


Ministry of science and high education RF Ulyanovsk State University	Form	
F-Educational program of the discipline		

APPROVED
by the decision of the Academic Council of the USU
Institute of Medicine, Ecology and Physical Culture
16.05.2024 Record No 9/260
Chairman V.V. Mashin
(Signature, Name)
«16» May 2024



EDUCATIONAL PLAN

Discipline	<i>Occupational diseases</i>
Faculty	Medical faculty of T.Z. <u>Biktimirov</u>
Name of department	Therapy and occupational diseases
Course	5

Direction (specialty) 31.05.01 General medicine

Orientation (profile/specialty) not provided

Form of training full-time

Date of introduction into the academic process at USU: «1» September 2024.

Revised at the Department meeting, Record No _____ of _____ 20 _____



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Information about the authors:

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AGREED	AGREED
Head of the department, developing discipline	Head of the graduating Department
 _____ / <u>A.M. Shutov</u> / <i>Signature</i> <i>Full-name</i> «16» May 2024	 _____ / <u>M.A. Vize-Khripunova</u> / <i>Signature</i> <i>Full-name</i> «16» May 2024

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1. OBJECTIVES AND AIM OF DISCIPLINE:

1.1 Objectives of mastering the discipline

The goal is to create a student's clinical thinking and practical clinical skills necessary for the diagnosis, treatment and prevention of occupational diseases, the formation of professional competencies.

1.2 Objectives of mastering the discipline

Tasks:


-
- - knowledge of the etiology, pathogenesis, and clinical manifestations of occupational diseases;
- - consolidation and improvement of skills of examination of the therapeutic patient;
- - formation of clinical thinking (ability to make a detailed clinical diagnosis based on your own clinical information about the patient);
- - mastering the method of differential diagnosis within the analyzed nosological forms;
- - mastering the basic principles of treatment and prevention of typical forms of occupational diseases;
- - develop professional competencies.

2. PLACE OF THE SUBJECT IN THE STRUCTURE OF GEP:

Discipline "Occupational diseases" refers to the training cycle C.3 Professional cycle. Basic part.

The basic knowledge, skills and competencies of the student needed to study the discipline are formed:

- in the study of the disciplines of the humanitarian, social and economic cycle: philosophy, bioethics, history of medicine, psychology and pedagogy, jurisprudence Latin;
- when studying the disciplines of the mathematical, natural science cycle: physics and mathematics; medical informatics; chemistry; biology; biochemistry; human anatomy; topographic anatomy; pathological anatomy; clinical pathological anatomy; histology, embryology, cytology; normal physiology; pathophysiology; microbiology, virology; pharmacology; immunology;
- when studying the disciplines of the professional cycle: hygiene; public health and healthcare, health economics; epidemiology; medical rehabilitation; clinical pharmacology; propaedeutics of internal diseases; faculty therapy; dermatovenerology; general surgery, surgical diseases; pediatrics; radiation therapy and radiation diagnostics, infectious diseases, phthisiopulmonology, outpatient therapy, occupational diseases, ophthalmology, obstetrics and gynecology, ENT diseases.


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3. LIST OF EXPECTED RESULTS OF INSTRUCTION ON THE SUBJECT (UNIT), CORELATED WITH PLANNED RESULTS OF COMPLETING THE PROGRAM


In the process of studying the discipline, the following competencies are formed: UC-1, PC-3, PC-4

As a result of studying the discipline, the student must:

Code and name of competency	List of planned learning outcomes by discipline (module), correlated with indicators of achievement of competencies
UC -1	<p>Know: - The legal framework for protecting the health of workers.</p> <p>To be able to: - analyze the data on the sanitary-production characteristics of working conditions and professional history of the patient to determine the possibility of developing occupational diseases; - to analyze, if possible, the mechanism of action of adverse factors in the working environment that cause the development of occupational disease;</p> <p>Own: -the correct management of medical documentation (registration of the medical history with an outline of all the main sections, the rationale for the clinical diagnosis, examination and treatment plan, as well as diaries and phased epicrisis when working with therapeutic patients);</p>
PC3	<p>Know: - The etiology, pathogenesis and preventive measures of the most common occupational diseases, the principles of their classification, - The clinical picture, course features and possible complications of the most common occupational diseases occurring in a typical form. - Diagnostic methods, the possibilities of physical examination methods for a patient with occupational pathology, modern methods of clinical, laboratory, instrumental examination of patients of this profile (including functional, radiological methods, ultrasound diagnostics),</p>

