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HYGIENE, ECOLOGY AND HUMAN HEALTH

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Abstract

This article contains theoretical knowledge about human hygiene and ecology and their impact on his health. The article also contains important information about human hygiene and ecology as separate areas of science and reflects the patterns of influence of environmental factors on public health. Various methods of hygienic examinations are disclosed and outlined.

The article outlines the ways of sanitary education of the population. The relationship between ecology and hygiene and the foundations of environmental knowledge in preventive medicine are reflected.

The environmental and hygienic importance of healthy nutrition is explained, the problems and tasks of health education of the population and the prevention of socially significant diseases are outlined. The article focuses on the sanitary and epidemiological well-being of the population and eliminating the influence of harmful factors on public health.

Key words: hygiene, human health, habitat, sanitary and epidemiological safety of the population, the influence of environmental factors on the human body, hygienic examination methods, personal hygiene, preventive measures, health measures.

Introduction

“I believe in hygiene. This is where the true progress of our science lies. The future belongs to preventive medicine.” These words spoken by scientist N.I. Pirogov decades ago became very relevant in our time. Indeed, from “preventative medicine”, i.e. The health of the future generation and all of humanity began to depend on hygiene and its preventive measures. Hygiene is a science that studies the rules of the influence of the environment on the human body and public health in order to substantiate hygienic standards, sanitary rules and measures, the implementation of which guarantees the strengthening of public health, the prevention of various diseases and the longevity of the population.

The object of study of hygiene, which is the main preventive discipline, is a healthy person in close interaction with the environment, as well as a sick person - as an object of study of clinical disciplines, the potential of whose body in some cases deteriorates due to various diseases. The preventive measures developed by hygiene must be applied to a healthy body. There is a possibility of harm to the sick body if preventive medical measures are used untimely and incorrectly.

The goal of the science of hygiene is to develop and implement the fundamentals of primary medical prevention. Prevention in a broad sense is a set of political, economic, legal, cultural, medical, environmental and other measures in the matter of preserving and strengthening the health of the population, its creative longevity, eliminating the causes of various ailments, improving working and leisure conditions, and protecting the natural environment. Objectively, there are three levels of prevention: The first level ensures the protection of public health and the prevention of diseases through a set of measures to provide a favorable living environment and a healthy lifestyle. It is called active offensive prevention. The second level is prenosological

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prevention, which includes an assessment of real and possible risks to human health associated with the adverse influence of environmental factors; diagnosis of pre-nosological disorders in public health; carrying out health and rehabilitation activities; The third level is prevention of disease progression, prevention of complications and disability as a consequence of chronic illness and early death. This is defensive and passive prevention. Preventive medicine solves serious issues: how to raise a healthy child, how to maintain health in adulthood, and ensure active movement even in old age. There is both individual and public prevention. Based on the object of application of preventive measures, primary prevention is distinguished, where measures are focused on the immediate cause of the disease, and secondary prevention - in situations of influencing the conditions and factors contributing to the development of an already diagnosed disease. The most declarative example of primary prevention is sanitary and hygienic and epidemiological measures, immunization, vaccination as a means of preventing infectious diseases. Primary prevention determines ways to prevent chronic non-epidemic pathologies: cardiovascular, oncological, endocrinological, the cause of which lies in poor nutrition, physical inactivity - especially in old age, smoking and alcohol consumption. According to N.A. Semashko, preventive trends consist in the care of society about the health of the population through the implementation of socio-economic measures to improve and transform working conditions, living and recreation, people's lifestyles, prevention of causes and risk factors for pathologies, and the implementation of specific social policies. This trend may become a basic strategy for the implementation of social policy in protecting and promoting the health of members of society.

Conducting experiments in studying the interaction of the human body and its environment, the science of hygiene uses the following research methods: 1. Sanitary examination method - which includes a description of the object of hygienic research and is subjective in nature. This method is the initial one for all hygienic studies and consists of a sanitary topographical, sanitary-epidemiological and sanitary-technical description. 2. Laboratory examination method - including reliable and real characteristics of the described objects. The laboratory method studies an object using physical, chemical, biological and microbiological research: a) physical research method - allows you to assess the microclimate of buildings - temperature, humidity, noise, vibration, etc.; b) the chemical method includes analysis of air and water, soil, as well as the biological value of food, etc. c) the bacteriological method is used in the case of assessing the bacterial contamination of air, water and food products, etc.; d) the toxicological method is used in the case of experiments on animals and in this case the effect of a chemical substance on the human body, and the final permissible concentrations of chemical substances are established. 3. To determine the influence of environmental factors on a living organism, physical, anthropometric and biochemical research methods are used. 4. Experimental method - when creating artificial living conditions, their effect on the human body and animals is studied. 5. Epidemiological method - when detecting short or long-term observations with subsequent calculation of health indicators, it studies changes in the health of society under the influence of internal and external factors and analysis of medical records and reporting documents. 6. Sanitary statistical methods - are used in the case of assessing morbidity levels, physical development of children and adolescents, demographic indicators of the natural movement of society. 7. Clinical methods - used in the case of assessing the health status of a society that is under the influence of negative environmental factors. To clarify the state of society, tests are used: biochemical and immunological. These methods of hygienic research are concentrated under the general concept of hygienic diagnostics. Its goal is to identify violations of

