

**OCCUPATIONAL INJURIES AND PREVENTIVE MEASURES.****WORKER HEALTH.**

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ANNOTATION: *This article analyzes injuries occurring in industrial settings, their main etiological factors, principles of risk assessment, and the effectiveness of preventive measures. The role of occupational hygiene, industrial sanitation, safety engineering, and the use of personal protective equipment in ensuring workers' health is highlighted. The study demonstrates that reducing occupational injuries is closely linked to proper organization of work processes, adherence to technological discipline, ergonomic approaches, and the implementation of a comprehensive monitoring system.*

Keywords: *occupational injuries, occupational hygiene, safety engineering, ergonomics, occupational diseases, industrial sanitation, preventive measures, labor protection.*

MAIN PART**1. Classification and Main Causes of Occupational Injuries**

An occupational injury is any physical damage or functional impairment sustained by a worker during the work process. According to the World Health Organization (WHO), the majority of injuries in industrial sectors are associated with mechanical, physical, chemical, and ergonomic factors.

The main causes include:

- insufficient technological development of production processes;
- violations of safety rules when working with hazardous machinery;
- failure to comply with safety engineering requirements;
- inadequate lighting or ventilation in the workplace;
- ergonomic errors related to heavy lifting or awkward working positions;



- exposure to chemical substances;
- worker fatigue and increased psychophysiological workload.

These factors may reduce work capacity, increase the risk of trauma, and negatively affect productivity.

2. Hygienic Assessment of Hazardous Factors in Production

Occupational hygiene assesses the degree of harmfulness of working conditions, identifies risk factors that may adversely affect workers' health, and develops scientifically-based preventive measures.

Major risk factor groups:

1. **Physical factors:** noise, vibration, extreme temperatures, ionizing radiation, electric current.
2. **Chemical factors:** gases, aerosols, vapors, heavy metals, organic solvents.
3. **Biological factors:** microorganisms, fungi, viruses.
4. **Ergonomic factors:** uncomfortable posture, heavy physical workload, repetitive movements.
5. **Psychophysiological factors:** stress, excessive workload, shift work.

In Uzbekistan, occupational risk assessments are based on national labor protection standards, GOST norms, and hygienic regulations.

3. Comprehensive Preventive Measures to Reduce Occupational Injuries

3.1. Organizational Measures

- proper technological arrangement of the work process;
- training new employees in safety regulations;
- conducting mandatory safety briefings;
- marking hazardous zones and installing warning signs;
- designing shift schedules based on physiological requirements.

3.2. Technical Measures

- equipping hazardous machinery with protective barriers;
- installing emergency alarms and automatic shutdown systems;



- improving industrial ventilation, lighting, and microclimate;
- strengthening electrical and fire safety systems.

3.3. Sanitary-Hygienic Measures

- regular cleaning and disinfection of workplaces;
- monitoring levels of harmful substances;
- promoting personal hygiene practices;
- providing sanitary and domestic facilities.

3.4. Personal Protective Equipment (PPE)

Workers must use PPE such as:

- gloves, respirators, masks;
- dielectric gloves, protective goggles;
- special work clothing and footwear;
- ear protection devices.

Proper and consistent use of PPE can prevent 40–60% of industrial injuries.

4. Worker Health and Integration of Occupational Safety Measures

Maintaining workers' health significantly enhances productivity. Medical-preventive measures include:

- **Pre-employment and periodic medical examinations:** assessing job suitability and early detection of occupational risks;
- **Promotion of healthy lifestyle:** proper nutrition, physical activity, and avoidance of harmful habits;
- **Diagnosis of occupational diseases:** pneumoconiosis, dermatoses, hearing disorders, intoxications, etc.

Implementing health monitoring systems in production helps detect risks at early stages and improve preventive strategies.

CONCLUSION

Reducing occupational injuries requires a comprehensive and integrated approach. The combined application of technical, organizational, sanitary-hygienic, and personal protective measures ensures a safer working environment. Workers' health is a key factor in improving labor productivity, and regular medical



examinations, ergonomic working conditions, and enhanced safety culture significantly reduce the rate of workplace injuries.

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