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	<p>To be able to: - conduct a targeted examination of the patient to identify his clinical signs, establishing the possibility of developing a professional disease;</p> <ul style="list-style-type: none"> - determine the patient's presence of possible concomitant non-occupational diseases; - identify specific features of the course of this occupational disease; - conduct a differential diagnosis between the alleged occupational and non-occupational diseases with a similar picture; - determine the degree and persistence of functional disorders of the affected organs and systems with the corresponding occupational disease in order to substantiate the diagnosis; - select and conduct the necessary preventive measures for patients with occupational diseases; - on the basis of the existing clinical picture, the degree of functional disorders, working conditions, the patient's profession, to solve questions about his working capacity and employment, as well as subsequent rehabilitation measures and medical examination. <p>Own: - methods of general clinical examination (interrogation, examination, palpation, percussion, auscultation) for diseases of internal organs;</p> <ul style="list-style-type: none"> -interpretation of the results of laboratory, instrumental diagnostic methods in the pathology of internal organs; -algorithm of a detailed clinical diagnosis for diseases of a therapeutic profile; - an algorithm for making a preliminary diagnosis with the subsequent referral of the patient to the appropriate specialist doctor, making a differential diagnosis for therapeutic pathology; -basic medical diagnostic and treatment measures for the provision of first aid in emergency and life-threatening conditions.
PC4	<p>Know: - The main characteristics of natural therapeutic factors, medicinal, non-drug therapy used in occupational pathology</p> <p>To be able to: - to make a choice, to justify the need for the use of natural therapeutic factors, medicinal, non-drug therapy and other methods in patients who need medical rehabilitation and spa treatment</p>

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	Own: - Drawing up a reasonable treatment plan. Identification of possible complications. Correction of the treatment plan in the absence of an effect or the development of complications. Timely detect life-threatening violations
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4. Volume of the subject


4.1. Volume of the subject in credit points (total): 2 credit points

4.2. On types of academic workload (in hours) 72:


Type of study	Number of hours 108 (full-time course)	
	Total according to plan	Including semesters
		Semester number - 9
1	2	3
Contact work of students with a teacher	54	54
Auditory lessons:	54	54
Lectures		
practical and seminar classes	54	54
laboratory work (laboratory workshop)		
Independent work	18	18
Current control (quantity and type: cont.work, colloquium, abstract)	-Interviewing, Testing , solving situations for dachas	-Interviewing, Testing , solving situations for dachas
Course work	-	-
Types of intermediate certification	offset	offset
Total hours for discipline	72	72

If it is necessary to use partially or exclusively remote educational technologies in the educational process, the table shows the number of hours of work of teaching staff with students for conducting classes in a remote format using e-learning.


4.3 Contents of the discipline (module). Distribution of hours on themes and kinds of study: Number of hours –
The form of training: full time

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Title and sections and topics	Total	Types of Training					Independent work	form of current control
		Auditory lessons			Online Classes			
		lectures	workshops, seminars	laboratory work				
1	2	3	4	5	6	7	8	
Section 1. Occupational Diseases								
1. Professional pathology as a clinical discipline. Features of the organization of medical care in industrial enterprises and in agriculture. Issues of examination of disability under prof. diseases. Curation of patients. General principles for the prevention of occupational diseases.	10		6	-		4	Interviewing, Testing, solving situations for dachas	
2. Occupational bronchial asthma.	6		6	-	-	-	Interviewing, Testing, solving situations for dachas	
3. Intoxication with lead, mercury, benzene, phosphorus main clinical syndromes, diagnosis criteria. Laboratory diagnostics, differential diagnostics, treatment, prevention, prognosis, VTE. Agriculture-related pesticides poisoning: organo-mercury compounds, phosphorus and organochlorine compounds. Diagnosis criteria, main clinical syndromes, laboratory diagnostics, therapeutic prophylaxis, prognosis, VTE.	14		8	-		6	Interviewing, Testing, solving situations for dachas	

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4. Vibration disease, characteristics of production vibrations, pathogenesis, classification of vibration disease, diagnosis criteria, the main clinical syndromes of vibration disease. Skin thermometry, studies of complex electrical resistance, algometry, vibration sensitivity. Strength and endurance of muscles / dynamometry, rheography, electroencephalography. Treatment, prevention, prognosis, VTE.	8		8	-			Interviewing, Testing, solving situations for dachas
5. Professional diseases from industrial aerosols. Pneumoconiosis, silicosis. General characteristics of pneumoconiosis, classification, X-ray diagnostics, silicosis: etiology, pathogenesis, berylliosis, diagnosis criteria, differential diagnosis, complications, clinical and radiological diagnostics, treatment, prevention, prognosis, VTE. prevention, VTE.	18		14	-		4	Interviewing, Testing, solving situations for dachas
6. Professional pathology caused by exposure to electromagnetic waves and laser radiation	4					4	Interviewing, Testing, solving situations for dachas
7. Occupational diseases from overstrain: shoulder epicondylitis, shoulder joint periarthritis, myositis. Pathogenesis. Features of the clinical course. Treatment. VTE issues. Prevention	6		6	-	-		Interviewing, Testing, solving situations for dachas
8. Occupational noise caused by occupational noise	6		6	-	-	-	Interviewing, Testing,

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							solving situations for dachas
Interactive Learning Forms							
Simulation course.	6	-	-	-	6	-	
Total	72 / 2 3ET		54	not	Including 6	18	

*If it is necessary to use partly distance educational technologies in the educational process, the organization of work with students with disabilities and disabled people is provided in the electronic information and educational environment, taking into account their individual psychophysical characteristics.