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human adaptation mechanisms and assess the state of his adaptation systems. Hygiene consists of several sections, each of which includes a separate area of hygienic science and practice: personal hygiene, communal hygiene, occupational hygiene, hygiene of children and adolescents, food hygiene, radiation hygiene, etc. A significant place is devoted to general hygiene - an independent hygienic discipline. This discipline covers the basic principles of the study of the environment, the patterns of influence of natural, household, and production factors on the health and morbidity of members of society and specifies the trend of health-improving measures. Environmental factors, due to the peculiarity of their impact on the human body, are divided into three groups. The first group is factors that are harmful and destructive to human health. These factors include toxic substances, dust, pathogens of various diseases contained in the air. The second group is useful factors. This factor includes inhaling clean, oxygen-rich air. The third group includes factors that are supposedly both beneficial and harmful, depending on how they are used Human. Here we can give an example of how the sun's rays are necessary for the healthy development and functioning of the human body, but in case of overtanning they harm the health of the body. An important task of hygiene, which is focused on improving environmental conditions, is to identify cause-and-effect relationships between the impact of environmental factors on the human body and potential variations in human health. Another task of hygiene is the development of means and methods of increasing the body's resistance to the influence of negative environmental factors. These means include: - healthy lifestyle; - personal hygiene; - hardening of the body; - balanced diet; - rational clothes and shoes; - physical activity, etc. It is well known that when leading a healthy lifestyle, the number of morbidity and mortality among the population can potentially be reduced by up to 50%, and this emphasizes the relevance of the practical implementation of the above-mentioned hygiene tasks among the population of our country, as well as the importance of sanitary education of citizens. Of course, in general hygiene the most important place is given to personal hygiene. Personal hygiene covers a certain number of hygienic requirements and standards aimed at preserving human health, performance, longevity, and the prevention of infectious and non-infectious diseases. The basic components of personal hygiene are skin care, dental care, hair care, as well as clothing and shoe hygiene. It is known that human skin performs an important protective function, protecting the body from the pathological influence of the surrounding world. If you follow the rules of cleanliness, it is potentially possible to help the largest organ of our body perform other functions - regulate body temperature, metabolism, immunity, secretion glands, receptors, perform respiratory and other functions. Washing regularly every day is necessary in order to maintain the rules of personal hygiene, and at the same time you need to use warm water, slightly above body temperature. Every week, approximately three hundred grams of fat and seven liters of sweat are released through our skin. In order not to disturb the functioning of the skin, it is necessary to wash off the mentioned secretions in a timely manner. If they are not washed off, then active reproduction of fungi, various microbes and other parasites begins on the surface of the epidermis. To clean your skin, you need to wash yourself with soap and a washcloth at least once a week. Compliance with the norms and rules of personal hygiene requires careful care of the condition of hands and nails, since they are a dangerous source of pathological microorganisms that can easily penetrate inside the body. According to this, you need to thoroughly wash your hands with soap after coming from the street or latrines. Also, your feet should be washed with warm water daily. This helps eliminate germs and reduce sweating and also prevents the appearance of fungi between the toes. You should wash your hair only when it gets dirty. However,

