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БИОЛОГИЯ ВА ЭКОЛОГИЯ ЖУРНАЛИ ЖУРНАЛ БИОЛОГИИ И ЭКОЛОГИЧЕСКИЙ JOURNAL OF BIOLOGY AND ECOLOGY

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ANNOTATION

It is known that the health status of the population, including children, is influenced by climatic and geographical, social, endemic and, to a large extent, environmental factors.

The article presents data on the effect of technogenic environmental pollutants on children's health. Meanwhile, in each region there are various technologies and production volumes that are almost unique in types, as well as in terms of the level of technogenic impact on the environment and the human body.

Key words: diseases, children, ecology, environmental factors.

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ЭКОЛОГИЧЕСКИЕ ФАКТОРЫ РИСКА И СОСТОЯНИЕ ЗДОРОВЬЯ ДЕТЕЙ В ТАШКЕНТСКОЙ ОБЛАСТИ (Узбекистан)

АННОТАЦИЯ

Известно, что на состояние здоровья населения, в том числе детского, оказывают влияние климато-географические, социально-бытовые, эндемические и в значительной мере - экологические факторы.

В статье представлены данные о влиянии техногенных загрязнителей окружающей среды на здоровья у детей. Между тем, в каждом регионе имеются различные технологии и объёмы производства, практически неповторимы по видам, а также по уровням техногенного воздействия на окружающую среду и организм человека.

Ключевые слова: заболевания, детское население, экология, факторы окружающей среды.

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ТОШКЕНТ ВИЛОЯТИДА (ЎЗБЕКИСТОН) ЯШОВЧИ БОЛАЛАР СОҒЛИФИГА ЭКОЛОГИК ХАВФ ОМИЛЛАР ТАЪСИРИ

АННОТАЦИЯ

Маълум бир хулудда яшовчилар айниқса болалар соғлиғига климато-географик, социал-маиший, эндемик ва экологик омиллар катта таъсир кўрсатади.

Ушбу мақолада бола организмига атроф мухитнинг техноген омилларини таъсири ҳақида маълумот келтирилган. Шунингдек ҳар бир хулудларда ўзининг турли ишлаб чиқариш, бир бирини такрорламайдиган омиллари атроф мухит ва одам организмига катта таъсир кўрсатади.

Калит сўзлар: касаланиш, болалар, экология, атроф мухит омиллари.

A sharp widespread aggravation of the environmental situation explains the growing interest in the environmental impact on children's health. According to the WHO, environmental factors account for more than 25% of all human diseases, and in a number of countries and individual regions this percentage can reach 40% or more [3]. From this point of view, it is quite reasonable to study the influence of various risk factors on the development of pathology of childhood. A significant part of Uzbekistan is a plain territory belonging to the Turan lowland, open to cold intrusions, which forms sharply continental climate features [5,7].

Sources of anthropogenic pollutants are transport and enterprises of the leading industries of the Tashkent region: oil and gas production and processing, energy, metallurgy, construction, chemical and others [4]. The contribution of mobile pollution sources, mainly automobiles, to the total air emissions is less than 50% in Kazakhstan and Turkmenistan, up to 70% in Uzbekistan and reaches almost 90% in Tajikistan and Kyrgyzstan [7]. The largest specific emissions of pollutants are in the Tashkent region [5].

The purpose of this work will study the impact of ecology on children's health.

Materials and methods. In order to study some features of family lifestyles, obtain information about the health status of children, as well as the presence of biomedical, sanitary and hygienic and other factors that could have an impact on children's health, a sample questionnaire was conducted among 500 families. Families were selected mechanically in organized children's groups from Almalyk and Angren, which are

defined in the work as a model of an industrial city (main district). The study consisted of several stages. A total of 2355 children from birth to 18 years were examined. Families with children born outside the Tashkent region were excluded from the study. A mathematical assessment of the impact of risk factors provided for the ranking of individual risk factors by the strength of their influence (the prevalence of risk factors of less than 34% was considered low, from 34% to 67% - moderate and from 67% or more - large).