5. COURSE CONTENT

Section 1. "Occupational Diseases"

Theme 1. General principles of diagnosis and differential diagnosis of occupational diseases.

General principles for the treatment of occupational diseases. Legislation providing for the protection of women and adolescents.

Features of medical and social expertise in occupational diseases. In the conditions of industrial production and agriculture, there are harmful factors that, under certain conditions, cause the development of occupational diseases. For the proper organization and monitoring of the effectiveness of treatment, prophylactic and rehabilitation measures, the doctor needs knowledge of the features of diagnosis, the principles of treatment and prevention of occupational diseases. This knowledge is also needed for activities aimed at protecting the health of workers and the prevention of occupational diseases, which is one of the main tasks of medical science and practical health care. Determining the degree of disability, rational employment and rehabilitation of patients with occupational diseases are relevant and of great social importance tasks of professional pathology.


When making a diagnosis of an occupational disease, the doctor must give a reasonable conclusion about the patient's working ability, carrying out preventive and therapeutic measures aimed at restoring the patient's health and working capacity.

Theme 2. Intoxication with lead, amino and nitro derivatives of aromatic hydrocarbons, mercury, main clinical syndromes, diagnosis criteria.

Intoxication with lead, mercury, benzene, phosphorus, the main clinical syndromes, diagnosis criteria. Laboratory diagnostics, differential diagnostics, treatment, prevention, prognosis, VTE.

Agriculture-related pesticides poisoning: organo-mercury compounds, phosphorus and organochlorine compounds. Diagnosis criteria, main clinical syndromes, laboratory diagnostics, therapeutic prophylaxis, prognosis, VTE

Laboratory diagnostics, differential diagnostics, treatment, prevention, prognosis, VTE. Agriculture-related pesticides poisoning: organo-mercury compounds, organophosphorus and organochlorine compounds. Diagnosis criteria, main clinical syndromes, laboratory diagnostics,

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therapeutic prophylaxis, prognosis, VTE. Ointment with mercury and its inorganic compounds. Intoxication of amino and nitro derivatives of aromatic hydrocarbons.

Lead and its inorganic compounds are poisons of polytropic action that cause chronic intoxication. In the clinical picture, lesions of the nervous, hematopoietic systems, digestive tract and liver are observed. In case of poisoning with an organic lead compound - tetraethyl lead (TES) - acute and chronic forms of the disease are observed, which are characterized by damage to the nervous system up to severe mental disorders.

Mercury refers to poisons with neurotropic action. Once in the body through the respiratory tract in the form of vapors, it is deposited in the parenchymal organs and bones. In the clinical picture of mercury intoxication, a peculiar symptom complex of the so-called irritant weakness, emotional lability is observed. Depending on the severity of intoxication, the following lesions can be distinguished: asthenoneurotic, asthenovegetative, diencephalic, mercury erythema, endocrine-vegetative dysfunction.

Aromatic hydrocarbons (benzene and its homologs — toluene, xylene, styrene, etc.) are substances with a toxic effect. In the clinical picture of acute intoxication, a predominant lesion of the nervous system is observed, resembling the effect of narcotic poisons. For chronic intoxication, damage to the bone marrow hematopoiesis with the development of hypoplastic states of the bone marrow is characteristic, and neoplastic processes can develop in the bone marrow during certain periods of intoxication


Theme 3. Vibration disease.

Characterization of industrial vibrations, pathogenesis, classification of vibrational disease, diagnosis criteria, the main clinical syndromes of vibrational disease. Skin thermometry, studies of complex electrical resistance, algometry, vibration sensitivity. Strength and endurance of muscles / dynamometry, rheography, electroencephalography. Treatment, prevention, prognosis, VTE.

Characterization of industrial vibrations, pathogenesis, classification of vibrational disease, diagnosis criteria, the main clinical syndromes of vibrational disease. Skin thermometry, studies of complex electrical resistance, algometry, vibration sensitivity. Strength and endurance of muscles - dynamometry, rheography, electroencephalography. Treatment, prevention, prognosis, VTE. Vibration refers to common adverse factors in the work environment. Many production processes are sources that generate vibration, which is usually combined with noise. In the clinical aspect, when it comes to vibrational disease, it should be borne in mind that such patients may experience disturbances due to exposure to noise. Therefore, when deciding on the rational treatment and assessment of disability, as well as the employment of relevant patients, it is necessary to keep in mind the combined effect of two unfavorable production factors. Professional pathology caused by laser radiation.

Theme 4. Pneumoconiosis, silicosis.

General characteristics of pneumoconiosis, classification, X-ray diagnostics, silicosis: etiology, pathogenesis, diagnosis criteria, differentiated diagnostics, complications, clinical and radiological diagnostics, treatment, prevention, prognosis, VTE. Dust bronchitis, professional

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bronchial asthma. Diagnosis criteria, treatment, prognosis, prevention, VTE.

