EFFECT OF HARMFUL SUBSTANCES EMITTED INTO THE ATMOSPHERE ON HUMAN HEALTH

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Abstract: *Air pollution, which poses a direct threat to human health, is associated with the release of toxic substances into the atmosphere produced by certain industrial processes. All air pollutants have a negative effect on human health to a greater or lesser extent. These substances enter the human body mainly through the respiratory system. Respiratory organs are directly affected by contamination, because about 50% of the 0.01-0.1 micron pollutant entering the lungs accumulates in them. Particles that enter the body have a toxic effect because they:*

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Abstract: Zagryaznenie vozdukha, predstavlyayushchee pryamuyu ogrozu zdorovyu chloveka, vyazano svybrosom v atmosferu toksichnyx veshchestv, obrajuyushchixsya v rezultate nekotoryx myshlennyx processesov. Vse gryazniteli vozdukha v tay ili inoy stepi okazyvayut negative vozdeystvie na zdorove cheloveka. Eti veshchestva popadayut v human organism primarily through the digestive system. Neposredstvennoe vozdeystvie zagryaznenenia okazyvayut na organy dykhaniya, poskolku v nix nakaplivaetsya okolo 50% postupayushchix v lekkie zagryaznyayushchix veshchestv razmerom 0.01-0.1 μm. Chastitsy, popadayushchie and organism, okazyvayut toksicheskoe deystvie, poskolku:.

Keywords:*Danger to human health, air pollution, inhalation of toxic substances produced in some industrial processes into the atmosphere, joint diseases, human.*

Keywords: *Danger to human health, air pollution, inhalation of toxic substances produced in some industrial processes into the atmosphere, together with diseases, human.*

Keywords: *Opasnost dlya zdorovya cheloveka, zagryaznenie vozdukha, vdykhanie v atmosferu toksichnyx veshchestv, obrajuyushchixsya pri nekotoryx promyshlennyx protsesakh, vmeste s zabolevaniyami cheloveka.*

Enter. Air pollution, which poses a direct threat to human health, is associated with the release of toxic substances into the atmosphere produced by certain industrial processes. All air pollutants have a negative effect on human health to a greater or lesser extent. These substances enter the human body mainly through the respiratory system. Respiratory organs are directly affected by contamination, because about 50% of the 0.01-0.1 micron pollutant entering the lungs accumulates in them. Particles that enter the body have a toxic effect because they:

- toxic (poisonous) by its chemical or physical nature;
- obstructs one or more mechanisms by which the respiratory (respiratory) tract is normally cleared;
- serves as a carrier of a toxic substance absorbed by the body.

Level of study of the problem. In some cases, exposure to one of the pollutants combined with others can cause more serious medical problems than exposure to each of them alone. The duration of exposure plays an important role [1]. High levels of air pollution have been linked to diseases such as respiratory tract damage, heart failure, bronchitis, asthma, pneumonia, emphysema and eye diseases. A sharp increase in concentration lasting several days increases the number of respiratory and cardiovascular diseases in the elderly. The fact is that the concentration of carbon dioxide exceeding the maximum permitted level causes physiological changes in the human body and causes death when the concentration exceeds 750 ml [2]. This is explained by the fact that it is an extremely aggressive gas that easily combines with hemoglobin (red blood cells). When combined, carboxyhemoglobin is formed, increases (above the norm, equal to 0.4%), its content in the blood is accompanied by the following[4].

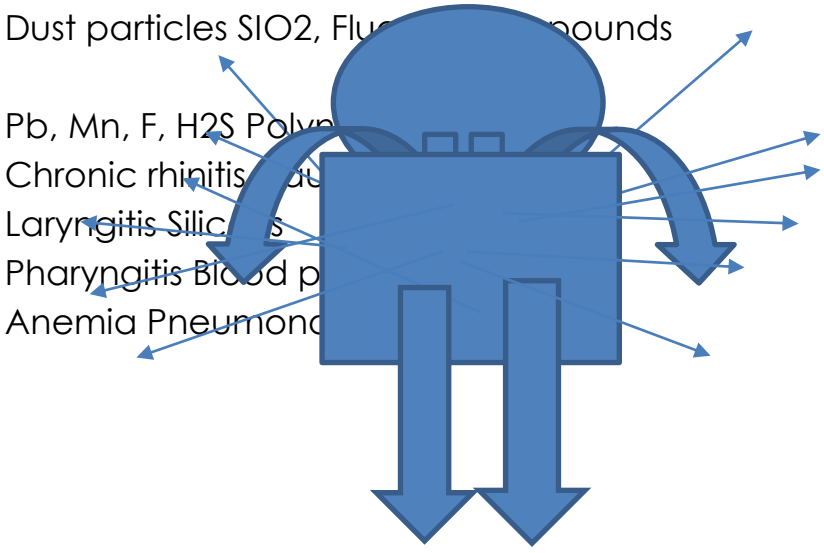
- the ability to assess the deterioration of visual acuity and the duration of the time interval;
- disorders of some psychomotor functions of the brain (in 2-5%);
- changes in heart and lung function (if the content is more than 5%);

•headache, drowsiness, spasms, breathing problems and death (in 10-80%).

