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THE INFLUENCE OF NEGATIVE FACTORS OF PRODUCTION ON THE STATE OF HEALTH OF EMPLOYEES IN THE ENTERPRISE “BELSHINA”

A. Voronina

Belarusian State University, ISEI BSU,
Minsk, Republic of Belarus
mystery159@mail.ru

At present time the industrial emissions lead to negative consequences, affect people's health, especially for workers of such enterprises. One of the indicators of bad health, is increasing growth of production and occupational diseases, a significant deterioration of newly detected abnormalities, the prevalence of chronic diseases, leading to disability. Studying of harmful chemical factors and their effects on workers of JSC "Belshina, health status of workers was analyzed.

Keywords: harmful factors, chemicals, hygienic conditions of production, health status, environmental protection.

The influence of the chemical factor during producing rubber products leads to various diseases, primarily the hepatobiliary system and the cardiovascular system. In particular, characteristic changes were secretory and pepsin-forming dysfunctions of the stomach against the background of a decrease in the protective barrier of the mucosa. Similarly, chemical substances have a direct effect on liver cells with a violation of the structure of lipid membranes and biochemical reactions, which subsequently leads to the development of necrotic processes. In addition, a number of studies have shown deterioration in health status with an increase in length of service and age.

The aim of research was to investigate the impact of negative factors of production on the health of employees of JSC "Belshina".

The analyses of morbidity with temporary disability of employees of JSC "Belshina" has been carried out.

Evaluation of the results of the analysis of morbidity with temporary disability makes it possible to say that the plant's overall level of occupational risk of morbidity with temporary disability must be attributed to the ultra-high in both cases and days of incapacity for work. The most minimal indicators of the level of occupational risk are established in the control group of the comparison, consisting of female employees of the plant management. In addition, potential "risk diseases" among employees of the enterprise have been identified, which include, first of all, domestic traumas. Catarrhal diseases, represented mainly by acute respiratory viral infection and acute bronchitis, and a disease of the musculoskeletal system such as dorsopathy are also quite often found in the RRF group, especially among women of the WCHR.

In conclusion, it should be pointed out that the results of the incidence of Belshina workers in the course of the study indicate that they have a more frequent occurrence among workers of the main occupations involved in the manufacture of rubber products themselves. It was found out that the highest rates of morbidity with temporary disability are found among the workers of the Belshina large-sized tire factory, especially among women.

At present the study of the state of health and the analysis of morbidity with temporary disability of workers in manufacturing enterprises causes certain difficulties in connection with the cancellation of instructions in sick-lists for temporary disability of workers not only of the names of diseases but also of the ICD- 10. At the same time, in the outpatient department, incidence rates with temporary disability of individual nosological forms of diseases by manufacturing enterprises are also largely not considered and, accordingly, are not evaluated.

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MATHEMATICAL MODELING IN MEDICINE

D. Vasilevskaya, O. Boyarkin

Belarusian State University, ISEI BSU,
Minsk, Republic of Belarus
daro.vasilek@gmail.com

Problems of the mathematical modeling of human body organs are considered. Mathematical method allow to contract computational algorithms that is proved to be very important under diseases diagnostics.

Keywords: mathematical modeling, systems of the human body, gene level, medicine.

In this note we analyze the mathematical statements of problems that are currently used in the mathematical modeling of medical and biological problems.

The choice of some mathematical models in the description and research of medical facilities depends on the individual knowledge of the specialist and the characteristics of the tasks being solved. The object of research in modern mathematical modeling is practically all the basic organs and systems of the human body: (i) the circulatory and respiratory system; (ii) the central and peripheral nervous systems; (iii) the digestive system; (iv) the kidneys and the liver; (v) the musculoskeletal system; (vi) the organs of vision and the skin, etc. Processes taking place at the cellular and gene levels cause significant interest. In so doing, the mechanisms of the onset and progression of diseases are studied numerically. Mathematical models of organs and parts of body are based on mechanical models.

Mathematical methods appear to be not only the most accurate, but also allow to create the most correct construction of computational algorithms, which is very important under diseases diagnostics.

The mathematical approach not only facilitates an accurate quantitative description of a particular problem by constructing one or another suitable model, but also provides the way of solving the task.

This review presents the most typical mathematical models which are currently used for the given class of problems.

ALLELIC DISCRIMINATION AS A METHOD FOR THE ESTIMATION OF SOCIAL INTERACTION

A. Yerofeyeva[1], A. Chuholskiy[1], D. Smiljanic[2]

[1]Belarusian State University, ISEI of BSU,
Minsk, Republic of Belarus
[2]University of Belgrade,
Belgrade, Serbia
amyerofeyeva@zoho.eu

Allelic discrimination gives the possibility to indicate a single nucleotide polymorphism (SNP) that may shed a clearer light on the correlation between genetic variation and its effect on the observed phenotype. Current method was used for identifying the oxytocin receptor gene polymorphism, which determines the degree of sociality.

Keywords: allelic discrimination, single nucleotide polymorphism, sociality, social interaction, polymerase chain reaction, genotyping, population genetics.

In the last few years, the method of allelic discrimination has been developed in molecular genetics. The assay detects variants of a single nucleic acid sequence. Single nucleotide polymorphisms (SNP) are one of the most