General characteristics of pneumoconiosis, classification, X-ray diagnostics, silicosis: etiology, pathogenesis, diagnosis criteria, differentiated diagnostics, complications, clinical and radiological diagnostics, treatment, prevention, prognosis, VTE. Dust bronchitis, professional bronchial asthma. Diagnosis criteria, treatment, prognosis, prevention, VTE.

The clinical picture of occupational dust diseases of the lungs is very diverse, which depends on the physicochemical properties of the impacting industrial dust. The main forms of dusty lung diseases are pneumoconioses, chronic dust bronchitis and some forms of allergic lung diseases. Depending on the type of dust that caused the development of pneumofibrosis, the following forms of pneumoconiosis are distinguished: a) silicosis, b) silicates, c) carboconioses, d) metalloconioses, e) pneumoconioses from organic dust, e) pneumoconioses from mixed dust.

According to the clinical picture, chronic dust bronchitis is not much different from chronic bronchitis of non-dust etiology. Therefore, the solution of the questions about the professional origin of chronic bronchitis in people working in conditions of increased dustiness encounters great difficulties, especially if the patient has been smoking for many years, and has a history of frequent acute respiratory infections. At the same time, timely diagnosis of dusty bronchitis is necessary for rational employment and effective treatment of the patient.

Theme 5. Professional pathology caused by functional overstrain of individual organs and systems.


Occupational diseases of the musculoskeletal system occur when performing work associated with prolonged forced uniform body position, physical strain of certain muscle groups, performing production operations at a fast pace, etc.

Theme 6. Occupational pathology caused by exposure to industrial noise.

In industrial conditions, the isolated influence of intense noise on the body of workers is relatively rare. At the same time, when combining noise with other unfavorable factors, primarily with vibration, the diagnosis of noise exposure is largely difficult. This is due to the fact that in the clinical picture of the effects of noise, changes are observed from the side of the hearing organ, nervous and cardiovascular systems (the symptoms of the latter have a number of similarities with the symptoms of vibrational disease). Therefore, in the absence of signs of cochlear neuritis in individuals exposed to the combined effects of noise and vibration, solving the issue of exposure to noise causes great difficulties.

Theme 7. Professional bronchial asthma.

Bronchial asthma has recently become one of the common forms of allergic diseases of professional origin. The clinical picture of it doesn't actually differ from unprofessional bronchial asthma. Therefore, its differential diagnosis requires an in-depth analysis of the patient's working conditions, the time of onset of the disease, the onset of asthmatic attacks directly at the workplace, and the use of provocative samples using substances for this purpose, with which the patient may come into contact during his labor activities. All this greatly complicates the timely identification of the initial forms of diseases and the use of preventive measures.

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6. . Topics of practical classes and seminars

Section 1. “Occupational Diseases”

Topic 1. . (practical lesson). General principles of diagnosis and differential diagnosis of occupational diseases.

General principles for the treatment of occupational diseases. Legislation providing for the protection of women and adolescents.

Features of medical and social expertise in occupational diseases.


Questions to the topic:

1. The main types of work and responsibilities of the shop doctor.
2. On the basis of which documents are mandatory pre-employment and periodic medical examinations of workers exposed to harmful and adverse working conditions carried out? Summary of appendices to this document.
3. What diseases relate to occupational, which to occupational injuries?
4. Grouping of professional forms of diseases according to the etiological principle.
5. The documentation necessary to resolve the issue of the relationship of the disease with the work performed (occupational disease). Who should make it up?
6. The importance of the sanitary-hygienic characteristics of working conditions for the diagnosis of occupational disease.
7. Features of the examination of the patient to identify his occupational disease.
8. Diagnosis of occupational and associated unprofessional diseases (form).
9. Which medical institutions have the right to an initial diagnosis of chronic and acute occupational diseases (intoxications). The concept of disability and types of violations.
10. The main tasks of VTE in the clinic of occupational diseases.
11. Benefits for persons with occupational diseases and intoxication
12. The main functions of the VK and its composition.
13. The concept of temporary disability and indications for its establishment.
14. The concept of a sick leave certificate, indications for its issuance and the maximum period of continuation.
15. The main functions of MSEC.
16. The concept of a group of disabilities and the criteria for their determination.

Topic 2. (laboratory lesson). Occupational bronchial asthma.

Questions to the topic:

1. What adverse production factors can cause the development of occupational bronchial asthma? Give examples of substances with a sensitizing irritant and combined effect.
2. What is the clinical picture of mild, moderate and severe bronchial asthma? List the main indicators of the function of external respiration and describe the nature of their changes in bronchial asthma. The totality of what data gives the basis for the diagnosis of bronchial asthma of professional origin?
5. What is the prognosis for professional bronchial asthma in each case?
6. What are the basic principles for treating bronchial asthma?


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7. List the criteria for determining the disability and employment of patients with occupational bronchial asthma.