Results and its discussion. In the statistical processing of the material, the ranking of the obtained data was carried out. When conducting primary prevention of the total number of risk factors studied that contribute to the development of chronic infectious diseases in children, the following factors should be considered. In urban conditions, five main groups of factors affect the child's health: living environment, production factors, social, biological and individual lifestyles. The ranking of the significance of individual risk factors indicates that one cannot ignore the living conditions in the home environment - they are also an integral part of the ecology. An analysis of the quality of the living environment showed that 71.4% of patients in the houses contained various animals, birds, aquarium fish, etc., about 71.4% of children live in apartments on 1 floors with central heating and relatively poor ventilation in panel houses of the old buildings, which in combination with the orientation of the child's rooms on highways and industrial enterprises can increase the impact of anthropogenic air pollution on the child's body. When interpreting the data, it is necessary to take into account the length of stay of families in the study area. The settled level in years was 12.1 ± 0.26 g, which indicates that most of the children had a similar exposure to the effects of regional environmental factors. To the greatest extent (up to 100%), the additional impact of living conditions was observed when using gas stoves without fume hoods, carpets, furniture made of particle boards and plastics, aerosol cosmetics, deodorants, and chemical insect control agents. The state of the child's living environment largely determines the presence of tobacco smoke in the air. During smoking, about half of the toxic substances with the smoke go into the environment. At the same time, a concentration of various toxic substances, especially nicotine, reaching $0.5 \text{ mg} / \text{m}^3$, which is dangerous for health, is quickly created in the air. Tobacco smoke has a high electrical potential, so it accumulates around non-smokers, including children. Smoking products have an irritating effect not only on the mucous membrane of the bronchi, but also on the whole body [1,2,6]. Smokers in the family have 57.1% of children. We can assume that the micro-ecological living environment and ecological disadvantage in the area where the sick child lives is mutually potentiated and are factors that influence the prevalence of chronic infectious diseases. An analysis of the data obtained made it possible to judge the influence of biological factors on the formation of chronic infectious diseases in children. So, high and moderate risk factors are frequent colds, childhood infections, chronic diseases of the ENT organs and perinatal encephalopathy. An environmentally disadvantaged region is also characterized by a high incidence of parents, a high frequency of complicated pregnancy and childbirth, which have a negative impact on the formation of individual characteristics of the child's body. According to the survey, $43.6 \pm 2.5\%$ of mothers had complications during pregnancy, and $15.7 \pm 0.8\%$ of births. One of the predisposing biological factors that form the conditions for the violation of perinatal development can be considered the age of the parents at the time of birth. The average age of the father, according to the survey, was 27.7 ± 0.61 g, of the mother - 25.5 ± 0.49 g. In the

process of analyzing social factors, typical violations were found in the organization of children's nutrition, a deficiency of irreplaceable nutrition factors and plastic material, the predominance of low nutritional and biological value in the diet. Numerous studies of foreign and domestic scientists show that the low social level is a strong, albeit indirect, factor that negatively affects health. Social factors create a backdrop against which biological risk factors are realized and exacerbate their effects [2,6]. The data on the child's lifestyle revealed in the process of questioning the parents are largely subjective, but it was found that more than half of the children (62.8%) lead a sedentary lifestyle, preferring to read books, watch TV shows, and play computer games (range their organized physical activity ranged from 0 to 10 hours per week.), 75% of children are not able to spend their holidays outside the city, every fourth child defines their sleep as inferior - lasting less than 8 hours, restless with m, violation of falling asleep, etc. Despite the conventionality of such an analysis, it was found that in the group of ranked factors with a high degree of influence of the health status of the child population, the state of the living environment dominates, followed by social, biological, and production factors. The data obtained indicate that in the group of ranked factors of a moderate degree of influence on children's health, the first place is occupied by biological factors, followed by the state of the living environment, social and production factors, the child's lifestyle has the least impact on health. Least prevalence are social factors, individual lifestyle, production and biological factors. Thus, the research results indicate that the regional characteristics of the health status of the children's population are determined by the influence of many risk factors, which are an integrated complex of technological, medical and social conditions that are different in nature, intensity and duration of exposure. Apparently, technogenic factors in the study area play the role of "stress-realizing" or "resolving" ones, causing overstrain or depletion of compensatory-adaptive mechanisms, failure of adaptation and development of the disease. Despite the undeniable evidence of the influence of technogenic pressures on the development of chronic diseases, the establishment of the causes and factors of eco-dependent diseases is a difficult task. This is primarily due to the fact that the health of children is affected not by individual negative factors, the diversity of which is shown by the example of the Tashkent region, but by various combinations and the duration of their impact on the body. The results of a targeted questionnaire can be considered practically significant, and the use of a medical and social questionnaire in healthcare practice and especially preventive examinations of the decreed contingent of schoolchildren who are affected by the environment will make it possible to form a risk group for chronic infectious diseases, including kidneys, without large economic costs.

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