently, 40-80% of such cases are caused by cardiovascular diseases, including strokes and heart attacks. It is noted that this is almost twice the number of deaths due to respiratory disorders. One of the main symptoms of a myocardial infarction is a long-term severe pain in the chest due to a decrease in the amount of oxygen and nutrients in a certain part of the heart muscle. Below is a diagram of development statistics of respiratory and cardiovascular diseases over the years.



Here we will look at the meaning of another medical term: stroke is a sudden disruption of blood circulation in the brain, damage to brain tissue, damage and loss of function of brain tissue, bleeding into the brain. As we can see, air pollution that we have neglected itself causes such serious diseases. These are invisible damages that destroy humanity from the inside. In addition, toxic smoke and heavy metal vapors emitted from enterprises and factories, cars, and several sources listed above, when we breathe through the lungs, pass through the blood to the tissues, in the organs, these toxic gases are absorbed. and the accumulation of heavy metal salts leads to the ischemia of this organ, resulting in serious consequences up to the failure of this organ.

Polluted atmospheric air affects not only humans, but also negatively affects all living organisms around us, including plants and animals. And this is our greatest harmful impact on the environment.

**CONCLUSION**

Measures to prevent or reduce the conditions and diseases listed above can save many lives. It may be just a statistic to us, but underneath these numbers, the truth is that thousands, millions of people are dying at the same

time unable to live their lives satisfactorily. Focus on urbanization leads to neglect of air pollution. Along with reducing deforestation, more plantings of these types of plants will reduce air pollution and even a small reduction in these statistics. The development of new, modern devices that detect levels of pollution, new technologies for filtering harmful fumes emitted from factories and factories is one of the main tasks facing us young people. Preventing even a small amount of disease using from disposable medical masks, especially soaking them in pure distilled water before use and then wearing them, will help trap dust particles that can pass through the mask and reduce the incidence and disease progression.

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