Topic 2. (practical lesson). Occupational intoxication with inorganic lead compounds. Tetraethyl lead toxicity. Ointment with mercury and its inorganic compounds. Intoxication of amino and nitro derivatives of aromatic hydrocarbons. **Occupational pesticide intoxication.**

Questions to the topic:

1. What are the main industries and professional groups of workers that may be exposed to the adverse effects of lead compounds.
2. List the ways in which lead enters the body.
3. What are the main pathogenetic mechanisms of development of lead intoxication?
4. State the current classification of chronic lead intoxication.
5. List the main clinical symptoms and syndromes of lead intoxication caused by inorganic and organic compounds of lead.
6. Give the criteria for the differential diagnosis of lead intoxication.
7. Describe the main methods of treatment and features of VTE in chronic lead intoxication.
8. What is the role of the hygienist and occupational therapist in establishing the connection of the disease with the working conditions of the sick person and carrying out preventive measures aimed at preventing lead intoxication, as well as at restoring the patient's disability.
9. What are the industries where contact with mercury and its inorganic compounds is possible.
10. What additional adverse occupational factors can contribute to the development of mercury intoxication?
11. Ways of mercury to enter the body and their role in the development of intoxication.
12. In which organs is mercury deposited?
13. The main ways of releasing mercury from the body.
14. What is meant by the "carriage" of mercury and can it be considered a disease?
15. What are the cardinal symptoms of micromercurialism and classical mercury intoxication.
16. What is the current classification of chronic mercury toxicity?
17. What organs and systems are affected by chronic mercury intoxication? List the main clinical syndromes of the disease.
18. What are the main methods of functional and laboratory diagnosis, allowing to judge the severity of chronic mercury intoxication.
19. What are the methods of treatment of mercury intoxication.
20. What is the administration scheme for unithiol in acute and chronic mercury intoxications?
21. What are the most effective methods for the prevention of mercurialism.
22. List medical contraindications that preclude employment in contact with mercury. What is demercurialization?
23. List the industries and professions in which aromatic hydrocarbons are adverse production factors.
24. Describe the route of entry, metabolism, and the route of elimination of benzene and its homologs from the body.
25. What organs and systems do aromatic hydrocarbons act on? What do you know about the pathogenetic mechanisms of intoxication?
26. Describe the clinical picture of acute intoxication.
27. What qualitative and quantitative changes in peripheral blood are characteristic for intoxication

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with aromatic hydrocarbons?

28. What neurological syndromes are observed in the clinic of intoxication with aromatic hydrocarbons?

29. What treatment and prophylactic measures are carried out in case of chronic intoxication with benzene and its homologues?

30. How are the issues of examination of disability in this disease?

31. List the main labor processes in which agricultural workers may be exposed to pesticides.

32. What are the pesticides, the most common in modern agriculture, and give their classification.

33. What are the main routes of entry of pesticides into the body?

34. What is the pathogenesis of chronic intoxication with toxic chemicals of various chemical structures?

35. Describe the clinical picture of intoxication with organochlorine and mercury toxic chemicals.

36. What is the clinical picture of intoxication with phosphorus organic pesticides?

37. Perform a differential diagnosis between osstra and chronic intoxication with pesticides.

38. What are the main methods of laboratory and functional diagnosis of chronic intoxication toxic chemicals.

39. What are the principles of antidote therapy of intoxication with pesticides of various chemical structures?


40. State your ideas about the main principles of VTE during professional intoxications with toxic chemicals.

41. List the methods of preventing intoxication with pesticides in agriculture

Topic 3. (practical lesson). Vibration disease due to local and general vibration.

Questions to the topic:

1. List the production in which vibration is a factor of occupational hazards.
2. What are the main professional groups of workers who may be exposed to "local" and "general" vibration.
3. What are the main parameters of vibration. What is their significance in the development of the disease?
4. What factors contribute to the development of vibrational disease?
5. State the classification of vibration disease.
6. What are the main clinical syndromes of vibrational disease in workers with manual mechanized instruments?
7. Describe the clinical syndromes of a vibrational disease that develops from exposure to general vibration.
8. What are the features of the clinical manifestations of the early stages of vibrational disease?
9. Describe the functional methods for diagnosing vibrational disease.
10. State the differential diagnosis of vibration disease.
11. What are the main methods of treatment and the characteristics of medical and labor expertise in vibration disease?
12. List the main measures of medical and hygienic prevention of vibrational disease.
13. What is the role of the hygienist in establishing a connection between the disease and the profession and in carrying out activities aimed at preventing the development of vibrational illness and restoring disability?


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**Topic 4 (practical lesson). Occupational diseases from industrial aerosols.
Pneumoconiosis.**

General characteristics of pneumoconiosis, classification, X-ray diagnostics, silicosis: etiology, pathogenesis, diagnosis criteria, differentiated diagnosis, complications, clinical and radiological diagnostics, treatment, prevention, prognosis, VTE. Diagnosis criteria, treatment, prognosis, prevention, VTE.