The purpose of the study. The level of carbon monoxide exposure to the body depends not only on its concentration, but also on the time a person is in polluted air (exposure). It has been found that people who work professionally with asbestos are more likely to develop cancer of the bronchi and diaphragm, which separate the chest and abdomen. Beryllium has a harmful effect on the respiratory tract, as well as on the skin and eyes (up to the development of cancer). Mercury vapors cause malfunction of the central nervous system and kidneys. Because mercury can accumulate in the human body, its effects eventually lead to mental retardation[5]. Chronic bronchitis, pulmonary emphysema, various allergic diseases,Dust particles in the atmosphere have an unpleasant effect on the human body. The complexity of dust depends on the biological activity of the chemical substances contained in them, and the physical aspect of their nature. For example, if lead (Pb), mercury, manganese (Mn), cadmium (Cd), fluorine (F), aerosols in the dust in the air are constantly falling into the body, it is clear that chronic diseases will appear. In particular, deficiency, fluorosis can cause diseases such as polyarthritis, polyneuritis (Fig. 1)

Picture 1.

Effects of harmful substances on human health



Practical results of the research. Khojaabad district of Andijan region, which is one of the major industrial cities of our republic, has many production enterprises that pollute the atmosphere. 637,600 tons of atmospheric air polluting substances are generated annually in the technological processes of production, of which 97.2% are captured. The

amount of air pollutants released into the atmosphere is 61.7 thousand tons. The efficiency of cleaning equipment is 93.9%. This indicator has increased by 1.9% compared to previous years. The main amount of harmful substances discharged (94%) corresponds to large production enterprises[6].

At the RECOSEMENT-cement production enterprise, it is planned to silt the facility for cleaning nitrogen oxides formed during gas burning, and the above-standard level of these substances has been maintained.

In total, more than 43.5 million wastes are collected, of which 62,000 industrial wastes and 46,000 tons of household wastes are processed per year. Also, the surface structure of 24,700 hectares of land in the district has been damaged, of which 5,700 hectares require recultivation. So far, 2.1 thousand hectares (37%) of land have been recultivated[7].

In Khojaabad district, studies were conducted to monitor pollutants and small volatile particles released into the atmosphere by production enterprises.

The rapid development of many industries has had a detrimental effect on the ecosystem[8].

During 2021-2022, air samples were taken and chemical analyzes were carried out in order to determine the amount of harmful factors. When the samples were analyzed in laboratory conditions, the results of the experiments carried out in the spring, summer and autumn of 2022 show that dust 0.27 mg/m3, sulfur 0.067 mg/m3, nitrogen anhydride 0.36 mg/m3, formaldehyde 0.062 mg/m3, lead was 0.0011 mg/m3. Nitrogen dioxide 2.2 ml/m3, formaldehyde 2.1 ml/m3, lead 1.8 ml/m3 are more than the allowed amount.

Summary. In this regard, the scientific research conducted on the scale of our republic shows that the following conclusions can be drawn. The main part of the enterprises with the participation of foreign capital belongs to Andijan city 89 (40.1%), Andijan 18 (8.1%), Shahrikhan 17 (7.7%) and Asaka 14 (6.3%) districts. fainting. The enterprises established with the least participation of foreign capital are Boz 4 (1.8%), Ulug'nor 4 (1.8%), Jalakuduq 5 (2.3%), Pakhtaabad 5 (2.3%)) and 5 (2.3%) districts of Khojaabad. Ambient air quality is evaluated according to the list of priority substances created separately for each city. The level of atmospheric pollution is determined using various characteristics and indicators of the ecosystem, but this does not allow us to evaluate it unambiguously.

To date, the methodology of risk analysis is very common. Risk assessment models are different and characterized by uncertainty of data.

•Taking into account the above conclusions, as well as the set goal, the following tasks were formed in the work:

•To carry out hazard identification, to analyze the regions of industrial cities of Uzbekistan according to indicators describing the level of atmospheric pollution, and to determine the characteristics of atmospheric air pollution processes.

•Theoretical analysis of connections in the "Risk-Danger" system and study of the quantitative indicator of risk assessment of exposure to urban air pollution.

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