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TYPES OF ENVIRONMENTAL FACTORS AFFECTING HUMAN HEALTH.



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ABSTRACT

Humans are not only social beings, but primarily biological ones, so all natural conditions and environmental factors influence their health in one way or another. For millennia, human activity has been aimed not at harmonious coexistence in the biosphere, but at creating comfortable living and working conditions exclusively for themselves.

Keywords. Biosphere, microorganism, environmental factor, biotic, abiotic, anthropogenic factors.

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Tabiiy fanlar va agrobiotexnologiya fakulteti
Ekologiya va geografiya kafedrasi dotsenti va assistent o'qituvchisi
Buxoro davlat universiteti
“Inson salomatligiga ta'sir qiluvchi atrof-muhit omilining turlari”



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ANNOTATSIYA

Insonlar nafaqat ijtimoiy qatlamda mavjud, balki asosan biologik qatlamdagi vakildir, shuning uchun barcha tabiiy sharoitlar va atrof-muhit omillari ularning sog'lig'iga u yoki bu tarzda ta'sir qiladi. Ming yillar davomida inson faoliyati biosferada uyg'un birga yashashga emas, balki faqat o'zlari uchun qulay yashash va ishlash sharoitlarini yaratishga qaratilgan edi.

Kalit so‘zlar: biosfera, mikroorganizm, atrof-muhit omili, biotik, abiotik, antropogen omillar.

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« Виды факторов окружающей среды, влияющих на здоровье человека »

АННОТАЦИЯ

Человек – существо не только социальное, но в первую очередь биологическое, поэтому все природные условия и факторы окружающей среды так или иначе оказывают влияние на его здоровье. Активная деятельность человека на протяжении тысячелетий была направлена не на гармоничное существование в биосфере, а на создание комфортных условий жизни и труда исключительно для себя.

Ключевые слова: биосфера, микроорганизм, экологический фактор, биотические, абиотические, антропогенные факторы.

Introduction. People built cities in swampy areas, dug tunnels through mountains, cleared forests, drained reservoirs, released carbon trapped in the earth's crust for millions of years as coal and oil, and built nuclear power plants, disregarding the living conditions of other inhabitants of the Earth (animals, plants, microorganisms). This significantly complicated the relationship between humans and nature. Over time, people realized that, in their efforts to ensure a comfortable existence, they were disrupting the natural balance of the biosphere. But since the destructive mechanism was set in motion long ago, it will take many years to restore the balance[1,5].

The aim of the study. Classification of Environmental Factors: Recognizing that an immediate return to life in close contact with nature is impossible, humans developed a special science—ecology (from the Greek oikos—dwelling, home)—to study the relationships between humans, other living organisms, and the conditions under which they exist. According to the terminology used in this scientific field, any environmental condition that directly or indirectly impacts a living organism at any stage of its life and to which it responds adaptively is an environmental factor[2,5,8].

Environmental factors can be roughly divided into three broad groups:

biotic – the influence of living nature;

abiotic (climatic, edaphic, etc.) – the influence of inanimate nature;

anthropogenic – the influence of human activity, whether rational or irrational.

Currently, the human body's adaptive mechanisms operate more slowly than the environment changes, leading to health problems. This is especially true for residents of modern megacities.

What are the dangers of air pollution? Living in a big city has many positive aspects. These include comfort, public amenities, developed infrastructure, and opportunities for self-fulfillment. However, megacities also pose significant health risks due to unfavorable environmental factors. In addition to the fact that the air in large cities is regularly polluted by gasoline exhaust from millions of cars, accidents at industrial facilities periodically occur, resulting in harmful emissions into the atmosphere [1,3].

Environmental factors also influence human mental health. For example: Stress and anxiety: Chronic exposure to pollutants and climate change can cause high levels of stress and anxiety,



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especially in people living in unfavorable conditions. Depression: Research shows that people living in polluted areas are more likely to suffer from depression, which may be related to poorer overall health and access to a clean environment[5].

Methods for Minimizing Health Impacts 4.1. Public Health The need to develop public health programs is becoming clear. Important measures include: Raising awareness: Informing the public about the dangers of pollution and ways to protect their health is a key step to improving the situation. Creating green spaces: Increasing the number of parks and greening cities will help improve air quality and create a healthy living environment[4].

Research material and method. Methods of comparative analysis, information synthesis, and statistical data interpretation were used. A systematic analysis of scientific literature, WHO reports, and Discussion and Results were utilized.

As a result of human mismanagement, tens of billions of tons of carbon dioxide, hundreds of millions of tons of carbon monoxide and dust, tens of millions of tons of nitrogen oxide, as well as enormous quantities of freons, toxic chemicals, and dangerous carcinogens, including asbestos, beryllium, nickel, chromium, and others, are released into the environment. Chemicals contained in human waste pass from one chain to another along environmental links: from air to soil, from soil to water, from water to atmosphere, and so on. Ultimately, they enter the human body. Toxins emitted into the atmosphere by modern industrial enterprises have even been detected in the ice of Antarctica! Environmental pollution manifests itself in acid rain, the formation of smoky smog, and toxic effects [3].