Questions to the topic:

1. In what areas of production are workers exposed to dust factors?
 2. What properties of dust particles determine their fibrogenic effect? What types of dust have the highest fibrogenic activity?
 3. What factors of the working environment and characteristics of the body determine the rate of development and progression of silicosis?
 4. The main theory of the pathogenesis of silicosis.
 5. Describe the morphological structure of the silicotic nodule.
 6. What complaints and objective data are characteristic of uncomplicated silicosis
 7. The main radiological signs of silicosis.
 8. List the main indicators of the function of external respiration and the nature of their changes in silicosis.
 9. List the most common complications of silicosis and give their characteristics (based on clinical, radiological, laboratory data).
 10. What variants of the course of silicosis are known to you?
 11. What are the principles of the classification of pneumoconiosis in our country?
 12. What occupational diseases are used for differential diagnosis of silicosis?
 13. What are the basic principles for treating silicosis? Why the irreversibility of far-reaching morphological changes cannot justify refusing treatment?
 14. What are the medical and physiotherapeutic methods of treating silicosis and its complications.
 15. The main criteria for determining the disability of patients with silicosis.
 16. The main methods of medical prevention of silicosis.
 17. What is the difference between the clinical picture of silicates and silicosis?
 18. What is the difference between the clinical picture of carboconiosis and silicosis?
1. What is the difference between the clinical picture of metalloconiasis and silicosis? What are the features of the clinical picture of pneumoconiosis due to exposure to organic dust? The main production and technological processes in which berylliosis can occur. Which beryllium compounds are the most toxic?
2. The pathogenesis of berylliosis. The penetration pathways of beryllium and its compounds into the body and excretion routes. The effect of beryllium in the air of working rooms on the course and severity of the clinical manifestations of the disease.
 3. What compounds of beryllium cause acute intoxications? List the clinical syndromes of acute intoxications with beryllium.
 4. What extrapulmonary lesions can be observed in acute berylliosis? Long-term effects of acute toxicity with beryllium. The concept of late berylliosis and its forecast.
 5. Chronic berylliosis: the main clinical syndromes, extrapulmonary lesions; features of violation of gas exchange.

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6. X-ray picture of lung lesions in stages I, II and III of chronic berylliosis.
7. Perform a differential diagnosis between berylliosis and other lung diseases characterized by the presence of a granulomatous process and an alveolar-capillary block.
8. The main treatment and preventive measures for acute intoxication with beryllium.
9. The main treatment and preventive measures for chronic berylliosis.
10. Issues of VTE: disability, employment, rehabilitation of patients with acute and chronic berylliosis.
11. What clinical forms of occupational diseases can be observed when exposed to electric welding aerosol?

Topic 5. (practical lesson). Occupational pathology caused by exposure to industrial noise.

Questions to the topic:


1. Questions: List the industries and professions where it is possible to develop diseases caused by exposure to intense noise.
2. What are the main characteristics of noise and their significance in the development of the disease.
3. What environmental factors contribute to the adverse effects of noise?
4. Indicate the criteria for assessing I, II, III, and IV degrees of hearing loss according to an audiometric study.
5. What organs and systems are affected when exposed to noise; What is the pathogenesis of these lesions?
6. What research methods are used to diagnose occupational hearing loss?
7. State the differential diagnosis of occupational hearing loss.
8. What are the treatment methods and features of VTE in case of professional hearing loss and when combined with damage to other organs and systems?
9. List the main measures of medical and sanitary-technical prevention of diseases that occur when exposed to intense industrial noise. What is the role of the sanitary doctor?

7. LABORATORY CLASSES

Not provided by the curriculum and work plans.

8. SUBJECTS OF COURSE PAPERS, TESTS, ESSAYS

The curriculum is not provided.

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9. LIST OF QUESTIONS FOR THE EXAM (OFF)

1. The concept of occupational diseases

Medical and labor examination and rehabilitation issues in occupational diseases.
Preliminary and periodic medical examinations

2. Silicosis

3. Silicases

4. Differential diagnosis of pneumoconiosis

5. Treatment and prevention of occupational respiratory diseases of dust etiology

6 berylliosis

7. Professional bronchial asthma

8. Vibration disease due to local vibration

9. Vibration disease due to general vibration

10. The effect of noise on the human body

11. Intoxication with lead and its compounds

12. Intoxication of aromatic hydrocarbons

13. Intoxication of amino and nitro compounds of benzene and its homologs

14. Intoxication of mercury and its inorganic compounds

15. Intoxication with irritating substances (chlorine, hydrogen chloride, sulfur dioxide, hydrogen sulfide, nitrogen oxides)

16. Intoxication with organochlorine compounds

17. Intoxication with organophosphorus compounds

18. Intoxication with mercury compounds

19. Diseases of the musculoskeletal system caused by work associated with functional overstrain and microtraumatization

20. Periarthrosis of the shoulder joint (shoulder-shoulder periarthrosis)


21. Epicondylosis of the shoulder

22. Stenosing ligamentoses

23. Coordination neurosis


24. Occupational muscle diseases

25. Occupational diseases of the peripheral nervous system

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10. INDEPENDENT WORK OF STUDENTS

