

RISKS IN PHARMACEUTICAL ACTIVITY AND PROFESSIONAL OBLIGATIONS OF THE EMPLOYEE

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Abstract. The article discusses the risks that arise in the implementation of the main processes of the activity of pharmaceutical employees. The main risks are related to non-observance of normative rules in the creation of working conditions, a large number of burdens on the employee during work, employees not using personal protective equipment during work.

Keywords: pharmaceuticals, working hours, risk analysis, labor protection, drugs, noise.

Introduction. The activities of any enterprises are associated with production risks. Inconvenient working conditions in a production enterprise, the occurrence of accidents indicate economic damage and damage to the organization's reputation. [1]. The causes and conditions of the emergence of dangerous situations are the subject of research on risk management, and its task is to give recommendations on ways to reduce the probability of their occurrence and to reduce their harmful effects on employees [2].

Risks affecting pharmaceutical activity include risks specific to any organization, as well as specific risks associated with the implementation of pharmaceutical activity [3]. In pharmaceutical activity, it is distinguished by the processes of development and packaging of drugs. Risks that arise in these stages pose a risk both to the premises and to the consumer of pharmaceutical services, because in many cases the result of the risk affects the work processes.

Relevance of the research

A list of dangerous and harmful production factors and measures to reduce or completely eliminate the effects of these factors is drawn up in each enterprise producing pharmaceutical products, taking into account the specific conditions of production.

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| a) group of physically dangerous and harmful production factors: | moving machines and mechanisms |
| | rolling stock and materials |
| | high amount of dust and gas in the air of the working area; |
| | surface of equipment and materials with high temperature; |
| | high-temperature air of the working zone; |
| | high level of noise in the workplace; |
| | high vibration; |
| | air with a high level of humidity; |
| | dangerous level voltage in the electric circuit, which can be connected through the human body; |
| | light flickering (pulsation); |
| | high static electricity; |
| lack of natural light; | |

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| | high level ultraviolet radiation; |
| | high atmospheric pressure |
| b) group of chemically dangerous and harmful production factors: | harmful liquid, solid, vaporous substances and aerosols acting through the respiratory tract and skin; |
| | caustic liquid, solid and vapors that affect the respiratory tract, skin and eyes. |
| c) group of psychophysiological harmful and dangerous production factors: | overexertion of sense organs; |
| | monotony of work. |

Figure 1

OST 64-031-87 SSBT "Technological processes of production of ready-made medicinal products" for employees of pharmaceutical production. Production of tablets. Safety requirements", GOST 12.4.011-89 and OST 64-7-472-83 SSBT "Technological processes of production of ready-made medicines. Production of injection solutions in ampoules. According to safety requirements" [4], the following groups of dangerous and harmful production factors can be affected (Look Fig 1).

According to GOST 17.2.3.02-78, each enterprise producing pharmaceutical products is should have information fully and objectively informed about dangerous and harmful production and technological processes, production factors, their classification, sources of occurrence, characteristics of exposure to workers and the level of health hazards and their future consequences.

The main causes of human resources risks in pharmaceutical activities are "insufficient personnel skills" and "irresponsible attitude of employees to work" [1].

There is a high need for the use of personal protective equipment in pharmaceutical enterprises in order to protect production from dangerous and harmful factors and prevent occupational diseases [4].

GOST 12.4.011-89 and OST 64-7-473-83 SSBT "Individual in the production of ready-made medicinal products" protective equipment in order. Classification. In accordance with the field of application, collective and individual protective equipment should be used [4,5,6].

Collective protective equipment includes: means of normalizing the air environment of production rooms and workplaces (ventilation and air purification, heating, keeping air temperature, humidity at the same level, etc.);

Means of normalizing the light of production rooms and workplaces (lighting devices, light positions, light protection devices, etc.);

Means of protection against noise, vibration, electric shock, static electricity, high temperature of the equipment surface;

Means of protection against mechanical and chemical factors.

Employees of pharmaceutical production should be provided with personal protective equipment in accordance with the "Model standards for free provision of special clothing, special shoes and other personal protective equipment for employees of pharmaceutical production enterprises" (Look Fig 2).

Fig 2

| Personal protective equipment is divided into the following groups: | | | | | | | | |
|--|-----------------------|--------------------------|--|-----------------------------------|---|----------------------------------|------------------------------------|------------------------|
| special clothing; | special shoes; | special headgear; | respiratory protective equipment; | hand protection equipment; | protective equipment for the head; | face protection products; | hearing protection devices; | eye protection. |

Low qualification of employees and cold attitude to the work done also shows insufficient responsibility of pharmaceutical employees. The risks caused by these factors during the implementation of the main processes of pharmaceutical activity have a significant negative impact on the overall economic indicators of the organization, and this determines the relevance of their study.

Enterprises should have a list of professions and specialties that should be sorted by profession. Specialists of the pharmaceutical enterprise, managers of production sites should have the relevant knowledge and work experience, the ability to organize the production of pharmaceuticals to meet the requirements [6,7,8]. The duties of managers and specialists are recorded in the job instructions in order to prevent ambiguities in the work or the assignment of one task to several people [9].

The purpose of the study is to study the risks associated with the insufficient responsibility of pharmaceutical employees during the implementation of the main operational processes of the pharmaceutical organization.

Research results and discussion. At the initial stage of the research, as a result of the analysis of the current regulatory documents related to the field of pharmaceuticals, the main processes of organizing pharmaceutical activities, the types of personal protective equipment of employees against dangerous and harmful factors in production, and their effective use were determined. This became the basis for the prevention of occupational diseases.

The working time of pharmacists is not only the main production resource, but also serves as the main criterion for determining production efficiency. In enterprises, it is necessary to determine the actual time spent on the production of a certain product or the product production rate. For this, it is important to study and determine how much work time is required to complete

it. The convenience of working conditions leads to an increase in the amount of work (Look Fig 1) of workers and the consumption of excess movement energy.

$$A = (P \cdot H) : \frac{P \cdot L}{9} : \frac{P \cdot H_1}{2} \cdot K \quad (1)$$

Here: A is the amount of work, kg/m; R – load mass, kg; N – lifting height, m; L - horizontal distance of the load, m; K - coefficient equal to six.

There is a concept of "work power" for an organism that performs a certain work in a certain time.

Work capacity is the amount of work per unit of time, determined using the following formula 2:

$$N = \frac{A}{t \cdot K_1} \quad (2)$$

Here: N - power of work, 1 sec/watt; A - work, kg/m; t - time/sec during which this work is performed; K₁ - conversion factor for times equal to 10 kg/m.

The strength of work is one of the main factors that determine the severity of work. The peculiarity of the service time of the workplace is that its elements are repeated at certain time intervals, and the duration of these intervals does not depend on the operation performed on the equipment, on the quality of the equipment used, on the physical and chemical properties of the processed raw materials, their qualities, hardness and softness, and on the quality of the equipment. depending on new and old [2].

Conclusion and recommendation.

- Risks in pharmaceutical production processes, risks in the processes of organization of working conditions are the most important;
- Reducing risks in the main processes of pharmaceutical activity prevents economic and social losses caused by accidents and occupational diseases of employees;
- It is important to monitor the compliance of pharmaceutical employees with labor protection and technical safety rules during their work.

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