Freon in the atmosphere contributes to the thinning of the ozone layer, which protects the Earth from the harmful effects of ultraviolet rays. All of the above-mentioned chemicals, depending on their concentration and exposure time, cause various symptoms: sore throat, cough, nausea, dizziness, loss of consciousness, and acute or chronic poisoning. Regular exposure to chemicals, even in small doses, is extremely dangerous! It manifests itself as rapid fatigue, apathy, decreased attention, forgetfulness, drowsiness, insomnia, severe mood swings, and other neuropsychiatric disorders. Harmful toxins negatively affect the kidneys, liver, spleen, and bone marrow, the main hematopoietic organ [2,4].

People use water for personal purposes, without even knowing what harmful substances it contains or the risks they pose. Therefore, the factors that shape human health in this case cannot outweigh pollution factors, and therefore, residents of industrial zones experience higher rates of illness, including cancer, which significantly shortens their lives [2]. The main physical factors that negatively impact humans are noise, electromagnetic radiation, vibration, and electrical current. Noise increases stress, and radiation increases the risk of cancer. In sports, a high level of physical fitness, general and specific physical fitness, adaptability, performance, and endurance are particularly important for achieving results [3, 6].

The identification of adverse environmental factors is based on diagnostics and the determination of risk factors of a physicochemical, infectious, biogenic, or other nature. These factors can cause pathological changes in the body, which, in turn, are endoecological pathogenic factors that have a significant negative impact on the body's physical condition, performance, etc., leading to a decrease in athletic performance and, in some cases, chronic occupational diseases. Microbiological infections play a significant role among factors that negatively impact health. These can subsequently lead to the development of mucosal diseases and disrupt the functioning of the human microflora as a whole [5, 7].

Results and discussion. Highly reactive chemical compounds tend to accumulate in the body and cause long-term effects. For example, adverse environmental factors cause genetic changes in living organisms, negatively impact fetal development, and provoke severe illnesses and increased mortality. Radioactive emissions are particularly dangerous in this regard. Reactions to environmental pollution depend on gender, age, individual body composition, and immune system. Children,



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pensioners, and people with chronic illnesses are considered the most vulnerable. Medical professionals have established a direct correlation between environmental degradation and increased allergies and cancer rates in specific regions.

It should also be remembered that smoking poses a significant health risk. In addition to inhaling harmful substances, smokers also pollute the atmosphere, endangering those around them. Experts claim that passive smokers receive more toxic substances than the actual smoker. To solve the problem associated with the unfavorable environmental situation, it is necessary to mobilize the entire society, develop and implement state and non-state programs and their clear, step-by-step implementation[2].

Factors of ambiguous significance include those of a physicochemical nature that determine human vital processes. These include temperature, humidity, air velocity, radiant heat, atmospheric conditions, atmospheric pressure, electrical conditions, background radiation, weather, air chemistry, etc. At optimal values, these factors can have a strengthening and tonic effect on the body (for example, temperature). However, beyond these values, the beneficial effect is lost, and they can begin to harm the health of athletes, contributing to a decline in their physical fitness and athletic performance. To prevent such effects, the values of these factors should be normalized in places where physical education and sports are practiced [4,6].

Other factors include: healthy nutrition, biorhythms, and a healthy lifestyle. A healthy human diet should consist of organic foods that contain biochemical substances such as proteins, fats, and carbohydrates. Currently, many foods contain substances that are not entirely suitable for consumption. But they do not exceed the maximum permissible concentration (MPC) of harmful substances, and are therefore considered safe[2].

Consuming foods with elevated levels of various harmful microelements can lead not only to decreased athletic performance but also to serious health problems, including the development of gastrointestinal diseases. All of the environmental factors discussed above affect the body not individually, but holistically [1].

Consequently, each reaction is caused by multiple factors. The intensity of these effects is determined by a synergistic approach, as various interactions occur between the factors themselves. Therefore, it is essential to clearly understand that for good health, it is essential to consider the influence of all the factors discussed above. **Conclusions.** Based on the above, it can be concluded that physical education and sport help the human body combat the effects of negative environmental factors. Furthermore, diet and monitoring the maximum permissible concentrations of harmful substances are also very important [6].

Conclusion. Ecology and human health are inextricably linked. The impact of the environment on the human body can be both direct and indirect, cumulative over time. Only a comprehensive approach, including prevention, information, adaptation, and international cooperation, will minimize the harm from adverse environmental factors and preserve the health of the nation's population.

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