№	Section, theme	Summary	Number of hours	form of control
Section 1. Occupational Diseases				
1.	General principles for the prevention of occupational diseases.	Definition of primary and secondary prevention .. Groups of persons subject to medical examination and the procedure for its implementation. The procedure for the primary and secondary prevention of occupational diseases. Determining the effectiveness of primary and secondary prevention of occupational diseases.	4	Interviewing, Testing , solving situations for dachas
2.	Pesticide poisoning used in agriculture:	Diagnosis criteria, main clinical syndromes, laboratory diagnostics, therapeutic prophylaxis, prognosis, VTE Laboratory diagnostics, differential diagnostics, treatment, prevention, prognosis, VTE. Agriculture-related pesticides poisoning: organo-mercury compounds, organophosphorus and organochlorine compounds. Diagnosis criteria, main clinical syndromes, laboratory diagnostics, therapeutic prophylaxis, prognosis, VTE.	4	Interviewing, Testing , solving situations for dachas
3.	Occupational pathology caused by exposure to electromagnetic waves and laser radiation	Definition Etiology and pathogenesis. Classification. The clinical picture .. Diagnostic criteria. Treatment. Forecast. Prevention Features of the articular syndrome. Differentiated diagnosis. Treatment (diet, non-steroidal anti-inflammatory drugs, anti-hyperuricemia drugs). Forecast. VTE.	4	Interviewing, Testing , solving situations for dachas
4.	Borreliosis	Definition Etiology and pathogenesis. The main clinical syndromes. Laboratory, instrumental and morphological diagnostics. Differential diagnosis. Treatment. Forecast. VTE.	4	Interviewing, Testing , solving situations for dachas

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Профессиональные базы данных, информационно-справочные системы

1. Электронно-библиотечные системы:

1.1. Цифровой образовательный ресурс IPRsmart : электронно-библиотечная система : сайт / ООО Компания «Ай Пи Ар Медиа». - Саратов, [2024]. – URL: <http://www.iprbookshop.ru>. – Режим доступа: для зарегистрир. пользователей. - Текст : электронный.

1.2. Образовательная платформа ЮРАЙТ : образовательный ресурс, электронная библиотека : сайт / ООО Электронное издательство «ЮРАЙТ». – Москва, [2024]. - URL: <https://urait.ru> . – Режим доступа: для зарегистрир. пользователей. - Текст : электронный.

1.3. База данных «Электронная библиотека технического ВУЗа (ЭБС «Консультант студента») : электронно-библиотечная система : сайт / ООО «Политехресурс». – Москва, [2024]. – URL: <https://www.studentlibrary.ru/cgi-bin/mb4x>. – Режим доступа: для зарегистрир. пользователей. – Текст : электронный.

1.4. Консультант врача. Электронная медицинская библиотека : база данных : сайт / ООО «Высшая школа организации и управления здравоохранением-Комплексный медицинский консалтинг». – Москва, [2024]. – URL: <https://www.rosmedlib.ru>. – Режим доступа: для зарегистрир. пользователей. – Текст : электронный.

1.5. Большая медицинская библиотека : электронно-библиотечная система : сайт / ООО «Букап». – Томск, [2024]. – URL: <https://www.books-up.ru/ru/library/> . – Режим доступа: для зарегистрир. пользователей. – Текст : электронный.

1.6. ЭБС Лань : электронно-библиотечная система : сайт / ООО ЭБС «Лань». – Санкт-Петербург, [2024]. – URL: <https://e.lanbook.com>. – Режим доступа: для зарегистрир. пользователей. – Текст : электронный.

1.7. ЭБС Znanium.com : электронно-библиотечная система : сайт / ООО «Знаниум». - Москва, [2024]. - URL: <http://znanium.com> . – Режим доступа : для зарегистрир. пользователей. - Текст : электронный.

2. КонсультантПлюс [Электронный ресурс]: справочная правовая система. / ООО «Консультант Плюс» - Электрон. дан. - Москва : КонсультантПлюс, [2024].

3. eLIBRARY.RU: научная электронная библиотека : сайт / ООО «Научная Электронная Библиотека». – Москва, [2024]. – URL: <http://elibrary.ru>. – Режим доступа : для авториз. пользователей. – Текст : электронный

4. Федеральная государственная информационная система «Национальная электронная библиотека» : электронная библиотека : сайт / ФГБУ РГБ. – Москва, [2024]. – URL: <https://нэб.рф>. – Режим доступа : для пользователей научной библиотеки. – Текст : электронный.


5. Российское образование : федеральный портал / учредитель ФГАУ «ФИЦТО». – URL: <http://www.edu.ru>. – Текст : электронный.