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you should not use too hot water, as it stimulates the sebaceous glands and makes your hair greasy. It is very important to be careful when choosing appropriate cosmetics, due to the fact that hair can quickly absorb harmful substances from it. When rinsing your hair, you need to pour cold water over it. After that pat your hair dry with a slightly warmed towel. When combing, use only your own comb. When caring for your oral cavity, you should brush your teeth at least twice a day exclusively with your own brush. At the first appearance of symptoms of damage to teeth and gums, you should consult a dentist. Personal hygiene in most cases can depend on the cleanliness of clothing, since it serves as a protector for the body from contamination, various damages and contact with harmful insects. It is necessary to implement regular cleaning of clothes and shoes and beware of wearing or wearing someone else's clothes or shoes. For daily washing, you should use regular toilet or baby soap. They contain a minimal amount of chemicals and do not have a negative effect on the skin. The diet must be balanced as much as possible and should contain a large amount of vegetables and fruits, as well as dairy products and seafood. It is necessary, if possible, to exclude from the diet those foods that cause or may cause allergic reactions in the body of children and adults. Every person should understand and observe the rules of personal hygiene. The result of this knowledge will be good health, increased mental and physical performance, the effectiveness of which will certainly be reflected in the acquisition of achievements in any field of human activity. Of course, the relationship between hygiene and human ecology clearly affects his health. The term ecology was formed (from the Greek oikos - house, dwelling, residence and logos - teaching) - a science that studies the general laws of existence of living organisms, their relationship with each other and with their environment. Ecology, like other areas of science, appeared and developed along with society. The scientific works of Aristotle and Hippocrates contain information about ecology. So, even in those ancient times, scientists were aware of caring for nature and its protection. Ancient Greek philosopher Epicurus in the 4th century. BC e. stated the following: “One should not force nature, one should obey it.” Ecology as a separate field of science was formed in the works of the German biologist Ernst Haeckel, who in 1866 published his work “General Morphology of Organisms.” It was in this publication that he defined the scientific discipline “ecology”. Among Russian scientists, V.N. contributed to the development of ecology. Sukachev, who gave science the term “biogeocenosis”, V.I. Vernadsky is the author of the books “Biosphere” (1926) and “Chemical Structure of the Earth’s Biosphere and Its Environment” (1965), defining most environmental concepts and forming the fundamental doctrine of the Earth’s biosphere. In the modern world, the science of ecology is divided into some scientific branches and disciplines, but, surprisingly, they are far from the fundamental understanding of ecology as a biological science about the relationship of living organisms with their environment. Determined by the volume of objects studied, ecology is divided into autoecology (an organism and its environment), population ecology (population and its environment), synecology (biochemical community, ecosystem and their environment), geographic or landscape ecology (large geosystems, geographical processes involving living world and their environment) and global ecology (the study of the Earth's biosphere). In connection with the approach to the subjects of study, ecology is divided into the ecology of microorganisms, plants, animals, humans, agricultural, industrial, etc. Depending on the environment, the ecology of land, seas, fresh water bodies, tundras, forests, cities, etc. is distinguished.

Due to the methods of study, environmental directions are distinguished, such as biosphere ecology, medical, mathematical, chemical, economic, legal, etc. Let us dwell on the interpretation

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of medical ecology, which directly relates to our topic under study. She studies various human pathologies associated with environmental pollution, as well as ways and means of their prevention and treatment. The state of health of any society and its location is assessed by the state of cleanliness or pollution of its environment. The study of the universal rules of relationships between nature and society is divided into a special direction - this is human ecology, which examines the interaction of a person with his environment. The present scientific term was formed in 1972. It was proposed for consideration in Stockholm at the First UN International Meeting on the Environment. The history of the development of human ecology begins from this time. The subject of ecology is the environment, habitats and populations of living beings and its relationship with the environment. The basic laws of ecology were systematized by the American ecologist B. Commoner. The first law says: “Everything is connected to everything.” A slight shift in a particular place of the ecological network leaves traces for a long time in another place. The second law says: “Everything has to go somewhere.” In general terms, this is a reformulation of the popular law of conservation of matter. B. Commoner states: “One of the main reasons for the modern environmental crisis is that colossal quantities of different substances have been extracted from the bowels of the earth, where they were bound, and transformed into new, often active and far from natural compounds” (“Closing circle", 1974). The third law states: “Nature knows best.” Natural ecological mechanisms, with their stability, are very complex formations, and their formation occurred as a result of evolutionary development, when choosing from a large number of options. Therefore, the natural option is the best. But there are different points of view regarding the inclusion of changes in nature, since in the interests of man it is possible to improve nature and adapt it to human life. But this must be done competently, prudently, having mastered serious scientific knowledge about nature. The fourth law says: “Nothing comes for free” or “Everything must be paid for.” The interpretation of this law is that the ecosystem of the world is a single whole. When modifying this system to some extent in a particular place, one must act prudently and anticipate the consequences of this action. Substances taken from nature that have been taken away or spoiled by man must be returned by man. Otherwise, serious shifts could presumably develop, even threatening the existence of human civilization. Following the above-mentioned words, we can generalize that human hygiene and ecology study and analyze all the same phenomena - the influence of the environment on human health. Factors related to human health: - genetic; - natural and climatic; - endemic; - epidemic; - production; - social; - environmental. In the study of environmental factors affecting human health, hygiene and ecology have common goals. Prospective activities of hygienists should include the development of scientifically based recommendations and measures that eliminate or at least reduce the harmful effects of negative factors, or should enhance the positive influence of environmental factors that are subject to intensification. Ecologists of our country participate in the development of the country's environmental legislation. Having found a harmful effect of any factor on the environment and human health, they announce this fact and make it publicly known through the media. They form environmental consciousness among citizens and form the actions of the population to protect and preserve the country’s nature.

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