6. Электронная библиотечная система УлГУ : модуль «Электронная библиотека» АБИС Мега-ПРО / ООО «Дата Экспресс». – URL: <http://lib.ulsu.ru/MegaPro/Web>. – Режим доступа : для пользователей научной библиотеки. – Текст : электронный.

Инженер ведущий



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11. EDUCATIONAL, METHODOLOGICAL AND INFORMATIONAL SUPPORT OF THE DISCIPLINE

Профессиональные болезни

Main literature:

1. Internal Diseases : Textbook in 2 Vols. Vol. I / edited by A. I. Martynov, Z. D. Kobalava, S. V. Moiseev. - Moscow : GEOTAR-Media, 2022. - 688 с. - ISBN 978-5-9704-6766-4. - Текст : электронный // ЭБС "Консультант студента" : [сайт]. - URL : <https://www.studentlibrary.ru/book/ISBN9785970467664.html>
2. Internal Diseases. Vol. II. : Textbook in 2 Vols. / edited by A. I. Martynov, Z. D. Kobalava, S. V. Moiseev. - Moscow : GEOTAR-Media, 2022. - 616 с. - ISBN 978-5-9704-6767-1. - Текст : электронный // ЭБС "Консультант студента" : [сайт]. - URL : <https://www.studentlibrary.ru/book/ISBN9785970467671.html>

Additional literature:


1. Мамурбаев А. А. Foundations of occupational medicine / А. А. Мамурбаев. - Актобе : ЗКМУ, 2017. - 479 с. - Текст : электронный // ЭБС "Букап" : [сайт]. - URL : <https://www.books-up.ru/ru/book/foundations-of-occupational-medicine-10947813/>
2. The organization and carrying out of examination of temporary disability = Организация и проведение экспертизы временной нетрудоспособности : an educational manual for English-speaking students / А. Г. Сердюков, И. Б. Набережная, Ж. Б. Набережная, А. С. Нимгирова. - Астрахань : Астраханский ГМУ, 2020. - 103 с. - ISBN 9785442405583. - Текст : электронный // ЭБС "Букап" : [сайт]. - URL : <https://www.books-up.ru/ru/book/the-organization-and-carrying-out-of-examination-of-temporary-disability-10835934/>
3. Дьяченко Т. С. Morbidity and disability of the population. Methodology of study = Заболеваемость и инвалидность населения. Методология изучения : учебно-методическое пособие для практических занятий по дисциплине «Общественное здоровье и здравоохранение, экономика здравоохранения» : Tutorial for practical classes in Public health, Health care and Health care economics / Т. С. Дьяченко, Л. Н. Грибина, А. Н. Голубев. - Волгоград : ВолгГМУ, 2021. - 80 с. - Текст : электронный // ЭБС "Букап" : [сайт]. - URL : <https://www.books-up.ru/ru/book/morbidity-and-disability-of-the-population-methodology-of-study-13816430/>
4. Амлаев К. Р. Medical prevention = Медицинская профилактика : Учебное пособие / К. Р. Амлаев. - Ставрополь : СтГМУ, 2020. - 204 с. - Текст : электронный // ЭБС "Букап" : [сайт]. - URL : <https://www.books-up.ru/ru/book/medical-prevention-15722037/>

Educational- methodical literature: Shapoval N. S.

Educational and methodological guidelines for the organization of independent work of students in the discipline «Occupational diseases» for the specialty of 31.05.01 «General medicine» / N.

S. Shapoval; Ulyanovsk State University. - Ulyanovsk : UISU, 2022. - 11 p. - Неопубликованный ресурс; На англ. яз. -

URL: <http://lib.ulsu.ru/MegaPro/Download/MObject/11575> . - Режим доступа: ЭБС УлГУ. - Текст : электронный.

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12. SPECIAL CONDITIONS FOR STUDENTS WITH DISABILITIES

Training students with disabilities is carried out taking into account the peculiarities of psychophysical development, individual capabilities and health of such students. Education of students with disabilities can be organized in conjunction with other students, and separately. If necessary, students from among persons with disabilities (at the request of the student) may be offered one of the following options for the perception of information, taking into account their individual psychophysical characteristics:

- for persons with visual impairment: in printed form in large print; in the form of an electronic document; in the form of an audio file (translation of educational materials into audio format); in printed form in Braille; individual consultations with the involvement of a special translator; individual tasks and consultations.
- for persons with hearing impairment: in printed form; in the form of an electronic document; video materials with subtitles; individual consultations with the assistance of a sign language interpreter; individual tasks and consultations.
- for persons with musculoskeletal disorders: in printed form; in the form of an electronic document; in the form of an audio file; individual tasks and consultations."
- if it is necessary to use partially or exclusively remote educational technologies in the educational process, the organization of work of teaching staff with students with disabilities is provided in an electronic information and educational environment, taking into account their individual psychological characteristics

*If it is necessary to use partly distance educational technologies in the educational process, the organization of work with students with disabilities and disabled people is provided in the electronic information and educational environment, taking into account their individual psychophysical characteristics.

Developers

Associate professor of the department, Ph. D, Shapoval N.S.



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